



**Public Works and Government Services Canada  
ATB Place North Tower  
10025 Jasper Ave./10025 ave. Jaspe  
5th floor/5e étage  
Edmonton  
Alberta  
T5J 1S6  
Bid Fax: (780) 497-3510**

## Offre à commandes individuelle du département(OCID)

## Comments - Commentaires

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

Public Works and Government Services Canada  
ATB Place North Tower  
10025 Jasper Ave./10025 ave Jasper  
5th floor/5e étage  
Edmonton  
Alberta  
T5J 1S6

<b>Title - Sujet</b> Mechanical and Electrical Services	
<b>Solicitation No. - N° de l'invitation</b> EP922-171951/A	<b>Date</b> 2016-12-08
<b>Client Reference No. - N° de référence du client</b> PWGSC EP922-171951	<b>GETS Ref. No. - N° de réf. de SEAG</b> PW-\$PWU-201-10925
<b>File No. - N° de dossier</b> PWU-6-39237 (201)	<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 2017-01-18</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Mountain Standard Time MST
<b>Delivery Required - Livraison exigée</b> See Herein	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Ho (RPC), Hector	<b>Buyer Id - Id de l'acheteur</b> pwu201
<b>Telephone No. - N° de téléphone</b> (780)901-0989 ( )	<b>FAX No. - N° de FAX</b> (780)497-3510
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> See Herein	
<b>Security - Sécurité</b> This request for a Standing Offer does not include provisions for security. Cette Demande d'offre à commandes ne comprend pas des dispositions en matière de sécurité.	

**Instructions: Voir aux présentes**

<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 (type or print)</b>	
<b>Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

Solicitation No. - N° de l'invitation  
EP922-171951/A  
Client Ref. No. - N° de réf. du client  
PWGSC EP922-171951

Amd. No. - N° de la modif.  
File No. - N° du dossier  
PWU-6-3040

Buyer ID - Id de l'acheteur  
pwu201  
CCC No./N° CCC - FMS No/ N° VME

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## REQUEST FOR STANDING OFFER (RFSO)

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## SUPPLEMENTARY INSTRUCTIONS TO PROPONENTS (SI)

### SI 1 INTEGRITY PROVISIONS – DECLARATION OF CONVICTED OFFENCES

In accordance with the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Proponent must provide **with its bid, as applicable**, to be given further consideration in the procurement process, the required documentation as per General instructions to Proponents (GI), Integrity Provisions – Proposal, **section 3b**.

### SI 2 FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - 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, or to set-aside a Standing Offer, 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 issuing of a Standing Offer or during the period of the Standing Offer.

### SI 3 SECURITY REQUIREMENTS

Proponents are hereby informed that there is a strong possibility that some call-ups against the Standing Offers might require that the consultants and their personnel possesses a Facility Security Clearance (FSC) at the SECRET level issued by the Canadian Industrial Security Directorate (CISD) of Public Works and Government Services Canada (PWGSC).

Should the successful proponents not have the level of security indicated above, PWGSC shall sponsor the successful proponents so CISD can initiate procedures for security clearance. CISD, by letter, shall forward documentation to the successful proponents for completion.

Proponents desiring such sponsorship should so indicate in their covering letter with their proposal.

Successful proponent(s) issued a standing offer as a result of this RFSO, not possessing the required security clearance at time of call up, will be bypassed and PWGSC will proceed to the next consultant who possesses the required security clearance and it is furthest away from the ideal business distribution. Refer to the Standing Offer Particulars for information regarding ideal business distribution.

### SI 4. HEALTH AND SAFETY - Workers Compensation

1. The recommended Proponent shall provide to the Contracting Authority, prior to Contract award:
  - a) a Workers Compensation Board letter of good standing, also listing covered Directors, Principals, Proprietor(s) or Partners who will be or who are anticipated to be present on the work site(s).
2. The recommended Proponent shall deliver all of the above documents to the Contracting Authority on or before the date stated (usually 3-5 days after notification) by the Contracting Authority. Failure to comply with the request may result in the proposal being declared non-compliant.

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## GENERAL INSTRUCTIONS TO PROPONENTS (GI)

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## GENERAL INSTRUCTIONS TO PROPONENTS

### Integrity Provisions – Proposal

1. The *Ineligibility and Suspension Policy* (the “Policy”) in effect on the date the Request for Standing Offers (RFSO) is issued, and all related Directives in effect on that date, are incorporated by reference into, and form a binding part of the RFSO. The Proponent must comply with the Policy and Directives, which can be found at <http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>.
2. Under the Policy, charges and convictions of certain offences against a Supplier, its affiliates or first tier sub-consultants, and other circumstances, will or may result in a determination by Public Works and Government Services Canada (PWGSC) that the Supplier is ineligible to be issued or is suspended from being issued a standing offer and to enter into a contract with Canada. The list of ineligible and suspended Suppliers is contained in PWGSC's Integrity Database. The Policy describes how enquiries can be made regarding the ineligibility or suspension of Suppliers.
3. In addition to all other information required in the Request for Standing Offers, the Proponent must provide the following:
  - a. by the time stated in the Policy, all information required by the Policy described under the heading “Information to be Provided when Bidding, Contracting or Entering into a Real Property Agreement”; and
  - b. with its bid, a complete list of all foreign criminal charges and convictions pertaining to itself, its affiliates and its proposed first tier sub-consultants that, to the best of its knowledge and belief, may be similar to one of the listed offences in the Policy. The list of foreign criminal charges and convictions must be submitted using an Integrity Declaration Form, which can be found at <http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>.
4. Subject to subsection 5, by submitting a bid in response to this Request for Standing Offers, the Proponent certifies that:
  - a. it has read and understands the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html);
  - b. it understands that certain domestic and foreign criminal charges and convictions, and other circumstances, as described in the Policy, will or may result in a determination of ineligibility or suspension under the Policy;
  - c. it is aware that Canada may request additional information, certifications, and validations from the Proponent or a third party for purposes of making a determination of ineligibility or suspension;
  - d. it has provided with its bid a complete list of all foreign criminal charges and convictions pertaining to itself, its affiliates and its proposed first tier sub-consultants that, to the best of its knowledge and belief, may be similar to one of the listed offences in the Policy;
  - e. none of the domestic criminal offences, and other circumstances, described in the Policy that will or may result in a determination of ineligibility or suspension, apply to it, its affiliates and its proposed first tier sub-consultants; and
  - f. it is not aware of a determination of ineligibility or suspension issued by PWGSC that applies to it.

5. Where a Proponent is unable to provide any of the certifications required by subsection 4, it must submit with its bid a completed Integrity Declaration Form, which can be found at <http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>.
6. Canada will declare non-responsive any bid in respect of which the information requested is incomplete or inaccurate, or in respect of which the information contained in a certification or declaration is found by Canada to be false or misleading in any respect. If Canada establishes after issuance of the Standing Offer that the Proponent provided a false or misleading certification or declaration, Canada may set aside the Standing Offer and terminate for default any resulting contracts. Pursuant to the Policy, Canada may also determine the Proponent to be ineligible for issuance of a standing offer for providing a false or misleading certification or declaration.

## GI 1 DEFINITION

In this Request for Standing Offers (RFSO), the following words or phrases have the corresponding meaning.

**"Applicable Taxes":**

The Goods and Services Tax (GST), the Harmonized Sales Tax (HST), and any provincial tax, by law, payable by Canada such as, the Quebec Sales Tax (QST) as of April 1, 2013.

**"Consultant Team":**

The team of consultants, specialists and subconsultants, including the Proponent, proposed by the Proponent to perform the services required.

**"Key Personnel":**

Staff of the Proponent, subconsultants and specialists proposed to be assigned to this project.

**"Price Rating":**

A rating assigned to the price component of a proposal and subsequently used to establish a Price Score for inclusion as a percentage of the total score to be established following the evaluation and rating of technical proposals.

**"Proponent":**

"Proponent" means the person or entity (or, in the case of a joint venture, the persons or entities) submitting a proposal to provide services under a call-up resulting from a standing offer. It does not include the parent, subsidiaries or other affiliates of the Proponent, or its sub-consultants.

**"PWGSC Evaluation Board":**

The board established to evaluate and rate proposals. Board members represent a broad cross-section of professional qualifications and experience.

**"Technical Rating":**

A rating assigned to the technical component of a proposal in the selection procedure and subsequently used to establish a Technical Score for inclusion as a percentage of the total score.

## GI 2 INTRODUCTION

1. Public Works and Government Services Canada (PWGSC) is inviting consulting firms with Electrical and Mechanical Engineering expertise to submit proposals for Standing Offers. This procurement will follow a one phase submission process. The selected consultants shall provide a range of services as identified in the Required Services section of this document for building projects in the Western Region, excluding Comprehensive Land Claim Areas and the Northwest Territories.

Geographic Zones and area boundaries are as follows and will be such each time they appear in this Request for Standing Offer (RFSO) described:

- Northern Alberta covers the area of Red Deer, AB, and north;
  - Southern Alberta covers the area south of Red Deer;
  - Northern Saskatchewan covers the area north of Davidson, SK, (excluding Prince Albert)
  - Prince Albert, Saskatchewan
  - Southern Saskatchewan covers the area of Davidson and south; and
  - Manitoba is all of Manitoba
2. Proponents shall be licensed or eligible to be licensed to practise in the province governing each applicable zone or zones (i.e. Alberta, Saskatchewan and/or Manitoba). If a Proponent is licensed to practise in only one of the three provinces, then that Proponent must be eligible and willing to be licensed in the province in which they are not licensed. Firms should be able to demonstrate successful delivery of these services for a broad variety of projects within past seven (7) years. In general, the firm and its personnel will be evaluated on the basis of their demonstrated understanding of the scope of services, their approach and methodology to providing those services, the quality of their relevant experience in this area, as well as the cost of the provision of the services.
  3. It is PWGSC's intention to authorize up to twenty (20) Standing Offers, four (4) in each zone, Northern and Southern Alberta, Northern and Southern Saskatchewan, and Manitoba, each for a period of two (2) years plus an option for two (2) one-year periods from the date of issuing the Standing Offers. The total dollar value of all Standing Offers is estimated to be \$10,500,000.00 (Applicable Taxes included). Individual call-ups will vary, up to a maximum of \$500,000.00 (Applicable Taxes included). Proponents should note that there is no guarantee that the full or any amount of the Standing Offers will be called-up; PWGSC will issue call-ups only when the specific services to be provided under the Standing Offer are needed. Please refer to Section SP5, CALL-UP PROCEDURE.
  4. The total dollar value of \$10,000,000.00 (GST Extra) will be distributed across five (5) Western Region Zones, in the following amounts:

Northern Alberta	\$2,500,000.00
Southern Alberta	\$2,500,000.00
Northern Saskatchewan	\$1,000,000.00
Southern Saskatchewan	\$1,500,000.00
Manitoba	\$2,500,000.00
<b>Total:</b>	<b>\$10,000,000.00</b>

5. Funding will be distributed between the top firms for each zone as follows:
  - where 4 Standing Offers are authorized - 36% for the top ranked firm, 28% for the 2nd, 21% for the 3rd, 15% for the 4th
  - where 3 Standing Offers are authorized - 42% for the top ranked firm, 33% for the 2nd, 25% for the 3rd
  - where 2 Standing Offers are authorized - 55% for the top ranked firm, 45% for the 2nd
  - Where 1 Standing Offer is authorized - 100% for the top ranked firm

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

### **GI 3 PROCUREMENT BUSINESS NUMBER**

Proponents are required to have a Procurement Business Number (PBN) before issuance of a standing offer. Proponents may register for a PBN on line at Supplier Registration Information (<https://srisupplier.contractsCanada.gc.ca/>). For non-Internet registration, proponents may contact the InfoLine at 1-800-811-1148 to obtain the telephone number of the nearest Supplier Registration Agent.

### **GI 4 CONTRACTING AUTHORITY AND DEPARTMENTAL REPRESENTATIVE**

1. The Contracting Authority for this Request for Standing Offer is:
- Public Works and Government Services Canada  
Real Property Contracting Directorate  
ATB Place, North Tower  
5th Floor, 10025 Jasper Avenue  
Edmonton, Alberta T5J 1S6  
Hector Ho  
Title: Procurement Specialist  
Telephone: (780) 901-0989
2. The Contracting Authority is responsible for the establishment of the Standing Offer, its administration, and any contractual issues relating to individual call-ups.
3. A Departmental Representative will be identified at time of each individual Call-Up.
4. The Departmental Representative will be responsible for all matters concerning the technical content of the work under the Call-Up.

### **GI 5 QUANTITY**

The level of services and estimated expenditure specified in the Request for Standing Offer are only an approximation of requirements given in good faith. The making of a proposal by the Proponent shall not constitute an agreement by Canada. Canada may make one or several call-ups against a standing offer.

### **GI 6 PWGSC OBLIGATION**

A Request for Standing Offer does not commit PWGSC to authorize the utilization of a standing offer or to pay any cost incurred in the submission of proposals, or cost incurred in making necessary studies for the preparation thereof, or to procure or contract for any services. PWGSC reserves the right to reject or authorize for utilization any proposal in whole or in part, with or without further discussion or negotiation. Canada reserves the right to cancel or amend the Request for Standing Offer at any time.

### **GI 7 RESPONSIVE PROPOSALS**

To be considered responsive, a proposal must meet all of the mandatory requirements set out in the Request for Standing Offer. No further consideration in the selection procedure will be given to a Proponent submitting a non-responsive proposal. Proponents that submitted non-responsive proposals are notified accordingly.



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## GI 8 COMMUNICATIONS - SOLICITATION PERIOD

1. Questions or requests for clarification during the solicitation period must be submitted in writing to the Contracting Authority named on the Request for Standing Offer - Page 1 as early as possible. **Enquiries should be received no later than ten (10) working days prior to the closing date identified on the front page of the Request for Standing Offer** Enquiries received after that time may not be answered.
2. To ensure the integrity of the competitive bid process, enquiries and other communications regarding the RFSO must be directed only to the Contracting Authority identified in the RFSO. Failure to comply with this requirement may result in the proposal being declared non-responsive.
3. To ensure consistency and quality of information provided to proponents, significant enquiries received and their replies will be posted on the Government Electronic Tendering Service (GETS).

## GI 9 OVERVIEW OF SELECTION PROCESS

1. The Standing Offer selection process is as follows:
  - a) a Request for Standing Offer is obtained by proponents through the GETS;
  - b) in response to the Request for Standing Offer, interested proponents shall submit their proposals using a "two-envelope" procedure, in which proponents submit the "technical" component of their proposal in one envelope and the proposed price of the services (price proposal) in a second envelope as further described in GI 10.3 below;
  - c) responsive proposals are reviewed, evaluated and rated by a PWGSC Evaluation Board in accordance with the criteria, components and weight factors set out in the Request for Standing Offer;
  - d) PWGSC may issue a standing offer to the successful proponents;
  - e) Proponents are notified of the results within one week after PWGSC has entered into a standing offer arrangement with the successful proponents.

## GI 10 SUBMISSION OF PROPOSAL

1. Canada requires that each proposal, at closing date and time or upon request from the Contracting Authority, be signed by the Proponent or by an authorized representative of the Proponent. If a proposal is submitted by a joint venture, it must be in accordance with section GI18.
2. It is the Proponent's responsibility to:
  - a) obtain clarification of the requirements contained in the Request for Standing Offer, if necessary, before submitting a proposal;
  - b) submit an original of the proposal plus the specified number of copies, duly completed, IN THE FORMAT REQUESTED, on or before the closing date and time set for receipt of proposals;

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- c) send its proposal only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit specified on page 1 of the Request for Standing Offer or to the address specified in the Request for Standing Offer;
  - d) ensure that the Proponent's name, return address, the solicitation number and description, and solicitation closing date and time are clearly visible on the envelope or the parcel(s) containing the proposal; and
  - e) provide a comprehensive and sufficiently detailed proposal that will permit a complete evaluation in accordance with the criteria set out in the Request for Standing Offer.
3. The technical and price components of the proposal must be submitted in separate, easily identified envelopes in accordance with the instructions contained in the proposal document. Both envelopes shall be submitted as one package which shall clearly and conspicuously display and indicate on the outside of the package the information identified in paragraph 2. d) above.
  4. Timely and correct delivery of proposals to the office designated for receipt of proposals is the sole responsibility of the Proponent. Public Works and Government Services Canada will not assume or have transferred to it those responsibilities. All risks and consequences of incorrect delivery of proposals are the responsibility of the Proponent.
  5. The evaluation of proposals may result in authorization to utilize one or more Standing Offers in whole or in part, taking into consideration the evaluation criteria and selection method stated herein. The lowest or any proposal will not necessarily be authorized. In case of error in the calculation of prices, the unit prices will govern.
  6. The proposal should completely and thoroughly address each element of the requirements as enumerated in the Request for Standing Offer. It is also essential that the elements contained in the proposal be stated in a clear and concise manner.
  7. Proposal documents and supporting information may be submitted in either English or French.
  8. Canada will make available Notices of Proposed Procurement (NPP), RFSOs and related documents for download through the Government Electronic Tendering Service (GETS). Canada is not responsible and will not assume any liabilities whatsoever for the information found on websites of third parties. In the event an NPP, RFSO or related documentation would be amended, Canada will not be sending notifications. Canada will post all amendments using GETS. It is the sole responsibility of the Proponent to regularly consult GETS for the most up-to-date information. Canada will not be liable for any oversight on the Proponent's part nor for notification services offered by a third party.

#### **GI 11 NON-ACCEPTANCE OF ELECTRONICALLY TRANSMITTED PROPOSALS**

Due to the nature of this solicitation, a complete technical proposal, as well as a cost of services proposal (submitted under separate cover), with supporting information is required to allow a proper evaluation to be conducted. Electronic transmission of the proposal by such means as electronic mail or facsimile is not considered to be practical, and therefore, will not be accepted.

#### **GI 12 EVALUATION OF PRICE**

The price proposal must be submitted in Canadian dollars and will be evaluated excluding Applicable Taxes.

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### **GI 13 LIMITATION OF SUBMISSIONS**

1. A Proponent may not submit more than one proposal. This limitation also applies to the persons or entities in the case of a joint venture. If more than one proposal is received from a Proponent (or, in the case of a joint venture, from the persons or entities), all such proposals shall be rejected and no further consideration shall be given.
2. A joint venture is defined as an association of two or more parties which combine their money, property, knowledge, skills, time or other resources in a joint business enterprise agreeing to share the profits and the losses and each having some degree of control over the enterprise.
3. An arrangement whereby Canada contracts directly with a consultant who may retain sub-consultants or specialist consultants to perform portions of the services is not a joint venture arrangement. A sub-consultant or specialist consultant may, therefore, be proposed as part of the consultant team by more than one Proponent. The Proponent warrants that it has written permission from such sub-consultant or specialist consultant to propose their services in relation to the services to be performed.
4. Notwithstanding paragraph 3. above, in order to avoid any conflict of interest, or any perception of conflict of interest, a Proponent shall not include in its submission another Proponent as a member of its consultant team, as a sub-consultant or specialist consultant.
5. Any joint venture entered into for the provision of professional services or other services must be in full compliance with the requirements of any provincial or territorial law pertaining thereto in the Province or Territory in which the project is located.

### **GI 14 LICENSING REQUIREMENTS**

1. Consultant team members and key personnel shall be, or be eligible to be licensed, certified or otherwise authorized to provide the necessary professional services to the full extent that may be required by provincial law in the province of the work.
2. By virtue of submission of a proposal, the Proponent certifies that the Proponent's consultant team and key personnel are in compliance with the requirements of paragraph 1 above. The Proponent acknowledges that PWGSC reserves the right to verify any information in this regard and that false or erroneous certification may result in the proposal being declared non-responsive.

### **GI 15 REJECTION OF PROPOSAL**

1. Canada may reject a proposal where any of the following circumstances is present:
  - (a) the Proponent has been declared ineligible for selection, following unsatisfactory performance in a previous project as determined in accordance with the department's performance review procedures;
  - (b) an employee, sub-consultant or specialist consultant included as part of the proposal has been declared ineligible, for selection for work with the department in accordance with the performance review procedure referred to in paragraph 1.(a), which would render the employee, sub-consultant or specialist consultant ineligible to bid on the requirement, or the portion of the requirement the employee, sub-consultant or specialist consultant is to perform;
  - (c) the Proponent is bankrupt or where, for whatever reason, its activities are rendered inoperable for an extended period;

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- (d) evidence, satisfactory to Canada, of fraud, bribery, fraudulent misrepresentation or failure to comply with any law protecting individuals against any manner of discrimination, has been received with respect to the Proponent, any of its employees, any sub-consultant or any specialist consultant included as part of the proposal;
  - (e) evidence satisfactory to Canada that based on past conduct or behavior, the Proponent, a sub-consultant, a specialist consultant or a person who is to perform the Services is unsuitable or has conducted himself/herself improperly;
  - (f) with respect to current or prior transactions with the Government of Canada,
    - (i) Canada has exercised its contractual remedies of taking the services out of the consultant's hands, suspension or termination for default with respect to a contract with the Proponent, any of its employees, any sub-consultant or any specialist consultant included as part of the proposal;
    - (ii) Canada determines that the Proponent's performance on other contracts, including the quality of the services provided and the quality and timeliness of the delivery of the project, is sufficiently poor to jeopardize the successful completion of the requirement being bid on.
2. Where Canada intends to reject a proposal pursuant to subsection 1.(f), the Contracting Authority will so inform the Proponent and provide the Proponent ten (10) days within which to make representations, before making a final decision on the proposal rejection.

**GI 16 NOT APPLICABLE**

**GI 17 INSURANCE REQUIREMENTS**

1. The successful Proponent shall be required to obtain and maintain Professional Liability and Comprehensive General insurance coverage in accordance with the requirements set out elsewhere in the Request for Standing Offer documents.
2. No insurance requirement stipulated in the Request for Standing Offer documents should be construed as limiting any insurance required by federal, provincial or municipal law. Neither should it limit any coverage which the successful Proponent and other members of the consultant team may consider to be necessary for their own protection or to fulfill their obligations.
3. By virtue of submission of a proposal, the Proponent certifies that the Proponent and the other members of the consultant team as may be applicable are capable of obtaining, and will obtain and maintain liability insurance in accordance with the requirements set out in the proposal documents.

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## **GI 18 JOINT VENTURE**

1. A joint venture is an association of two or more parties who combine their money, property, knowledge, expertise or other resources in a single joint business enterprise, sometimes referred as a consortium, to bid together on a requirement. Proponents who bid as a joint venture must indicate clearly that it is a joint venture and provide the following information:
  - (a) the name of each member of the joint venture;
  - (b) the Procurement Business Number of each member of the joint venture;
  - (c) the name of the representative of the joint venture, i.e. the member chosen by the other members to act on their behalf, if applicable;
  - (d) the name of the joint venture, if applicable.
2. If the information is not clearly provided in the proposal, the Proponent must provide the information on request from the Contracting Authority.
3. The proposal and any resulting standing offer must be signed by all the members of the joint venture unless one member has been appointed to act on behalf of all members of the joint venture. The Contracting Authority may, at any time, require each member of the joint venture to confirm that the representative has been appointed with full authority to act as its representative for the purposes of the RFSO and any resulting standing offer. If a standing offer is issued to a joint venture, all members of the joint venture will be jointly and severally or solidarily liable for the performance of any contract resulting from a call-up against the standing offer.

## **GI 19 LATE SUBMISSIONS**

Submissions delivered after the stipulated closing date and time will be returned unopened.

## **GI 20 LEGAL CAPACITY**

The Proponent must have the legal capacity to contract. If the Proponent is a sole proprietorship, a partnership or a corporate body, the Proponent must provide, if requested by the Contracting Authority, a statement and any requested supporting documentation indicating the laws under which it is registered or incorporated together with the registered or corporate name and place of business. This also applies to proponents submitting a proposal as a joint venture.

## **GI 21 DEBRIEFING**

Should a Proponent desire a debriefing, the Proponent should contact the person identified on the front page of the Request for Standing Offer within 15 working days of the notification of the results of the solicitation. The debriefing will include an outline of the strengths and weaknesses of the submission, referring to the evaluation criteria. The confidentiality of information relating to other submissions will be protected. The debriefing may be provided in writing, by telephone or in person.

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## GI 22 FINANCIAL CAPABILITY

1. Financial Capability Requirement: The Proponent must have the financial capability to fulfill this requirement. To determine the Proponent's financial capability, the Contracting Authority may, by written notice to the Proponent, require the submission of some or all of the financial information detailed below during the evaluation of proposals. The Proponent must provide the following information to the Contracting Authority within fifteen (15) working days of the request or as specified by the Contracting Authority in the notice:
  - (a) Audited financial statements, if available, or the unaudited financial statements (prepared by the Proponent's outside accounting firm, if available, or prepared in-house if no external statements have been prepared) for the Proponent's last three fiscal years, or for the years that the Proponent has been in business if this is less than three years (including, as a minimum, the Balance Sheet, the Statement of Retained Earnings, the Income Statement and any notes to the statements).
  - (b) If the date of the financial statements in (a) above is more than five months before the date of the request for information by the Contracting Authority, the Proponent must also provide, unless this is prohibited by legislation for public companies, the last quarterly financial statements (consisting of a Balance Sheet and a year-to-date Income Statement), as of two months before the date on which the Contracting Authority requests this information.
  - (c) If the Proponent has not been in business for at least one full fiscal year, the following must be provided:
    - (i) the opening Balance Sheet on commencement of business (in the case of a corporation, the date of incorporation); and
    - (ii) the last quarterly financial statements (consisting of a Balance Sheet and a year-to-date Income Statement) as of two months before the date on which the Contracting Authority requests this information.
  - (d) A certification from the Chief Financial Officer or an authorized signing officer of the Proponent that the financial information provided is complete and accurate.
  - (e) A confirmation letter from all of the financial institution(s) that have provided short-term financing to the Proponent outlining the total of lines of credit granted to the Proponent and the amount of credit that remains available and not drawn upon as of one month prior to the date on which the Contracting Authority requests this information.
2. If the Proponent is a joint venture, the financial information required by the Contracting Authority must be provided by each member of the joint venture.
3. If the Proponent is a subsidiary of another company, then any financial information in 1. (a) to (e) above required by the Contracting Authority must be provided by the ultimate parent company. Provision of parent company financial information does not by itself satisfy the requirement for the provision of the financial information of the Proponent, and the financial capability of a parent cannot be substituted for the financial capability of the Proponent itself unless an agreement by the parent company to sign a Parental Guarantee, as drawn up by Public Works and Government Services Canada (PWGSC), is provided with the required information.

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4. Financial Information Already Provided to PWGSC: The Proponent is not required to resubmit any financial information requested by the Contracting Authority that is already on file at PWGSC with the Contract Cost Analysis, Audit and Policy Directorate of the Policy, Risk, Integrity and Strategic Management Sector, provided that within the above-noted time frame:
- (a) the Proponent identifies to the Contracting Authority in writing the specific information that is on file and the requirement for which this information was provided; and
  - (b) the Proponent authorizes the use of the information for this requirement.
- It is the Proponent's responsibility to confirm with the Contracting Authority that this information is still on file with PWGSC.
5. Other Information: Canada reserves the right to request from the Proponent any other information that Canada requires to conduct a complete financial capability assessment of the Proponent.
6. Confidentiality: If the Proponent provides the information required above to Canada in confidence while indicating that the disclosed information is confidential, then Canada will treat the information in a confidential manner as permitted by the Access to Information Act, R.S., 1985, c. A-1, Section 20(1) (b) and (c).
7. Security: In determining the Proponent's financial capability to fulfill this requirement, Canada may consider any security the Proponent is capable of providing, at the Proponent's sole expense (for example, an irrevocable letter of credit from a registered financial institution drawn in favour of Canada, a performance guarantee from a third party or some other form of security, as determined by Canada).
8. In the event that a proposal is found to be non-compliant on the basis that the Proponent is considered NOT to be financially capable of performing the subject requirement, official notification shall be provided to the Proponent.

## **GI 23 REVISION OF PROPOSAL**

A proposal submitted may be amended by letter or facsimile provided the revision is received at the office designated for the receipt of proposals, on or before the date and time set for the receipt of proposals. The revision must be on the Proponent's letterhead or bear a signature that identifies the Proponent, and must clearly identify the change(s) to be applied to the original proposal. The revision must also include the information identified in GI 10 2. d).

## **GI 24 PERFORMANCE EVALUATION**

Proponents shall take note that the performance of the Consultant during and upon completion of the services shall be evaluated by Canada. The evaluation includes all or some of the following criteria: Design, Quality of Results, Management, Time and Cost. Should the Consultant's performance be considered unsatisfactory, the Consultant may be declared ineligible for future contracts. The form [PWGSC-TPSGC 2913-1](http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913-1.pdf), SELECT - Consultant Performance Evaluation Report (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913-1.pdf>), is used to record the performance.

## **GI 25 PROPOSAL COSTS**

No payment will be made for costs incurred in the preparation and submission of a proposal in response to the Request for Standing Offer. Costs associated with preparing and submitting a proposal, as well as any costs incurred by the Proponent associated with the evaluation of the proposal, are the sole responsibility of the Proponent.



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## **GI 26 CONFLICT OF INTEREST - UNFAIR ADVANTAGE**

1. In order to protect the integrity of the procurement process, proponents are advised that Canada may reject a proposal in the following circumstances:
  - (a) if the Proponent, any of its sub-consultants, any of their respective employees or former employees was involved in any manner in the preparation of the bid solicitation or in any situation of conflict of interest or appearance of conflict of interest;
  - (b) if the Proponent, any of its sub-consultants, any of their respective employees or former employees had access to information related to the bid solicitation that was not available to other proponents and that would, in Canada's opinion, give or appear to give the Proponent an unfair advantage.
2. The experience acquired by a Proponent who is providing or has provided the goods and services described in the bid solicitation (or similar goods or services) will not, in itself, be considered by Canada as conferring an unfair advantage or creating a conflict of interest. This Proponent remains however subject to the criteria established above.
3. Where Canada intends to reject a proposal under this section, the Contracting Authority will inform the Proponent and provide the Proponent an opportunity to make representations before making a final decision. Proponents who are in doubt about a particular situation should contact the Contracting Authority before bid closing. By submitting a proposal, the Proponent represents that it does not consider itself to be in conflict of interest nor to have an unfair advantage. The Proponent acknowledges that it is within Canada's sole discretion to determine whether a conflict of interest, unfair advantage or an appearance of conflict of interest or unfair advantage exists.

## **GI 27 LIMITATION OF LIABILITY**

Except as expressly and specifically permitted in this Request for Standing Offer, no Proponent or potential Proponent shall have any claim for any compensation of any kind whatsoever in relation to this Request for Standing Offer, or any aspect of the procurement process, and by submitting a proposal each Proponent shall be deemed to have agreed that it has no claim.

## **GI 28 STATUS AND AVAILABILITY OF RESOURCES**

The Proponent certifies that, should it be issued a standing offer as a result of the Request for Standing Offer, every individual proposed in its proposal will be available to perform the Services resulting from a call-up against the Standing Offer as required by Canada's representatives and at the time specified in a call-up or agreed to with Canada's representatives. If the Proponent is unable to provide the services of an individual named in its proposal, the Proponent may propose a substitute with at least the same qualifications and experience. The Proponent must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement for Canada's approval in its sole discretion.

## **GI 29 CODE OF CONDUCT FOR PROCUREMENT – PROPOSAL**

The Code of Conduct for Procurement provides that Proponents must respond to Requests for Standing Offers (RFSO) in an honest, fair and comprehensive manner, accurately reflect their capacity to satisfy the requirements set out in the RFSO and resulting contract, submit bids and enter into contracts only if they will fulfill all obligations of the Contract. By submitting a bid, the Proponent is certifying that it is complying with the Code of Conduct for Procurement (<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndt/contexte-context-eng.html>). Failure to comply with the Code of Conduct for Procurement may render the bid non-responsive



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**STANDING OFFER PARTICULARS (SP)**

- SP 1 General
- SP 2 Withdrawal/Revision
- SP 3 Period of the Standing Offer
- SP 4 Call-Up Limitation
- SP 5 Call-Up Procedure
- SP 6 Invoicing

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## STANDING OFFER PARTICULARS

### SP 1 GENERAL

1. The Consultant acknowledges that a standing offer is not a contract and that the issuance of a Standing Offer and Call-up Authority does not oblige or commit Canada to procure or contract for any services listed in the Standing Offer.
2. The Consultant offers to provide and deliver to Canada the services described in the Standing Offer, in accordance with the pricing set out in the Standing Offer if, and when the Contracting Authority may request such services, in accordance with the conditions listed at subsection 3 below.
3. The Consultant understands and agrees that:
  - a) a call-up against the Standing Offer will form a contract only for those services which have been called-up, provided that such call-up is made in accordance with the provisions of the Standing Offer;
  - b) Canada's liability is limited to that which arises from call-ups against the Standing Offer made within the period specified in the Standing Offer;
  - c) Canada has the right to procure the services specified in the Standing Offer by means of any other contract, standing offer or contracting method;
  - d) the Standing Offer cannot be assigned or transferred in whole or in part;
  - e) the Standing Offer may be set aside by Canada at any time.

### SP 2 WITHDRAWAL/REVISION

In the event that the Consultant wishes to withdraw the Standing Offer after authority to call-up against the Standing Offer has been given, the Consultant must provide no less than thirty (30) days' written notice to the Contracting Authority, unless specified otherwise in the Standing Offer. The thirty (30) days' period will start upon receipt of the notification by the Contracting Authority and the withdrawal will be effective at the expiry of that period. The Consultant must fulfill any and all call-ups which are made before the expiry of that period.

The period of the Standing Offer may only be extended, or its usage increased, by the Contracting Authority issuing a revision to the Standing Offer in writing.

### SP 3 PERIOD OF THE STANDING OFFER

The period for placing call-ups against the Standing Offer shall be for two (2) years commencing from the start date identified on the Standing Offer.

If the Standing Offer is authorized for use beyond the initial period, the Consultant offers to extend its proposal for an additional two one-year period under the same conditions and at the rates or prices specified in the Standing Offer.

The Consultant will be advised of the decision to authorize the use of the Standing Offer for an extended period by the Contracting Authority thirty (30) days before the expiry of the Standing Offer. A revision to the Standing Offer will be issued by the Contracting Authority.

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#### SP 4 CALL-UP LIMITATION

Each call-up against the Standing Offer will have a maximum limitation of expenditure of \$500,000.00 (Applicable Taxes included). The call-up limitation includes consultant fees and all related disbursements.

#### SP 5 CALL-UP PROCEDURE

1. Services will be called-up as follows:

- a) The Departmental Representative will establish the scope of services to be performed. For each individual Call-Up, consultants will be considered using a computerized distribution system. This system will track all call-ups assigned to each consultant and will maintain a running total of the dollar value of business distributed. The system will contain for each consultant an ideal business distribution percentage which has been established as follows; 36% of the business for the top ranked consultant, 28% for the 2nd ranked consultant, 21% for the 3rd ranked consultant and 15% for the 4th ranked consultant. In the event fewer than four (4) consultants are successful, the undistributed % of business will be redistributed amongst the offerors being recommended using the following formula:

$$\text{Revised Distributions \%} = \frac{\text{pre-established \%}}{100 \text{ less the non distributed \%}} \times 100$$

The Consultant who is furthest under their respective ideal business distribution percentage in relation to the other consultants will be selected for the next call-up.

- b) The Consultant will be provided the scope of services and will submit a proposal to the Departmental Representative in accordance with the fixed hourly rates established under the Standing Offer. The Consultant's proposal shall include the category of personnel, name of personnel and the number of hours estimated/required to perform the services, as well as an estimate of proposed disbursements, if applicable. If the Consultant is unable to provide the services of an individual named in its proposal (submitted in response to the Request for Standing Offer), the Consultant may propose a substitute with at least the same qualifications and experience in the estimation of Canada. The Consultant must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement for Canada's approval in its sole discretion. If the Consultant is unable to provide a substitute with similar qualifications and experience, Canada may set aside the standing offer.
- c) For services from a Specialist Consultant that is not named or for which discipline is not identified in the Standing Offer, the Consultant's proposal shall include the category and name of personnel as well as their hourly rate(s) with the number of hours estimated/required by the Specialist Consultant to perform these services. A fixed fee or, where it is not possible or appropriate to agree upon a fixed fee, a time based fee to an upset limit will be established. **No markup allowed.**
- d) For the preparation of bilingual documents, the Consultant shall estimate the required number of hours and multiply by the hourly rates established in the Standing Offer. If the services of a translation firm are required to produce bilingual documents, these costs shall be treated as a disbursement.
- e) A fixed fee or, where it is not possible or appropriate to agree upon a fixed fee, a time based fee to an upset limit will be established in accordance with the hourly rate(s) established in the Standing Offer.

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- f) Standing Offer holders not possessing the required security clearance at time of call up, will be bypassed and PWGSC will proceed to the next consultant who possesses the required security clearance and it is furthest away from the ideal business distribution.
2. The Consultant will be authorized in writing by the Contracting Authority to proceed with the services by issuance of a Call-up against the Standing Offer.
3. Any proposed changes to the scope of work are to be discussed with the Departmental Representative but any resulting changes can only be authorized by an amendment issued by the Contracting Authority.

## **SP 6 INVOICING**

1. For prompt processing of invoices, include the following information on each invoice for payment:
- a) PWGSC project number;
  - b) Invoicing period with dates;
  - c) Work done to justify invoice (short narrative) for services provided
  - d) Summary of costs as follows:

Amount this invoice	(1)	Fees + Applicable Taxes = Total
Total previous invoices	(2)	Fees + Applicable Taxes = Total
Total invoiced to date	(1+2) =(3)	Fees + Applicable Taxes = Total
Agreed fees	(4)	Fees + Applicable Taxes = Total
Amount to complete	(4-3) =(5)	Fees + Applicable Taxes = Total
% Services completed this stage	(6)	
  - e) Authorized signatures of the consultant and the date.
2. Include with each invoice for authorized disbursements, receipt of original invoices (or legible copies if originals cannot be supplied) for all items claimed.

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## TERMS AND CONDITIONS

0220DA	General Conditions (GC)
0000DA	Supplementary Conditions (SC)
9998DA	Terms of Payment (TP)
9999DA	Consultant Services (CS)
2000DA	Calculation of Fees (CF)

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**0220DA      GENERAL CONDITIONS**

GC 1	Definitions
GC 2	Interpretations
GC 3	Not applicable
GC 4	Assignment
GC 5	Indemnification
GC 6	Notices
GC 7	Suspension
GC 8	Termination
GC 9	Taking the Services Out of the Consultant's Hands
GC 10	Time and Cost Records to be Kept by the Consultant
GC 11	National or Departmental Security
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GC 15	Declaration by Consultant
GC 16	Insurance Requirements
GC 17	Resolution of Disagreements
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GC 19	Entire Agreement
GC 20	Contingency Fees
GC 21	Harassment in the Workplace
GC 22	Taxes
GC 23	Changes in the Consultant Team
GC 24	Joint and Several Liability
GC 25	Performance evaluation - contract
GC 26	International Sanctions
GC 27	Integrity Provisions - Standing Offer
GC 28	Code of Conduct for Procurement – Standing Offer

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## GC 1 Definitions

**Applicable Taxes** means the Goods and Services Tax (GST), the Harmonized Sales Tax (HST), and any provincial tax, by law, payable by *Canada* such as, the Quebec Sales Tax (QST) as of April 1, 2013;

**Architectural and Engineering Services** means services to provide a range of investigation and recommendation reports, planning, design, preparation, or supervision of the construction, repair, renovation or restoration of a work and includes contract administration services, for real property projects;

**Average Bank Rate** means the simple arithmetic mean of the *Bank Rate* in effect at 4:00 p.m. Eastern Time each day during the calendar month which immediately precedes the calendar month in which payment is made;

**Bank Rate** means the rate of interest established from time to time by the Bank of Canada as the minimum rate at which it makes short term advances to members of the Canadian Payments Association;

**Canada, Crown, Her Majesty or the Government**

means Her Majesty the Queen in right of Canada as represented by the Minister of Public Works and Government Services and any other person duly authorized to act on behalf of that minister or, if applicable, an appropriate minister to whom the Minister of Public Works and Government Services has delegated his or her powers, duties or functions and any other person duly authorized to act on behalf of that minister;

**Construction Contract** means a contract entered into between *Canada* and a *Contractor* for the construction of the Project;

**Construction Contract Award Price** means the price at which a *Construction Contract* is awarded to a *Contractor*;

**Construction Cost Estimate** means an anticipated amount for which a *Contractor* will execute the construction of the Project;

**Construction Cost Limit** means that portion of the total amount of Project funds which shall not be exceeded on construction of the Project;

**Construction Services** means construction, repair, renovation or restoration of any work except a vessel and includes; the supply and erection of a prefabricated structure; dredging; demolition; environmental services related to a real property; or, the hire of equipment to be used in or incidentally to the execution of any construction services referred to above;

**Consultant** means the party identified in the Standing Offer to perform the *Consultant Services* under the Standing Offer and any subsequent Call-up, and includes the officer or employee of the *Consultant* identified in writing by the *Consultant*;

**Contracting Authority** means the party identified on the front cover page, responsible for the establishment of the Standing Offer, its amendments, administration, and any contractual issues relating to individual call-ups;

**Contractor** means a person, firm or corporation with whom *Canada* enters, or intends to enter, into a *Construction Contract*;

**Contract Price** means the amount stated in the Call-Up to be payable to the *Consultant* for the *Services*, exclusive of *Applicable Taxes*;

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**Cost Plan** means the allocation of proposed costs among the various elements of the Project, as described in the *Project Brief or Terms of Reference*;

**Days** means continuous calendar days, including weekends and statutory public holidays;

**Departmental Representative** means the officer or employee of Canada identified to the consultant in writing by a duly authorized departmental officer to perform the Departmental Representative's duties under the Agreement;

**Facility Maintenance Services** means services related to activities normally associated with the maintenance of a facility and keeping spaces, structures and infrastructure in proper operating condition in a routine, scheduled, or anticipated fashion to prevent failure and degradation including inspection, testing, servicing, classification as to serviceability, repairs, rebuilding and reclamation, as well as cleaning, waste removal, snow removal, lawn care, replacement of flooring, lighting or plumbing fixtures, painting and other minor works;

**Mediation** is a process of dispute resolution in which a neutral third party assists the parties involved in a dispute to negotiate their own settlement;

**Project Brief or Terms of Reference** means a document describing in sufficient detail the *Services* to be provided by the *Consultant* to permit the *Consultant* to proceed with the *Services* and may include general project information, scope of the work, site and design data, and time plan, specifically related to the Project;

**Project Schedule** means a time plan, including the sequence of tasks, milestone dates and critical dates which must be met for the implementation of the planning, design and construction phases of the Project;

**Services** means the *Services* provided by the *Consultant* and the *Services* required for the project as set forth in the Standing Offer and subsequent Call-up documents;

**Specialist Consultant** means any Architect, Professional Engineer, or other specialist, other than the *Consultant*, engaged by *Canada* directly or, at the specific request of *Canada*, engaged by the *Consultant*;

**Sub-Consultant** means any Architect, Professional Engineer, or other specialist engaged by the *Consultant* for the *Services* included in the Standing Offer or any subsequent Call-up;

**Technical Documentation** includes designs, reports, photographs, physical models, surveys, drawings, specifications, computer software developed for the purpose of the Project, computer printouts, design notes, calculations, CADD (Computer-aided Design and Drafting) files, and other data, information and material, prepared, computed, drawn, or produced and operating and maintenance manuals either prepared or collected for the Project.

**Total Estimated Cost, Revised Estimated Cost, Increase (Decrease)** on Page 1 of the Contract or Contract Amendment means an amount used for internal administrative purposes only that comprises the *Contract Price*, or the revised *Contract Price*, or the amount that would increase or decrease the *Contract Price* and the *Applicable Taxes* as evaluated by the *Contracting Authority*, and does not constitute tax advice on the part of *Canada*.



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**GC 2 Interpretations**

1. Words importing the singular only also include the plural, and vice versa, where the context requires;
2. Headings or notes in the Standing Offer shall not be deemed to be part thereof, or be taken into consideration in its interpretation;
3. "Herein", "hereby", "hereof", "hereunder" and similar expressions refer to the Standing Offer as a whole and not to any particular subdivision or part thereof.

**GC 3 Not Applicable****GC 4 Assignment**

1. The Call-Up shall not be assigned, in whole or in part, by the *Consultant* without the prior consent of Canada.
2. An assignment of the Call-Up without such consent shall not relieve the *Consultant* or the assignee from any obligation under the Call-up, or impose any liability upon *Canada*.

**GC 5 Indemnification**

1. The *Consultant* shall indemnify and save harmless *Canada*, its employees and agents, from losses arising out of the errors, omissions or negligent acts of the *Consultant*, its employees and agents, in the performance of the *Services* under the Call-up that may result from the Standing Offer.
2. The *Consultant's* liability to indemnify or reimburse *Canada* under the Standing Offer shall not affect or prejudice *Canada* from exercising any other rights under law.

**GC 6 Notices**

1. Any notice, request, direction, consent, decision, or other communication that is required to be given or made by either party pursuant to the Standing Offer, shall be in writing, and shall be deemed to have been effectively given when:
  - (a) served personally, on the day it is delivered;
  - (b) forwarded by registered mail, on the day the postal receipt is acknowledged by the other party; or
  - (c) forwarded by facsimile or other electronic means of transmission, one working day after it was transmitted.
2. The address of either party, or the person authorized to receive notices, may be changed by notice in the manner set out in this provision.

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## **GC 7 Suspension**

1. The *Departmental Representative* may require the *Consultant* to suspend the *Services* being provided, or any part thereof, for a specified or unspecified period.
2. If a period of suspension does not exceed sixty (60) *days* and when taken together with other periods of suspension does not exceed ninety (90) *days*, the *Consultant* will, upon the expiration of that period, resume the performance of the *Services* in accordance with the terms of the Standing Offer and the relevant Call-up, subject to any agreed adjustment of the time schedule as referred to in CS 3 of clause 9999DA, Consultant Services.
3. If a period of suspension exceeds sixty (60) *days* or when taken together with other periods of suspension, the total exceeds ninety (90) *days*, and:
  - (a) the *Departmental Representative* and the *Consultant* agree that the performance of the *Services* shall be continued, then the *Consultant* shall resume performance of the *Services*, subject to any terms and conditions agreed upon by the *Departmental Representative* and the *Consultant*, or
  - (b) the *Departmental Representative* and the *Consultant* do not agree that the performance of the *Services* shall be continued, then the Call-Up shall be terminated by notice given by Canada to the *Consultant*, in accordance with the terms of GC 8.
4. Suspension costs related to this clause are as outlined in TP 8 of clause 9998DA, Terms of Payment.

## **GC 8 Termination**

Canada may terminate any Call-up at any time in its sole discretion, and the fees paid to the *Consultant* will be in accordance with the relevant provisions in TP 9 of clause 9998DA, Terms of Payment.

## **GC 9 Taking the Services Out of the Consultant's Hands**

1. Canada may take all or any part of the *Services* out of the *Consultant's* hands and may employ reasonable means necessary to complete such *Services* in the event that:
  - (a) The *Consultant* has become insolvent or has committed an act of bankruptcy, and has neither made a proposal to the *Consultant's* creditors nor filed a notice of intention to make such a proposal, pursuant to the *Bankruptcy and Insolvency Act*, or
  - (b) the *Consultant* fails to perform any of the *Consultant's* obligations under the Standing Offer or any of the Call-ups or, in Canada's opinion, so fails to make progress as to endanger performance of the Standing Offer or any of its call-ups, in accordance with its terms.
2. If the *Consultant* has become insolvent or has committed an act of bankruptcy, and has either made a proposal to the *Consultant's* creditors or filed a notice of intention to make such a proposal, pursuant to the *Bankruptcy and Insolvency Act*, the *Consultant* shall immediately forward a copy of the proposal or the notice of intention to the *Contracting Authority*.

3. Before the *Services* or any part thereof are taken out of the *Consultant's* hands under GC 9.1(b), the *Departmental Representative* will provide notice to the *Consultant*, and may require such failure of performance or progress to be corrected. If within fourteen (14) days after receipt of notice the default is not corrected or corrective action is not initiated to correct such fault, Canada may, by notice, without limiting any other right or remedy, take all or any part of the *Services* out of the *Consultant's* hands.
4. If the *Services* or any part thereof have been taken out of the *Consultant's* hands, the *Consultant* will be liable for, and upon demand pay to *Canada*, an amount equal to all loss and damage suffered by *Canada* by reason of the non-completion of the *Services* by the *Consultant*.
5. If the *Consultant* fails to pay on demand for the loss or damage as a result of GC 9.4, *Canada* will be entitled to deduct and withhold the same from any payments due and payable to the *Consultant*.
6. If the *Services* or any part thereof are taken out of the *Consultant's* hands as a result of GC 9.1(b) and GC 9.3, the amount referred to in GC 9.5 shall remain in the Consolidated Revenue Fund until an agreement is reached or a decision of a court or tribunal is rendered. At that time the amount, or any part of it, which may become payable to the *Consultant* shall be paid together with interest from the due date referred to in TP 2 of clause 9998DA, Terms of Payment, and in accordance with the terms of the Standing Offer.
7. The taking of the *Services*, or any part thereof, out of the *Consultant's* hands does not relieve or discharge the *Consultant* from any obligation under the Standing Offer, the Call-up, or imposed upon the *Consultant* by law, in respect to the *Services* or any part thereof that the *Consultant* has performed.

#### **GC 10 Time and Cost Records to be Kept by the Consultant**

1. Time charged and the accuracy of the *Consultant's* time recording system may be verified by the *Departmental Representative* before or after payment is made to the *Consultant* under the terms and conditions of the Call up.
2. The *Consultant* shall keep accurate time and cost records and, if required for the purposes of the Standing Offer, shall make these documents available to the *Departmental Representative* who may make copies and take extracts therefrom.
3. The *Consultant* shall afford facilities for audit and inspection upon request and shall provide the *Departmental Representative* with such information as may be required from time to time with reference to the documents referred to in GC 10.2.
4. The *Consultant* shall, unless otherwise specified, keep the time sheets and cost records available for audit and inspection for a period of at least six (6) years following completion of the *Services*.
5. If the verification is done after payment by Canada, the *Consultant* agrees to repay any overpayment immediately upon demand.

#### **GC 11 National or Departmental Security**

1. If the *Departmental Representative* is of the opinion that the Project is of a class or kind that involves national or departmental security, the *Consultant* may be required:
  - (a) to provide any information concerning persons employed for purposes of the Standing Offer unless prohibited by law;

- (b) to remove any person from the Project and its site if that person cannot meet the prescribed security requirements; and
  - (c) to retain the Project *Technical Documentation* while in the *Consultant's* possession in a manner specified by the *Departmental Representative*.
- 2. Notwithstanding the provisions of GC 12, if the Project is of a class or kind that involves national or departmental security, the *Consultant* shall not issue, disclose, discard or use the Project *Technical Documentation* on another project without the written consent of the *Departmental Representative*.

## GC 12 Rights to Intellectual Property

### 1. Definitions

"Background" means all Technical Output that is not Foreground and that is proprietary to or the confidential information of the *Consultant*, the *Consultant's Sub-Consultants*, or any other entity engaged by the *Consultant* in the performance of the *Services*;

"Foreground" means any Invention first conceived, developed or reduced to practice as part of the *Services* and all other Technical Output conceived, developed, produced or implemented as part of the *Services*;

"IP Rights" means any intellectual property rights recognized by law, including any intellectual property right protected through legislation (such as that governing copyright, patents, industrial design, or integrated circuit topography) or arising from protection of information as a trade secret or as confidential information;

"Invention" means any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter, whether or not patentable and without limiting the foregoing the term includes any unique design and construction system;

"Technical Output" means: (i) all information of a scientific, technical, or artistic nature relating to the *Services*, whether oral or recorded in any form or medium and whether or not subject to copyright, including but not limited to any Inventions, designs, methods, reports, photographs, physical models, surveys, drawings, specifications developed for the purpose of the Project; as well as (ii) computer printouts, design notes, calculations, CADD (Computer-aided Design and Drafting) files, and other data, information and material, prepared, computed, drawn, or produced for the purpose of the Project; and (iii) operating and maintenance manuals prepared or collected for the Project; and (iv) any buildings, built works, structures and facilities constructed as, or as part of, the Project. Technical Output does not include data concerned with the administration of the Standing Offer and/or Call-Up by Canada or the *Consultant*, such as internal financial or management information, unless it is a deliverable under the terms of the Standing Offer and/or Call-Up.

### 2. Identification and Disclosure of Foreground

The *Consultant* shall:

- (a) promptly report and fully disclose to Canada all Foreground that could be Inventions, and shall report and fully disclose to Canada all other Foreground not later than the time of completion of the *Services* or such earlier time as Canada or the Standing Offer and/or Call-Up may require, and

- (b) for each disclosure referred to in (a), indicate the names of all *Sub-Consultants* at any tier, if any, in which IP Rights to any Foreground have vested or will vest.

Before and after final payment to the *Consultant*, Canada shall have the right to examine all records and supporting data of the *Consultant* which Canada reasonably decides is pertinent to the identification of the Foreground.

3. IP Rights Vest with *Consultant*

Subject to articles GC 12.10 and GC 12.11 and the provisions of GC 11 National or Departmental Security, and without affecting any IP Rights or interests therein that have come into being prior to the Standing Offer and/or Call-Up or that relate to information or data supplied by *Canada* for the purposes of the Standing Offer and/or Call-Up, all IP Rights in the Foreground shall immediately, as soon as they come into existence, vest in and remain the property of the *Consultant*.

4. Ownership Rights in Deliverables

Notwithstanding the *Consultant's* ownership of the IP Rights in the Foreground that is a prototype, built work, building, structure, facility, model or custom or customized system or equipment together with associated manuals and other operating and maintenance documents and tools, *Canada* shall have unrestricted ownership rights in those deliverables, including the right to make them available for public use, whether for a fee or otherwise, and the right to sell them.

5. Licence to Foreground

Without limiting any implied licences that may otherwise vest in *Canada*, and in consideration of *Canada's* contribution to the cost of development of the Foreground, the *Consultant* hereby grants to *Canada* a non-exclusive, perpetual, irrevocable, worldwide, fully-paid and royalty-free licence to exercise all IP Rights in the Foreground that vest in the *Consultant* pursuant to article GC 12.3, for the purpose of:

- (a) the construction or implementation of any building, built works, structures and facilities, contemplated by the Project;
- (b) the further development or alteration or evolution of any part of the constructed or implemented Project, including procurement of materials and components for this purpose;
- (c) the further development, modification (including additions or deletions), completion, translation, or implementation of the Foreground and any addition to it as *Canada* may require for the purposes of the completion, utilization and subsequent evolution of the Project;
- (d) the use, occupancy, operation, exploitation, maintenance, repair or restoration of the constructed or implemented or subsequently modified Project, including the procurement of replacement materials and components required for any such purpose; and
- (e) the publishing and transmission of reproductions of the Project or any part thereof in the form of paintings, drawings, engravings, photographs or cinematographic works, to the public, in hard copy or by any electronic or other means, except for copies in the nature of architectural drawings or plans.

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6. Licence to Foreground for Other Projects

The *Consultant* hereby grants to *Canada* a non-exclusive, perpetual, world-wide, irrevocable licence to exercise all IP Rights that vest in the *Consultant* pursuant to paragraph GC 12.3 for the purpose of planning, designing and constructing or otherwise implementing any project other than the Project, and for any purpose set out in paragraph GC 12.5 as it relates to such other project. In the event that *Canada* exercises such IP Rights in another project, and provided that *Canada* does not already have equivalent rights under a previous contract or otherwise, *Canada* agrees to pay to the *Consultant* reasonable compensation determined in accordance with current industry practice and having regard to *Canada's* contribution to the cost of development of the Foreground. The *Consultant* shall ensure that in any sale, assignment, transfer or licence of any of the IP Rights that vest in the *Consultant* under the Standing Offer and/or Call-Up, the purchaser, assignee, transferee or licensee agrees to be bound by the terms of this provision and to accept reasonable compensation as is contemplated herein. The *Consultant* shall also ensure that any such purchaser, assignee, transferee or licensee of the IP Rights is required to impose the same obligations on any subsequent purchaser, transferee, assignee or licensee.

7. Licence to Background

Without limiting any implied licences that may otherwise vest in *Canada*, the *Consultant* hereby grants to *Canada* a non-exclusive, perpetual, irrevocable, worldwide, fully-paid and royalty-free licence to exercise such of the IP Rights in any Background incorporated into the *Services* or necessary for the performance of the *Services* as may be required

- (a) for the purposes contemplated in article GC 12.5 and GC 12.6;
- (b) for disclosure to any contractor engaged by *Canada*, or bidder for such a contract, to be used solely for a purpose set out in article GC 12.5 and GC 12.6;

and the *Consultant* agrees to make any such Background available to *Canada* upon request.

8. *Canada's* Right to Disclose and Sub-license

The *Consultant* acknowledges that *Canada* may wish to award contracts, which may include a competitive process, for any of the purposes contemplated in article GC 12.5, GC 12.6 and GC 12.7. The *Consultant* agrees that *Canada's* licence in relation to the IP Rights in the Foreground and in the Background, includes the right to disclose that Foreground and Background to bidders for such contracts, and to sub-license or otherwise authorize the use of that Foreground and Background by any contractor or consultant engaged by *Canada* for the purpose of carrying out such a contract.

9. *Consultant's* Right to Grant Licence

- (a) The *Consultant* represents and warrants that the *Consultant* has, or the *Consultant* shall obtain without delay, the right to grant to *Canada* the licence to exercise the IP Rights in the Foreground and the Background as required by the Standing Offer and/or Call-Up.
- (b) Where the IP Rights in any Background or Foreground are or will be owned by a *Sub-Consultant*, the *Consultant* shall either obtain a licence from that *Sub-Consultant* that permits compliance with articles GC 12.5, GC 12.6 and GC 12.7 or shall arrange for the *Sub-Consultant* to convey directly to *Canada* the same rights by execution of the form provided for that purpose by *Canada* no later than the time of disclosure to *Canada* of that Background and Foreground.

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10. Trade Secrets and Confidential Information

The *Consultant* shall not use or incorporate any trade secrets or confidential information in any Foreground or Background used or created in performance of the Standing Offer and/or Call-Up.

11. Canada Supplied Information

- (a) Where performance of the *Services* involves the preparation of a compilation using information supplied by *Canada*, then the IP Rights that shall vest under paragraph GC 12.3 shall be restricted to the IP Rights in Foreground that are capable of being exploited without the use of the information supplied by *Canada*. All IP Rights in any compilation, the Foreground in which cannot be exploited without the use of such *Canada* supplied information shall vest in *Canada*. The *Consultant* agrees that the *Consultant* shall not use or disclose any *Canada* supplied information for any purpose other than completing the performance of the *Services*. The *Consultant* shall maintain the confidentiality of such information. Unless the Standing Offer and/or Call-Up otherwise expressly provides, the *Consultant* shall deliver to *Canada* all such information together with every copy, draft, working paper and note thereof that contains such information upon the completion or termination of the Standing Offer and/or Call-Up, or at such earlier time as *Canada* may require.
- (b) If the *Consultant* wishes to make use of any *Canada* supplied information that was supplied for purposes of the Standing Offer and/or Call-Up, for the commercial exploitation or further development of any of the Foreground, then the *Consultant* may make a written request for a licence to exercise the required IP Rights in that *Canada* supplied information, to *Canada*. The *Consultant* shall give *Canada* an explanation as to why such a licence is required. Should *Canada* agree to grant such a licence, it shall be on terms and conditions to be negotiated between the parties including payment of compensation to *Canada*.

12. Transfer of IP Rights

- (a) If *Canada* takes the *Services* out of the *Consultant's* hands in accordance with GC 9 of the General Conditions, in whole or in part, or if the *Consultant* fails to disclose any Foreground in accordance with article GC 12.2, *Canada* may upon reasonable notice, require the *Consultant* to convey to *Canada* all of the IP Rights in the Foreground or in the case of a failure to disclose, all the IP Rights in the Foreground not provided. The IP Rights to be conveyed shall include the IP Rights in any Foreground that have vested or are to vest in a *Sub-Consultant*. In the case of IP Rights in Foreground which have been sold or assigned to a party other than a *Sub-Consultant*, the *Consultant* shall not be obligated to convey those IP Rights to *Canada*, but shall pay to *Canada* on demand an amount equal to the consideration which the *Consultant* received from the sale or assignment of the IP Rights in that Foreground or, in the case of a sale or assignment was not at arms length, the fair market value of the IP Rights in that Foreground, in each case including the value of future royalties or licence fees.
- (b) In the event of the issuance by *Canada* of a notice referred to in (a), the *Consultant* shall, at the *Consultant's* own expense and without delay, execute such conveyances or other documents relating to title to the IP Rights as *Canada* may require, and the *Consultant* shall, at *Canada's* expense, afford *Canada* all reasonable assistance in the preparation of applications and in the prosecution of any applications for, or any registration of, any IP Right in any jurisdiction, including without limitation the assistance of the inventor in the case of Inventions.



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- (c) Until the *Consultant* completes the performance of the *Services* and discloses all of the Foreground in accordance with article GC 12.2, and subject to the provisions of GC 11 National or Departmental Security, the *Consultant* shall not, without the prior written permission of Canada, sell, assign or otherwise transfer title to the IP Rights in any of the Foreground, or license or otherwise authorize the use of the IP Rights in any of the Foreground by any person.
- (d) In any sale, assignment, transfer or licence of IP Rights in Foreground by the *Consultant* except a sale or licence for end use of a product based on Foreground, the *Consultant* shall impose on the other party all of its obligations to *Canada* in relation to the IP Rights in the Foreground and any restrictions set out in the Standing Offer and/or Call-Up on the use or disposition of the IP Rights in the Foreground (and, if applicable, the Foreground itself), including the obligation to impose the same obligations and restrictions on any subsequent transferee, assignee or licensee. The *Consultant* shall promptly notify *Canada* of the name, address and other pertinent information in regard to any transferee, assignee or licensee.

### **GC 13 Conflict of Interest and Values and Ethics Codes for the Public Service**

1. The *Consultant* declares that the *Consultant* has no pecuniary interest in the business of any third party that would cause, or seem to cause, a conflict of interest in carrying out the *Services*, and should such an interest be acquired during the life of the Standing Offer, the *Consultant* shall declare it immediately to the *Departmental Representative*.
2. The *Consultant* shall not have any tests or investigations carried out by any persons, firms, or corporations, that may have a direct or indirect financial interest in the results of those tests or investigations.
3. The *Consultant* shall not submit, either directly or indirectly, a bid for any Construction Contract related to the Project.
4. The *Consultant* acknowledges that no individuals who are subject to the provisions of the Conflict of Interest Act, 2006, c. 9, s.2, the Conflict of Interest Code for Members of the House of Commons, the Values and Ethics Code for the Public Services, or all other codes of values and ethics applicable within specific organizations cannot derive any direct benefit resulting from the Standing Offer or subsequent Call-ups.
5.
  - (a) The *Consultant* shall not be eligible to compete as a consultant or sub-consultant for a project which may result from the provision of the *Services* if the *Consultant* is involved in the development of a Project Brief or Terms of Reference, a Request for Proposal or similar documents for such project.
  - (b) The *Consultant* providing certain pre-design services (e.g. studies, analysis, schematic design) that do not involve the development of a Project Brief or Terms of Reference, a Request for Proposal or similar documents for such project may be eligible to compete as a consultant or sub-consultant for a project which may result from the provision of these services. The experience acquired by a *Consultant* who has only provided pre-design services, where the information / documentation resulting from these services is made available to other proponents, will not be considered by Canada as conferring an unfair advantage or creating a conflict of interest.



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#### **GC 14 Status of Consultant**

The Consultant is an independent contractor engaged by Canada to perform the Services. Nothing in the Standing Offer through a Call-up is intended to create a partnership, a joint venture or an agency between Canada and the other party or parties. The Consultant must not represent itself as an agent or representative of Canada to anyone. Neither the Consultant nor any of its personnel is engaged as an employee or agent of Canada. The Consultant is responsible for all deductions and remittances required by law in relation to its employees.

#### **GC 15 Declaration by Consultant**

The *Consultant* declares that:

- (a) based on the information provided pertaining to the *Services* required under the Standing Offer, the *Consultant* has been provided sufficient information by the *Departmental Representative* to enable the *Services* required under the Standing Offer to proceed and is competent to perform the *Services* and has the necessary licences and qualifications including the knowledge, skill and ability to perform the *Services*; and
- (b) the quality of *Services* to be provided by the *Consultant* shall be consistent with generally accepted professional standards and principles.

#### **GC 16 Insurance Requirements**

##### **1. General**

- a) The Consultant shall ensure that appropriate liability insurance coverage is in place to cover the consultant and the members of the consultant team and shall maintain all required insurance policies as specified herein.
- b) The Consultant shall, if requested by the Contracting Officer at any time, provide to the Contracting Officer an Insurer's Certificate of Insurance and/or the originals or certified true copies of all contracts of insurance maintained by the Consultant pursuant to the provisions contained herein.
- c) The payment of monies up to the deductible amount made in satisfaction of a claim shall be borne by the Consultant.
- d) Any insurance coverages additional to those required herein that the Consultant and the other members of the consultant team may deem necessary for their own protection or to fulfill their obligations shall be at their own discretion and expense.

##### **2. Commercial General Liability**

- a) The insurance coverage provided shall not be less than that provided by IBC Form 2100, as amended from time to time, and shall have: a limit of liability of not less than \$5,000,000.00 per occurrence; an aggregate limit of not less than \$5,000,000.00 within any policy year.
- b) The policy shall insure the Consultant and shall include Her Majesty the Queen in right of Canada, represented by the Minister of Public Works and Government Services as an Additional Insured, with respect to liability arising out of the performance of the Services.

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3. Professional Liability

- a) The Professional Liability insurance coverage shall be in an amount usual for the nature and scope of the Services but, shall have a limit of liability of not less than \$1,000,000 per claim, and be continually maintained from the commencement of performance of the Services until five (5) years after their completion.
- b) The following provision must be incorporated into the conditions of the Consultant's Professional Liability insurance coverage: "Notice of Cancellation of Insurance Coverage: The Insurer agrees to give the Contracting Authority at least thirty (30) days' prior written notice of any policy cancellation and before making any reduction in coverage."

**GC 17 Resolution of Disagreements**

- 1. In the event of a disagreement regarding any aspect of the *Services* or any instructions given under the Standing Offer and subsequent Call-ups:
  - (a) The *Consultant* may give a notice of disagreement to the *Departmental Representative*. Such notice shall be promptly given and contain the particulars of the disagreement, any changes in time or amounts claimed, and reference to the relevant clauses of the Standing Offer and Call-up;
  - (b) The *Consultant* shall continue to perform the *Services* in accordance with the instructions of the *Departmental Representative*; and
  - (c) The *Consultant* and the *Departmental Representative* shall attempt to resolve the disagreement by negotiations conducted in good faith. The negotiations shall be conducted, first, at the level of the *Consultant's* project representative and the *Departmental Representative* and, secondly and if necessary, at the level of a principal of the *Consultant* firm and a senior departmental manager.
- 2. The *Consultant's* continued performance of the *Services* in accordance with the instructions of the *Departmental Representative* shall not jeopardize the legal position of the *Consultant* in any disagreement.
- 3. If it was subsequently agreed or determined that the instructions given were in error or contrary to the Standing Offer or Call-up, *Canada* shall pay the *Consultant* those fees the *Consultant* shall have earned as a result of the change(s) in the *Services* provided, together with those reasonable disbursements arising from the change(s) and which have been authorized by the *Departmental Representative*.
- 4. The fees mentioned in GC 17.3 shall be calculated in accordance with the Terms of Payment set out in the Standing Offer and the relevant Call-up.
- 5. If the disagreement is not settled, the *Consultant* may make a request to the *Departmental Representative* for a written departmental decision and the *Departmental Representative* shall give notice of the departmental decision within fourteen (14) days of receiving the request, setting out the particulars of the response and any relevant clauses of the Standing Offer or Call-up.
- 6. Within fourteen (14) days of receipt of the written departmental decision, the *Consultant* shall notify the *Departmental Representative* if the *Consultant* accepts or rejects the decision.
- 7. If the *Consultant* rejects the departmental decision, the *Consultant*, by notice may refer the disagreement to *Mediation*.

8. If the disagreement is referred to *Mediation*, the *Mediation* shall be conducted with the assistance of a skilled and experienced mediator chosen by the *Consultant* from a list of mediators proposed by Canada, and departmental *Mediation* procedures shall be used unless the parties agree otherwise.
9. Negotiations conducted under the Standing Offer and any resulting Call-up, including those conducted during *Mediation*, shall be without prejudice.

#### **GC 18 Amendments**

The Standing Offer or any resulting Call-up may not be amended, or modified, nor shall any of its terms and conditions be waived, except by agreement in writing executed by the Consultant and the Contracting Authority.

#### **GC 19 Entire Agreement**

The Standing Offer and Call-up constitutes the entire and only agreement between the parties and supersedes all previous negotiations, communications and other agreements, whether written or oral, unless they are incorporated by reference in the Standing Offer and/or Call-up. There are no terms, covenants, representations, statements or conditions binding on the parties other than those contained in the Standing Offer and Call-up.

#### **GC 20 Contingency Fees**

The Consultant certifies that it has not, directly or indirectly, paid or agreed to pay and agrees that it will not, directly or indirectly, pay a contingency fee for the solicitation, negotiation or obtaining of the Standing Offer to any person, other than an employee of the Consultant acting in the normal course of the employee's duties. In this section, "contingency fee" means any payment or other compensation that depends or is calculated based on a degree of success in soliciting, negotiating or obtaining the Standing Offer and "person" includes any individual who is required to file a return with the registrar pursuant to section 5 of the Lobbying Act, 1985, c. 44 (4th Supplement).

#### **GC 21 Harassment in the Workplace**

1. The Consultant acknowledges the responsibility of Canada to ensure, for its employees, a healthy work environment, free of harassment. A copy of the Treasury Board policy, the Policy on the Prevention and Resolution of Harassment in the Workplace, which is also applicable to the Consultant, is available on the Treasury Board Web site.
2. The Consultant must not, either as an individual, or as a corporate or unincorporated entity, through its employees or subconsultants, harass, abuse, threaten, discriminate against or intimidate any employee, consultant or other individual employed by, or under contract with Canada. The Consultant will be advised in writing of any complaint and will have the right to respond in writing. Upon receipt of the Consultant's response, the Contracting Authority will, at its entire discretion, determine if the complaint is founded and decide on any action to be taken.

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## GC 22 Taxes

1. Federal government departments and agencies are required to pay *Applicable Taxes*.
2. *Applicable Taxes* will be paid by Canada as provided in the invoice submission. *Applicable Taxes* must be specified on all invoices as a separate item along with corresponding registration numbers from the tax authorities. All items that are zero-rated, exempt or to which these *Applicable Taxes* do not apply must be identified as such on all invoices. It is the sole responsibility of the Consultant to charge *Applicable Taxes* at the correct rate in accordance with applicable legislation. The Consultant agrees to remit to appropriate tax authorities any amounts of *Applicable Taxes* paid or due.
3. The Consultant is not entitled to use Canada's exemptions from any tax, such as provincial sales taxes, unless otherwise specified by law. The Consultant must pay applicable provincial sales tax, ancillary taxes, and any commodity tax, on taxable goods or services used or consumed in the performance of the contract (in accordance with applicable legislation), including for material incorporated into real property.
4. In those cases where *Applicable Taxes*, customs duties, and excise taxes are included in the *Contract Price*, the *Contract Price* will be adjusted to reflect any increase, or decrease, of *Applicable Taxes*, customs duties, and excise taxes that will have occurred between bid submission and contract award. However, there will be no adjustment for any change to increase the *Contract Price* if public notice of the change was given before bid submission date in sufficient detail to have permitted the Consultant to calculate the effect of the change.
5. Tax Withholding of 15 Percent - Canada Revenue Agency  
  
Pursuant to the Income Tax Act, 1985, c. 1 (5th Supp.) and the Income Tax Regulations, Canada must withhold 15 percent of the amount to be paid to the Consultant in respect of services provided in Canada if the Consultant is not a resident of Canada, unless the Consultant obtains a valid waiver from the Canada Revenue Agency. The amount withheld will be held on account for the Consultant in respect to any tax liability which may be owed to Canada.

## GC 23 Changes in the *Consultant* team

1. Should an entity or person named in the Consultant's proposal as an entity or person who is to perform the *Services* or part of the *Services* be unable to perform or complete the *Services*, the *Consultant* shall obtain the concurrence of the *Departmental Representative* prior to performing or completing the *Services*, or entering into an agreement with another equally qualified entity or person to perform or complete the *Services*, such concurrence not to be unreasonably withheld.
2. In seeking to obtain the concurrence of the *Departmental Representative* referred to in paragraph 1, the *Consultant* shall provide notice in writing to the *Departmental Representative* containing:
  - (a) the reason for the inability of the entity or person to perform the *Services*;
  - (b) the name, qualifications and experience of the proposed replacement entity or person, and
  - (c) if applicable, proof that the entity or person has the required security clearance granted by *Canada*.

3. The *Consultant* shall not, in any event, allow performance of any part of the *Services* by unauthorized replacement entities or persons, and acceptance of a replacement entity or person by the *Departmental Representative* shall not relieve the *Consultant* from responsibility to perform the *Services*.
4. The *Departmental Representative*, with the authority of Canada, may order the removal from the *Consultant* team of any unauthorized replacement entity or person and the *Consultant* shall immediately remove the entity or person from the performance of the *Services* and shall, in accordance with paragraphs 1. and 2., secure a further replacement.
5. The fact that the *Departmental Representative* does not order the removal of a replacement entity or person from the performance of the *Services* shall not relieve the *Consultant* from the *Consultant's* responsibility to meet all the *Consultant's* obligations in the performance of the *Services*.

#### **GC 24 Joint and Several Liability**

If at any time there is more than one legal entity constituting the *Consultant*, their covenants under the Standing Offer and/or Call-Up shall be considered to be joint and several and apply to each and every entity. If the *Consultant* is or becomes a partnership or joint venture, each legal entity who is a member or becomes a member of the partnership or joint venture or its successors is and continues to be jointly and severally liable for the performance of the work and all the covenants of the *Consultant* pursuant to the Standing Offer and/or Call-Up, whether or not that entity ceases to be a member of the partnership, joint venture or its successor.

#### **GC 25 Performance evaluation - contract**

1. Consultants shall take note that the performance of the *Consultant* during and upon completion of the services shall be evaluated by Canada. The evaluation includes all or some of the following criteria:
  - a. Design
  - b. Quality of Results
  - c. Management
  - d. Time
  - e. Cost
2. A weighting factor of 20 points will be assigned to each of the five criteria as follows:
  - a. Unacceptable: 0 to 5 points
  - b. Not satisfactory: 6 to 10 points
  - c. Satisfactory: 11 to 16 points
  - d. Superior: 17 to 20 points
3. The consequences resulting from the performance evaluation are as follows:
  - a. For an overall rating of 85% or higher, a congratulation letter is sent to the *Consultant*.
  - b. For an overall rating of between 51% and 84%, a standard, meets expectations, letter is sent to the *Consultant*.

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- c. For an overall rating of between 30% and 50%, a warning letter is sent to the Consultant indicating that if, within the next two (2) years, they receive 50% or less on another evaluation, the firm may be suspended from any new PWGSC solicitations for construction services, architectural and engineering services or facility maintenance services, of real property projects, for a period of one year.
  - d. For an overall rating of less than 30%, a suspension letter is sent to the Consultant indicating that the firm is suspended from any new PWGSC solicitations for construction services, architectural and engineering services or facility maintenance services, of real property projects, for a period of one year.
  - e. For a rating of 5 points or less on any one criterion, a suspension letter is sent to the Consultant indicating that the firm is suspended from any new PWGSC solicitations for construction services, architectural and engineering services or facility maintenance services, of real property projects, for a period of one year.

The form PWGSC-TPSGC 2913-1, Select - Consultant Performance Evaluation Report (CPERF), is used to record the performance.

## **GC 26 International Sanctions**

1. Persons in Canada, and Canadians outside of Canada, are bound by economic sanctions imposed by Canada. As a result, the Government of Canada cannot accept delivery of goods or services that originate, either directly or indirectly, from the countries or persons subject to [economic sanctions](http://www.international.gc.ca/sanctions/index.aspx?lang=eng) (<http://www.international.gc.ca/sanctions/index.aspx?lang=eng>).
2. The Consultant must not supply to the Government of Canada any goods or services which are subject to economic sanctions.
3. The Consultant must comply with changes to the regulations imposed during the period of the Call-Up. The Consultant must immediately advise Canada if it is unable to perform the Services as a result of the imposition of economic sanctions against a country or person or the addition of a good or service to the list of sanctioned goods or services. If the parties cannot agree on a work around plan, the Call-Up will be terminated for the convenience of Canada in accordance with terms and conditions of the Standing Offer and/or Call-Up.

## **GC 27 Integrity Provisions - Standing Offer**

The Ineligibility and Suspension Policy (the "Policy") and all related Directives incorporated by reference into the Request for Standing Offers on its closing date are incorporated into, and form a binding part of the Standing Offer and any resulting contracts. The Consultant must comply with the provisions of the Policy and Directives, which can be found on Public Works and Government Services Canada's website at <http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>.

## **GC 28 Code of Conduct for Procurement – Standing Offer**

The Consultant agrees to comply with the [Code of Conduct for Procurement](http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>) and to be bound by its terms for the period of the Standing Offer and any resulting contracts.

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**0000DA SUPPLEMENTARY CONDITIONS**

**SC 1. Employer/Prime Consultant:**

1. During the Design Stage
  - a) The Consultant shall, where the Consultant is working on Federal property and is in control of the work site (no Federal presence or construction contractor), for the purposes of the applicable provincial or territorial Occupational Health & Safety Acts and Regulations, and for the duration of the Work of the Contract:
    - i) act as the Employer, where the Consultant is the only employer on the work site, in accordance with the Authority Having Jurisdiction;
    - ii) assume the role of Prime Consultant, where there are two or more employers (including sub-consultants) involved in work at the same time and space at the work site, in accordance with the Authority Having Jurisdiction; and
2. During the Construction Stage
  - a) The Consultant shall, for the purposes of the Occupational Health & Safety Acts and Regulations, and for the duration of the Work of the Contract, agree to accept that the Construction Contractor is the Principal/Prime Contractor, and to conform to that Contractor's Site Specific Health and Safety Plan.

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**9998DA TERMS OF PAYMENT**

**TP 1 Fees**

1. Subject to the terms and conditions of the Standing Offer, and in consideration for the performance of the *Services*, Canada shall pay to the *Consultant* a sum of money calculated in accordance with the fee arrangements identified herein and in 2000DA.
2. The *Consultant's* fees are only payable when the *Consultant* has performed the *Services* as determined by the *Departmental Representative*. Payment in respect of a *Service*, or part of a *Service*, is not to be deemed a waiver of *Canada's* rights of set-off at law or under this Standing Offer for costs or expenses arising from default or negligence of the *Consultant*.
3. The maximum amount payable under a Call-Up, including fees and disbursements, shall not be exceeded, without the prior written authorization of the Contracting Authority.

**TP 2 Payments to the Consultant**

1. The *Consultant* shall be entitled to receive progress payments at monthly or other agreed intervals, subject to the limitations of the Call-up, if applicable. Such payments shall be made not later than the due date. The due date shall be the 30th day following receipt of an acceptable invoice.
2. An acceptable invoice shall be an invoice delivered to the *Departmental Representative* in the agreed format with sufficient detail and information to permit verification. The invoice shall also identify, as separate items:
  - (a) the amount of the progress payment being claimed for *Services* satisfactorily performed,
  - (b) the amount for any tax calculated in accordance with the applicable federal legislation, and
  - (c) the total amount which shall be the sum of the amounts referred to in TP 2.2(a) and TP 2.2(b).
3. The amount of the tax shown on the invoice shall be paid by *Canada* to the *Consultant* in addition to the amount of the progress payment for *Services* satisfactorily performed.
4. The *Departmental Representative* shall notify the *Consultant* within fifteen (15) days after the receipt of an invoice of any error or missing information therein. Payment shall be made not later than thirty (30) days after acceptance of the corrected invoice or the required information.
5. Upon completion of each Call-up, the *Consultant* shall provide a Statutory Declaration evidencing that all the *Consultant's* financial obligations for *Services* rendered to the *Consultant* or on the *Consultant's* account, in connection with the Call-up, have been satisfied.
6. Upon written notice by a *Sub-Consultant*, with whom the *Consultant* has a direct contract, of an alleged non payment to the *Sub-Consultant*, the *Departmental Representative* may provide the *Sub-Consultant* with a copy of the latest approved progress payment made to the *Consultant* for the *Services*.
7. Upon the satisfactory completion of all *Services*, the amount due, less any payments already made, shall be paid to the *Consultant* not later than thirty (30) days after receipt of an acceptable invoice, together with the Statutory Declaration in accordance with TP 2.5.



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### TP 3 Delayed Payment

1. If *Canada* delays in making a payment that is due in accordance with TP 2, the *Consultant* will be entitled to receive interest on the amount that is overdue for the period of time as defined in TP 3.2 including the day previous to the date of payment. Such date of payment shall be deemed to be the date on the cheque given for payment of the overdue amount. An amount is overdue when it is unpaid on the first day following the due date described in TP 2.1.
2. Interest shall be paid automatically on all amounts that are not paid by the due date or fifteen (15) days after the *Consultant* has delivered a Statutory Declaration in accordance with TP 2.5 or TP 2.7, whichever is the later.
3. The rate of interest shall be the *Average Bank Rate* plus 3 percent per year on any amount which is overdue pursuant to TP 3.1.

### TP 4 Claims Against, and Obligations of, the Consultant

1. *Canada* may, in order to discharge lawful obligations of and satisfy lawful claims against the *Consultant* by a *Sub-Consultant*, with whom the *Consultant* has a direct contract, for *Services* rendered to, or on behalf of, the *Consultant*, pay an amount from money that is due and payable to the *Consultant* directly to the claimant *Sub-Consultant*.
2. For the purposes of TP 4.1 a claim shall be considered lawful when it is so determined:
  - (a) by a court of legal jurisdiction, or
  - (b) by an arbitrator duly appointed to arbitrate the said claim, or
  - (c) by a written notice delivered to the *Departmental Representative* and signed by the *Consultant* authorizing payment of the said claim or claims.
3. A payment made pursuant to TP 4.1 is, to the extent of the payment, a discharge of *Canada's* liability to the *Consultant* under a specific Call-up and will be deducted from any amount payable to the *Consultant* under any active Call-up.
4. TP 4.1 shall only apply to claims and obligations
  - (a) The notification of which has set forth the amount claimed to be owing and a full description of the *Services* or a part of the *Services* for which the claimant has not been paid. The notification must be received by the *Departmental Representative* in writing before the final payment is made to the *Consultant* and within one hundred twenty (120) days of the date on which the claimant
    - (1) should have been paid in full under the claimant's agreement with the *Consultant* where the claim is for an amount that was lawfully required to be held back from the claimant; or
    - (2) performed the last of the *Services* pursuant to the claimant's agreement with the *Consultant* where the claim is not for an amount referred to in TP 4.4(a)(1), and
  - (b) the proceedings to determine the right to payment of which shall have commenced within one year from the date that the notification referred to in TP 4.4(a) was received by the *Departmental Representative*.

5. *Canada* may, upon receipt of a notification of claim referred to in TP 4.4(a), withhold from any amount that is due and payable to the *Consultant* pursuant to a Call-up the full amount of the claim or any portion thereof.
6. The *Departmental Representative* shall notify the *Consultant* in writing of receipt of any notification of claim and of the intention of *Canada* to withhold funds pursuant to TP 4.5. The *Consultant* may, at any time thereafter and until payment is made to the claimant, post with *Canada*, security in a form acceptable to *Canada* in an amount equal to the value of the said claim. Upon receipt of such security *Canada* shall release to the *Consultant* any funds which would be otherwise payable to the *Consultant*, that were withheld pursuant to the provision of TP 4.5.
7. The *Consultant* shall discharge all lawful obligations and shall satisfy all lawful claims against the *Consultant* for *Services* rendered to, or on behalf of, the *Consultant* in respect of this Standing Offer at least as often as this Standing Offer requires *Canada* to discharge its obligations to the *Consultant*.

#### **TP 5 No Payment for Errors and Omissions**

The *Consultant* shall not be entitled to payment in respect of costs incurred by the *Consultant* in remedying errors and omissions in the *Services* that are attributable to the *Consultant*, the *Consultant's* employees, or persons for whom the *Consultant* had assumed responsibility in performing the *Services*.

#### **TP 6 Payment for Changes and Revisions**

1. Payment for any additional or reduced *Services* authorized by the Departmental Representative, prior to their performance, and for which a basis of payment has not been established at the time of execution of the Call-up, shall be in an amount or amounts to be determined by the Departmental Representative, acting reasonably, subject to these Terms of Payment.
2. Payment for additional *Services* not identified at the time of execution of the Call-up shall be made only to the extent that
  - (a) the additional *Services* are *Services* that are not included in stated *Services* in the Call-Up; and
  - (b) The additional *Services* are required for reasons beyond the control of the *Consultant*.

#### **TP 7 Extension of Time**

If, and to the extent that, the time for completion of the *Construction Contract* is exceeded or extended through no fault of the *Consultant* in the opinion of *Canada*, payment for the *Services* required for such extended period of the contract administration shall be subject to review and equitable adjustment by *Canada*.

#### **TP 8 Suspension Costs**

1. During a period of suspension of the *Services* pursuant to GC 7 of clause 0220DA, General Conditions, the *Consultant* shall minimize all costs and expenses relating to the *Services* that may occur during the suspension period.
2. Within fourteen (14) days of notice of such suspension, the *Consultant* shall submit to the *Departmental Representative* a schedule of costs and expenses, if any, that the *Consultant* expects to incur during the period of suspension, and for which the *Consultant* will request reimbursement.

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3. Payment shall be made to the *Consultant* for those costs and expenses that, in the opinion of *Canada*, are substantiated as having been reasonably incurred during the suspension period.

#### **TP 9 Termination Costs**

1. In the event of termination of any Call-up pursuant to GC 8 of clause 0220DA, General Conditions, *Canada* shall pay, and the *Consultant* shall accept in full settlement, an amount based on these Terms of Payment, for *Services* satisfactorily performed and any reasonable costs and expenses incurred to terminate the Call-Up.
2. Within fourteen (14) *days* of notice of such termination, the *Consultant* shall submit to the *Departmental Representative* a schedule of costs and expenses reasonably incurred. The *Consultant* must ensure that it has mitigated its costs to the best of its ability.
3. Payment shall be made to the *Consultant* for those costs and expenses that in the opinion of *Canada* are substantiated as having been reasonably incurred after the date of termination.
4. The *Consultant* has no claim for damages, compensation, loss of profit, loss of opportunity, allowance or otherwise by reason of, or directly or indirectly arising out of, any action taken or termination notice given by *Canada* under GC8 Termination.

#### **TP 10 Disbursements**

1. Subject to any provisions specifically to the contrary in the Supplementary Conditions, the following costs shall be included in the fees required to deliver the consultant services and shall not be reimbursed separately;
  - (a) reproduction and delivery costs of drawings, CADD files, specifications and other Technical Documentation specified in the Standing Offer Brief;
  - (b) standard office expenses such as any photocopying, computer costs, Internet, cellular phone costs, long distance telephone and fax costs, including that between the *Consultant's* main office and branch offices or between the *Consultant's* offices and other team members offices;
  - (c) courier and delivery charges for deliverables specified in the Standing Offer Brief;
  - (d) plotting;
  - (e) presentation material;
  - (f) parking fees;
  - (g) taxi charges;
  - (h) travel time;
  - (i) travel expenses; and
  - (j) local project office.

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2. Subject to any provisions specifically to the contrary in the Supplementary Conditions, the following disbursements reasonably incurred by the Consultant, that are related to the Services and approved by the Departmental Representative, shall be reimbursed to the Consultant at actual cost:
- (a) reproduction and delivery costs of drawings, CADD files, specifications and other Technical Documentation additional to that specified in the Standing Offer Brief;
  - (b) transportation costs for material samples and models additional to that specified in the Standing Offer Brief;
  - (c) project related travel and accommodation additional to that specified in the Standing Offer Brief shall be reimbursed in accordance with current National Joint Council (NJC) Travel Directive (<http://www.njc-cnm.gc.ca/directive/index.php?dlabel=travel-voyage&lang=eng&did=10&merge=2>); and
  - (d) other disbursements made with the prior approval and authorization of the Departmental Representative.
3. Disbursements shall be Project related and shall not include expenses that are related to the normal operation of the Consultant's business. The amounts payable, shall not exceed the amount entered in the Call-up, without the prior authorization of the Departmental Representative.

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**9999DA CONSULTANT SERVICES**

**CS 1 Services**

The *Consultant* shall perform the *Services* described herein and in any subsequent Call-up, in accordance with the terms and conditions of this Standing Offer.

**CS 2 Standard of Care**

In performing the services, the Consultant shall provide and exercise the standard of care, skill and diligence required by customarily accepted professional practices and procedures developed by professional bodies in the performance of the services at the time when and the location in which the *Services* are provided.

**CS 3 Time Schedule**

The *Consultant* shall:

- (a) submit in a timely manner to the *Departmental Representative*, for approval, a time schedule for the *Services* to be performed, in detail appropriate to the size and complexity of the Project, and in a format as requested by the *Departmental Representative*;
- (b) adhere to the approved time schedule and, if changes in the approved time schedule become necessary, indicate the extent of, and the reasons for such changes, and obtain the approval of the *Departmental Representative*.

**CS 4 Project Information, Decisions, Acceptances, Approvals**

- 1. The *Departmental Representative* shall provide, in a timely manner, project information, written decisions and instructions, including acceptances and approvals relating to the *Services* provided by the *Consultant*.
- 2. No acceptance or approval by the *Departmental Representative*, whether expressed or implied, shall be deemed to relieve the *Consultant* of the professional or technical responsibility for the *Services* provided by the *Consultant*.

**CS 5 Changes in Services**

The *Consultant* shall:

- (a) make changes in the *Services* to be provided for the Project, including changes which may increase or decrease the original scope of *Services*, when requested in writing by the *Departmental Representative*; and
- (b) prior to commencing such changes, advise the *Departmental Representative* of any known and anticipated effects of the changes on the *Construction Cost Estimate*, *Consultant fees*, *Project Schedule*, and other matters concerning the Project.

**CS 6 Codes, By-Laws, Licences, Permits**

The *Consultant* shall comply with all statutes, codes, regulations and by-laws applicable to the design and where necessary, shall review the design with those public authorities having jurisdiction in order that the consents, approvals, licences and permits required for the project may be applied for and obtained.

## CS 7 Provision of Staff

The *Consultant* shall, on request, submit to the *Departmental Representative* for approval, the names, addresses, qualifications, experience and proposed roles of all persons, including principals, to be employed by the *Consultant* to provide the *Services* identified in the Call-up and, on request, submit any subsequent changes to the *Departmental Representative* for approval.

## CS 8 Sub-Consultants

1. The *Consultant* shall:
  - (a) prior to any Call-up notify the *Departmental Representative* of any other sub-consultants with whom the *Consultant* intends to enter into agreements for part of the *Services* and, on request, provide details of the terms, and *Services* to be performed under the said agreements and the qualifications and names of the personnel of the *Sub-Consultants* proposed to be employed on any Call-up;
  - (b) include in any agreements entered into with sub-consultants such provisions of this Standing Offer as they apply to the *Sub-Consultants'* responsibilities; and
  - (c) upon written notice by a *Sub-Consultant*, with whom the *Consultant* has a direct contract, inform the *Sub-Consultant* of the *Consultant's* obligations to the *Sub-Consultant* under this Standing Offer.
2. The *Departmental Representative* may object to any *Sub-Consultant* within six (6) days of receipt of notification given in accordance with CS 8.1(a) and, on notification of such objection, the *Consultant* shall not enter into the intended agreement with the *Sub-Consultant*.
3. Neither an agreement with a *Sub-Consultant* nor the *Departmental Representative's* consent to such an agreement by the *Consultant* shall be construed as relieving the *Consultant* from any obligation under this Standing Offer or subsequent Call-ups, or as imposing any liability upon *Canada*.

## CS 9 Cost Control

If the *services* required under a call-up are for a construction project, the following will apply:

1. Throughout Project development, the *Construction Cost Estimate* prepared by the *Consultant* shall not exceed the *Construction Cost Limit*.
2. In the event that the *Consultant* considers that the *Construction Cost Estimate* will exceed the *Construction Cost Limit*, the *Consultant* shall notify the *Departmental Representative* and
  - (a) if the excess is due to factors under the control of, or reasonably foreseeable by the *Consultant*, the *Consultant* shall, if requested by the *Departmental Representative*, and at no additional cost to *Canada*, make such changes or revisions to the design as may be necessary to bring the *Construction Cost Estimate* within the *Construction Cost Limit*; or
  - (b) if the excess is due to factors that are not under the control of the *Consultant*, changes or revisions may be requested by the *Departmental Representative*. Such changes or revisions shall be undertaken by the *Consultant* at *Canada's* expense, and the cost involved shall become an amount to be mutually agreed, prior to performance of the said changes or revisions.

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File No. - N° du dossier  
PWU-6-3040

Buyer ID - Id de l'acheteur  
pwu201  
CCC No./N° CCC - FMS No/ N° VME

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3. If the lowest price obtained by bid process or negotiation exceeds the *Construction Cost Limit*, and if the excess is due to reasons within the control of, or reasonably foreseeable by the *Consultant*, the *Consultant* shall, if requested by the *Departmental Representative*, and without additional charge, be fully responsible for revising the Project scope and quality as required to reduce the construction cost and shall modify the construction documents as necessary to comply with the *Construction Cost Limit*.

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**2000DA CALCULATION OF FEES**

**CF 1 Fee Arrangement(s) for Services**

1. The fee to be paid to the *Consultant* for the *Services* pursuant to any Call-up, shall be determined by one or more of the following methods:
  - (a) Fixed Fee:  
The fixed fee will be established by multiplying the applicable hourly rate(s) by the number of hours, negotiated and agreed to by the *Departmental Representative* and the *Consultant*.
  - (b) Time Based Fee to an Upset Limit:  
An upset limit will be established by the *Departmental Representative*, and the *Consultant* will be paid for actual work performed using the applicable hourly rate(s) for such work.
2. Maximum Amount(s) Payable  
The maximum amount(s) that applies (apply) to the *Services* to be carried out at the fixed hourly rates shall be as specified in the Call-up, which amount(s) shall not be exceeded without the prior authorization of the *Departmental Representative* with the approval of Canada.

**CF 2 Payments for Services**

1. Payments in respect of the fixed fee shall be made upon satisfactory performance of the *Services* but such payments shall not exceed the amount(s) as specified in the Call-up, for each *Service*.
2. Payments in respect of the time based fee arrangement shall be made upon satisfactory performance of the *Services* but such payments shall not exceed the amount(s) as specified in the Call-up, for each *Service*.
3. Progress payments, in respect of all fee arrangements, shall be made in accordance with TP 2 in clause 9998DA, Terms of Payment, of the Standing Offer, but such payments shall not exceed the value of the fee indicated for each *Service* under consideration.
4. If, for reasons attributable to the *Consultant*, a price cannot be obtained by a tender or negotiation within the *Construction Cost Limit*, or acceptable to the *Departmental Representative* for the award of the *Construction Contract*, the *Consultant* shall be entitled to receive payment for the tender call, bid evaluation and construction contract award *Services*, only when the requirements of CS 9.3, in clause 9999DA, Consultant Services and Departmental Responsibilities, have been met.



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File No. - N° du dossier  
PWU-6-3040

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### **SUBMISSION REQUIREMENTS AND EVALUATION (SRE)**

- 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

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## 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 General Instructions to Proponents (GI 9).

#### 1.2 Submission of Proposals

The Proponent is responsible for meeting all submission requirements. Please follow detailed instructions in "Submission of Proposals", General Instructions to Proponents (GI 10).

#### 1.3 Calculation of Total Score

For this Standing Offer the Total Score will be established as follows:

Technical Rating x 90%	=	Technical Score (Points)
<u>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.

1. Submit one (1) bound original plus one (1) electronic copy (on disk or USB stick)
2. Paper size should be - 216mm x 279mm (8.5" x 11")
3. Minimum font size - 11 point Times or equal
4. Minimum margins - 12 mm left, right, top, and bottom
5. Double-sided submissions are preferred
6. One (1) 'page' means one side of a 216mm x 279mm (8.5" x 11") sheet of paper
7. 279mm x 432mm (11" x 17") fold-out sheets for spreadsheets, organization charts etc. will be counted as two pages.
8. The order of the proposals should follow the order of the Request for Standing Offer SRE 3 section.

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## 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 vary in accordance with the number of *Zones* being proposed:

- One Zone - maximum thirty-five (35) pages
- Two Zones - maximum forty (40) pages
- Three Zones - maximum forty-five (45) pages
- Four Zones - maximum fifty (50) pages
- Five Zones - maximum fifty-five (55) pages

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

- Covering letter
- Declaration/Certifications Form (Appendix A)
- Integrity Provisions –Required Documentation
- Front page of the Request for Standing Offer document
- Front page of revision(s) to the Request for Standing Offer document
- Price Proposal Form (Appendix B)

***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 Declaration/Certifications Form

Proponents must complete, sign and submit the following:

- A. Appendix A, Declaration / Certifications Form as required.

#### 3.1.2 Licensing, Certification or Authorization

The Proponent shall be authorized to provide engineering services and must include an 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 law in the province governing each applicable zone or zones. (Alberta, Saskatchewan and/or Manitoba.)

You must indicate current license or how you intend to meet the provincial licensing requirements.

#### 3.1.3 Integrity Provisions – Required documentation

In accordance with the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Proponent must provide, **as applicable**, to be given further consideration in the procurement process, the required documentation as per General instructions to Proponents (GI), Integrity Provisions – Proposal, **section 3a**.

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### 3.2 RATED REQUIREMENTS

Proposals meeting the mandatory requirements will be evaluated in accordance with the following criteria. The clarity of the proposal writing will form part of the evaluation (use of language, document structure, conciseness and completeness of the response):

#### 3.2.1 Comprehension of the Scope of Services

1. *What we are looking for:*  
A demonstration of the understanding of the overall requirements for services, including specific deliverables, expected approaches, technical expectations, and coordination requirements, especially in delivering government projects.
2. *What the Proponent should provide:*
  - a) scope of services - detailed list of services;
  - b) summary of your proposed typical work breakdown structure, i.e. resources assigned, time schedule, level of effort;
  - c) broader goals (federal image, sustainable development, sensitivities);
  - d) risk management strategy;
  - e) project management approach to working with PWGSC (understanding of PWGSC management structure, Client environment, standing offer process, working with the government in general);

#### 3.2.2 Team Approach / Management of Services

1. *What we are looking for:*  
How the team will be organized in its approach and methodology in the delivery of the Required Services.
2. *What the Proponent should provide:*  
A description of:
  - a) Roles and responsibilities of key personnel;
  - b) Assignment of the resources and availability of back-up personnel;
  - c) Management and organization (reporting structure);
  - d) Description of the firm's approach to responding to the individual call-ups which will arise as a result of this standing offer;
  - e) Quality control techniques;
  - f) Demonstration of how the team intends to meet the 'Project Response Time Requirements' ;
  - g) Conflict resolution.

#### 3.2.3 Past Experience

1. *What we are looking for:*  
Only include projects that were started within past seven (7) years, the Proponent has participated in a range of projects requiring a full scope of services in accordance with the Required Services (RS) section. The Proponent's participation in these projects should have involved the scope of services listed in the Required Services (RS) section.

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2. *What the Proponent should provide:*
    - a) A brief description of a maximum of three (3) significant projects, two (2) completed and one (1) undertaken over the last seven (7) years by the Proponent;
    - b) For the above projects, include the names of senior personnel and project personnel who were involved as part of the project team and their respective responsibilities, as well as the scope, and budget per discipline;
    - c) Indicate the dates the services were provided for the listed projects;
    - d) Scope of services rendered, project objectives, constraints and deliverables; and
    - e) Client references - name, address, phone and fax of client contact at working level. Reference checks may be completed if deemed necessary.
  3. The Proponent (as defined in General Instructions GI 1) 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.
  4. Please indicate those projects which were carried out in joint venture and the responsibilities of each of the involved entities in each project.

#### 3.2.4 Senior Personnel Expertise and Experience

1. *What we are looking for:*

A demonstration that the Proponent has senior personnel in-house with the capability, capacity and expertise in each area listed in the Required Services (RS) section.
2. *What the Proponent should provide: (approximately two (2) pages **per** senior personnel)*
  - a) submit a maximum of two (2) c.v.'s of senior personnel. Each curriculum vitae should clearly indicate the years of experience the senior personnel has in the provision of the services specified in the Required Services (RS) section; and
  - b) Identify the personnel's years of experience, the number of years with the firm; and
  - c) professional accreditation; and
  - d) accomplishments/achievements/awards.
3. In-house personnel means personnel within the Proponent's organization (see definition of Proponent in General Instructions GI 1). Past expertise and experience of personnel not within the Proponent's (or joint venture Proponent's) organization will not be considered in the evaluation.

#### 3.2.5 Project Personnel Expertise and Experience

1. *What we are looking for:*

A demonstration that the Proponent has project personnel in-house with the capability, capacity and expertise to provide the required services and deliverables listed in the Required Services (RS) section.
2. *What the Proponent should provide:*
  - a) submit a maximum of two (2) c.v.'s of project personnel which will perform the majority of the work resulting from the individual Call-ups. Each curriculum vitae should clearly indicate the years of experience the project personnel has in the provision of the services specified in the Required Services (RS) section;
  - b) Identify the personnel's years of experience, the number of years with the firm;
  - c) professional accreditation; and
  - d) accomplishments/achievements/awards.

3. In-house personnel means personnel within the Proponent's organization (see definition of Proponent in General Instructions GI 1). Past expertise and experience of personnel not within the Proponent's (or joint venture Proponent's) organization will not be considered in the evaluation.

### 3.2.6 Hypothetical Projects

1. *What we are looking for:*  
Describe the approach and methodology that you would employ to deliver the project in a general written response only.

The clarity of the report writing will form part of the evaluation (use of language, document structure, conciseness and completeness of the response).

2. *What the Proponent should provide for each hypothetical project :*
  - a) description of the approach and methodology that you would employ to solve the problem;
  - b) summary of your proposed work breakdown structure, i.e. scope of work, resources assigned, time schedule, level of effort in terms of number of hours of all identified resources;
  - c) appropriateness of assigned resources;
  - d) level of effort;
  - e) project management approach to working with PWGSC (understanding of PWGSC management structure, CSU/Client environment, standing offer process, working with the government in general);
  - f) problem-solving methodology (client involvement, PWGSC involvement, other government agency involvement, creative approaches to solving problems).

Calculation of a fee for the provision of these services is not required.

3. *The Facts:*  
When responding to the following hypothetical fact situations, be advised that the hypothetical is to be used for evaluation purposes only. Areas and details in the hypothetical are provided only to give the Proponent sufficient material from which to develop an outline of their approach and methodology to the resolution of the issues.

#### **PROJECT 1 – Investigations and Reports**

Fire Pump replacement project at a Federal Correctional Institute involving;  
" Options analysis

#### **PROJECT 2 – Investigations and Reports**

Upgrade and/or replacement of an Energy Monitoring and Control System at an Agriculture and Agri-Foods Canada Federal Complex involving  
" Options Analysis

#### **PROJECT 3 – Investigations and Reports**

Electrical Engineering Systems Study for Grain Commission building at Winnipeg, Manitoba involving;  
" Options Analysis

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#### **PROJECT 4 – Investigations and Reports**

Electrical Site System Assessment for Edmonton Institute for Women (EIFW) involving;  
" Options Analysis

#### **PROJECT 5 – Engineering Services**

Replacement of boilers and chillers at a Federal Office Building involving;  
" Production of contract documentation  
" Construction in a fully occupied facility

#### **PROJECT 6 – Engineering Services**

Renovation of mechanical systems in a laboratory at a Federal Building involving;  
" Production of contract documentation  
" Construction in a fully occupied facility

#### **PROJECT 7 – Engineering Services**

Main service and distribution – Normal and emergency power upgrade at Federal Building involving;  
" Production of contract documentation  
" Construction in a fully occupied facility

#### **PROJECT 8 – Engineering Services**

Sustainable lighting design and control for a Federal Office and a Laboratory involving;  
" Production of contract documentation  
" Construction in a fully occupied facility

#### **PROJECT 9 – Engineering Services**

Security System CCTV upgrade at a Federal Building involving;  
" Production of contract documentation  
" Construction in a fully occupied facility

### **3.3 EVALUATION AND RATING**

Proposals that are responsive (i.e. which meet all the mandatory requirements set out in the Request for Standing Offer) will be reviewed, evaluated and rated by a PWGSC Evaluation Board. In the first instance, price envelopes will remain sealed and only the technical components of the proposal will be evaluated in accordance with the following to establish Technical Ratings:

<b>Criterion</b>	<b>Weight Factor</b>	<b>Rating</b>	<b>Weighted Rating</b>
Comprehension of the Scope of Services	1.0	0 - 10	0 - 10
Team Approach / Management of Services	1.0	0 - 10	0 - 10
Past Experience	3.0	0 - 10	0 - 30
Senior Personnel Expertise and Experience	2.0	0 - 10	0 - 20
Project Personnel Expertise and Experience	2.0	0 - 10	0 - 20
Hypothetical Projects	1.0	0 - 10	0 - 10
<b>Total</b>	<b>10.0</b>		<b>0 - 100</b>

### 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

To be considered further, proponents **must** achieve a minimum weighted rating of sixty-five (65) out of the hundred (100) points available for the rated technical criteria as specified above.

**No further consideration will be given to proponents not achieving the pass mark of sixty-five (65) points.**



#### **SRE 4 PRICE OF SERVICES**

All price proposal envelopes corresponding to responsive proposals which have achieved the pass mark of sixty-five (65) points are opened upon completion of the technical evaluation. When there are three or more responsive proposals, an average price is determined by adding all the price proposals together and dividing the total by the number of price proposals being opened. This calculation will not be conducted when one or two responsive proposals are received.

All price proposals which are greater than twenty-five percent (25%) above the average price will be set aside and will 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:

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

The proposals will be ranked in order from the highest to the lowest using the total score (technical plus price). The proponents submitting the highest ranked proposals will be recommended for issuance of a standing offer. In the case of a tie, the Proponent submitting the lower price for the services will be selected. Canada reserves the right to issue up to four (4) Standing Offers per zone.

---

## 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 "Submission of Proposals", General Instructions to Proponents (GI 10).

- ☐ Declaration / Certifications Form - completed and signed form provided in Appendix A
- ☐ Integrity Provisions – Required documentation – **as applicable**, in accordance with the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>) and as per General instructions to Proponents (GI), Integrity Provisions – Proposal, **section 3a**.
- ☐ Integrity Provisions - Declaration of Convicted Offences – **with its bid, as applicable**, in accordance with the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>) and as per General instructions to Proponents (GI), Integrity Provisions – Proposal, **section 3b**.
- ☐ Proposal - 1 original + 1 [electronic copy](#)
- ☐ Front page of Request for Standing Offer
- ☐ Front page of Revision(s) to a Request for Standing Offer

In a separate envelope:

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

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File No. - N° du dossier  
PWU-6-3040

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## **APPENDIX A**

### **Declaration/Certifications Form**

Solicitation No. - N° de l'invitation  
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### Declaration / Certifications Form (page 1 of 4)

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**Name of Proponent:** \_\_\_\_\_

**Street Address:** \_\_\_\_\_ **Mailing Address** (if different than street address)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**City:** \_\_\_\_\_ **City:** \_\_\_\_\_

**Prov./Terr./State:** \_\_\_\_\_ **Prov./Terr./State:** \_\_\_\_\_

**Postal/ZIP Code:** \_\_\_\_\_ **Postal/ZIP Code:** \_\_\_\_\_

**Telephone Number:** (    ) \_\_\_\_\_

**Fax Number:** (    ) \_\_\_\_\_

**E-Mail:** \_\_\_\_\_

**Procurement Business Number:** \_\_\_\_\_

---

#### Type of Organization

\_\_\_ Sole Proprietorship

\_\_\_ Partnership

\_\_\_ Corporation

\_\_\_ Joint Venture

#### Size of Organization

Number of Employees \_\_\_\_\_

Graduate Architects/ \_\_\_\_\_

Prof. Engineers: \_\_\_\_\_

Other Professionals \_\_\_\_\_

Technical Support \_\_\_\_\_

Other \_\_\_\_\_

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**Declaration / Certifications Form (page 2 of 4)**

**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 the issuance of a standing offer. 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.

**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.

---

**Declaration / Certifications Form (page 3 of 4)**

**Work Force Adjustment Directive**

Is the Proponent a FPS who received a lump sum payment pursuant to the terms of a Work Force Adjustment Directive? 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 the Goods and Services Tax or Harmonized Sales Tax.

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**Declaration / Certifications Form (page 4 of 4)**

---

**Name of Proponent:** \_\_\_\_\_

\_\_\_\_\_

**This Declaration forms part of the offer.**

Education, Professional Accreditation and Experience:

All statements made with regard to the education, professional accreditation and the experience of individuals proposed for providing services under the Standing Offer are accurate and factual, and we are aware that Canada reserves the right to verify any information provided in this regard and that untrue statements may result in the proposal being declared non-responsive. Should a verification by Canada disclose untrue statements, Canada shall have the right to treat any standing offer resulting from this solicitation as being in default and to terminate it accordingly.

**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.

**Name (print):** \_\_\_\_\_

**Capacity:** \_\_\_\_\_

**Signature** \_\_\_\_\_

**Telephone Number:** (    ) \_\_\_\_\_

**Fax Number:** (    ) \_\_\_\_\_

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

**Date:** \_\_\_\_\_

During proposal evaluation period, PWGSC contact will be with the above named person.

This Appendix A should be completed and submitted with the proposal, but may be submitted afterwards as follows: if any of these required certifications 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.

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## **APPENDIX B**

### Price Proposal Form



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## APPENDIX B - PRICE PROPOSAL

### INSTRUCTIONS

**1. Complete price proposal form for each *Zone* offered and submit in a separate sealed envelope, with the following information:**

- i. Name of Proponent,
- ii. RFSO – Mechanical Electrical Consulting Services
- iii. PWGSC Solicitation Number,
- iv. Name of Zone being proposed, and the words
- v. "PRICE PROPOSAL FORM"

2. Price proposals are not to include Applicable Taxes and will be evaluated in Canadian Dollars.

3. Proponents are not to alter or add information to the form.

4. In order to ensure that fair and competitive hourly rates are received for each of the positions listed, the following requirement must be strictly adhered to: proponents must provide an hourly rate for each listed position. In the event that the firm consists of fewer personnel than listed, provide an hourly rate that corresponds with each position listed. Within the engineers and technologists positions, the hourly rate provided must be equal to or greater than the hourly rate provided for the position listed below it. For example, if the firm does not have an Intermediate Technologist, the hourly rate provided must be equal to or greater than the hourly rate provided for the Junior Technologist. The hourly rate for any given category of personnel cannot be \$0 or nil value. Failure to insert an hourly rate for each position listed will render your proposal non-responsive.

5. The hourly rates identified herein will be fixed for the duration of the Standing Offer.

6. Travel and Living Expenses: Firms are advised that any travel time and travel-related expenses associated with the delivery of services within a 50 km radius of each major city located in each Zone as detailed herein are to be calculated as an integral part of the hourly rates. For delivery of services outside of this 50 km radius, travel-related expenses will be paid (with prior approval of the Departmental Representative) in accordance with current Treasury Board Policy.

- Northern Alberta is Edmonton, AB,
- Southern Alberta is Calgary, AB,
- Northern Saskatchewan is Saskatoon, SK,
- Southern Saskatchewan is Regina, SK, and
- Manitoba is Winnipeg, MB

7. Fixed hourly rates for each category are to be provided in column A and are then multiplied by the weight factor in column B (provided for evaluation purpose only). The totals for each discipline are then added together for evaluation purposes.

8. In the event that a mathematical error occurs in carrying over the totals, PWGSC will correct the totals to ensure the fairness of the Proposals

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## APPENDIX B – PRICE PROPOSAL

Name of Proponent: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
E-mail: \_\_\_\_\_  
PBN: \_\_\_\_\_  
\_\_\_\_\_  
Name of Zone: \_\_\_\_\_

### Time Based Rates will be used in the evaluation process.

#### Time Based Rates

PWGSC recognizes that some firms, especially smaller firms, do not have separate positions for each activity/position and that any one individual in a firm may perform more than one of the listed activities. Said individuals may have different rates for each activity, which must be reflected in the proposed rates.

The proposed charge out rates are not specifically for the individuals who perform the work, but are for the activity positions, regardless of the actual rates, titles or positions of whoever perform the activity for the firm.

The multiplying factor applied is used for evaluation purposes only, and is based on an average percentage of time for the activities of each position for a typical standing offer project, requiring 3,200 hours of service.

**FOR THE PERIOD OF APRIL 01, 2017 TO MARCH 31, 2018 (ESTIMATE)**

**Time Based Rates will be used in the evaluation process.**

Staff/position	Column A		Column B		=	Total
	\$	Rate per hour	x	Estimated hourly usage		
1. Mechanical Engineering						
1. Senior Engineer	\$	.....	x	50	= \$	.....
2. Intermediate Engineer	\$	.....	x	100	= \$	.....
3. Junior Engineer	\$	.....	x	150	= \$	.....
4. Senior Technologist	\$	.....	x	200	= \$	.....
5. Intermediate Technologist	\$	.....	x	300	= \$	.....
6. Junior Technologist	\$	.....	x	300	= \$	.....
7. Specification Writer	\$	.....	x	150	= \$	.....
8. CAD Operator	\$	.....	x	300	= \$	.....
2. Electrical Engineering						
1. Senior Engineer	\$	.....	x	50	= \$	.....
2. Intermediate Engineer	\$	.....	x	100	= \$	.....
3. Junior Engineer	\$	.....	x	150	= \$	.....
4. Senior Technologist	\$	.....	x	200	= \$	.....
5. Intermediate Technologist	\$	.....	x	300	= \$	.....
6. Junior Technologist	\$	.....	x	300	= \$	.....
7. Specification Writer	\$	.....	x	150	= \$	.....
8. CAD Operator	\$	.....	x	300	= \$	.....
3. Office/Administrative Support						
9. Clerical/Secretarial Personnel	\$	.....	x	100	= \$	.....
				Total Hours = 3200		
					Total	\$ .....

**FOR THE PERIOD OF APRIL 01, 2018 TO MARCH 31, 2019 (ESTIMATE)**

**Time Based Rates will be used in the evaluation process.**

Staff/position	Column A		Column B		=	Total
	\$	Rate per hour	x	Estimated hourly usage		
1. Mechanical Engineering						
1. Senior Engineer	\$	.....	x	50	= \$	.....
2. Intermediate Engineer	\$	.....	x	100	= \$	.....
3. Junior Engineer	\$	.....	x	150	= \$	.....
4. Senior Technologist	\$	.....	x	200	= \$	.....
5. Intermediate Technologist	\$	.....	x	300	= \$	.....
6. Junior Technologist	\$	.....	x	300	= \$	.....
7. Specification Writer	\$	.....	x	150	= \$	.....
8. CAD Operator	\$	.....	x	300	= \$	.....
2. Electrical Engineering						
1. Senior Engineer	\$	.....	x	50	= \$	.....
2. Intermediate Engineer	\$	.....	x	100	= \$	.....
3. Junior Engineer	\$	.....	x	150	= \$	.....
4. Senior Technologist	\$	.....	x	200	= \$	.....
5. Intermediate Technologist	\$	.....	x	300	= \$	.....
6. Junior Technologist	\$	.....	x	300	= \$	.....
7. Specification Writer	\$	.....	x	150	= \$	.....
8. CAD Operator	\$	.....	x	300	= \$	.....
3. Office/Administrative Support						
1. Clerical/Secretarial Personnel	\$	.....	x	100	= \$	.....
				Total Hours = 3200		
					Total	\$ .....

**FOR THE PERIOD OF APRIL 01, 2019 TO MARCH 31, 2020 (ESTIMATE) - OPTION YEAR 1**

**Time Based Rates will be used in the evaluation process.**

Staff/position	Column A		Column B		=	Total
	\$	Rate per hour	x	Estimated hourly usage		
1. Mechanical Engineering						
1. Senior Engineer	\$	.....	x	50	= \$	.....
2. Intermediate Engineer	\$	.....	x	100	= \$	.....
3. Junior Engineer	\$	.....	x	150	= \$	.....
4. Senior Technologist	\$	.....	x	200	= \$	.....
5. Intermediate Technologist	\$	.....	x	300	= \$	.....
6. Junior Technologist	\$	.....	x	300	= \$	.....
7. Specification Writer	\$	.....	x	150	= \$	.....
8. CAD Operator	\$	.....	x	300	= \$	.....
2. Electrical Engineering						
1. Senior Engineer	\$	.....	x	50	= \$	.....
2. Intermediate Engineer	\$	.....	x	100	= \$	.....
3. Junior Engineer	\$	.....	x	150	= \$	.....
4. Senior Technologist	\$	.....	x	200	= \$	.....
5. Intermediate Technologist	\$	.....	x	300	= \$	.....
6. Junior Technologist	\$	.....	x	300	= \$	.....
7. Specification Writer	\$	.....	x	150	= \$	.....
8. CAD Operator	\$	.....	x	300	= \$	.....
3. Office/Administrative Support						
1. Clerical/Secretarial Personnel	\$	.....	x	100	= \$	.....
				Total Hours = 3200		
				Total	\$	.....

**FOR THE PERIOD OF APRIL 01, 2020 TO MARCH 31, 2021 (ESTIMATE) - OPTION YEAR 2**

**Time Based Rates will be used in the evaluation process.**

<b>Staff/position</b>	<b>\$ <u>Column A</u> Rate per hour</b>	<b>x</b>	<b><u>Column B</u> Estimated hourly usage</b>	<b>=</b>	<b><u>Total</u></b>
<b>1. Mechanical Engineering</b>					
1. Senior Engineer	\$ .....	x	50	= \$	.....
2. Intermediate Engineer	\$ .....	x	100	= \$	.....
3. Junior Engineer	\$ .....	x	150	= \$	.....
4. Senior Technologist	\$ .....	x	200	= \$	.....
5. Intermediate Technologist	\$ .....	x	300	= \$	.....
6. Junior Technologist	\$ .....	x	300	= \$	.....
7. Specification Writer	\$ .....	x	150	= \$	.....
8. CAD Operator	\$ .....	x	300	= \$	.....
<b>2. Electrical Engineering</b>					
1. Senior Engineer	\$ .....	x	50	= \$	.....
2. Intermediate Engineer	\$ .....	x	100	= \$	.....
3. Junior Engineer	\$ .....	x	150	= \$	.....
4. Senior Technologist	\$ .....	x	200	= \$	.....
5. Intermediate Technologist	\$ .....	x	300	= \$	.....
6. Junior Technologist	\$ .....	x	300	= \$	.....
7. Specification Writer	\$ .....	x	150	= \$	.....
8. CAD Operator	\$ .....	x	300	= \$	.....
<b>3. Office/Administrative Support</b>					
1. Clerical/Secretarial Personnel	\$ .....	x	100	= \$	.....
				Total Hours = 3200	
				<b>Total</b>	<b>\$ .....</b>

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**Signature of Consultant or Joint Venture Consultants.**

.....  
signature

.....  
signature

.....  
capacity

.....  
capacity

.....  
signature

.....  
signature

.....  
capacity

.....  
capacity

**END OF PRICE PROPOSAL FORM**

**APPENDIX C**

**General Procedures & Standards**

**See attached document**

**APPENDIX D**

**Terms of Reference**



Public Works and  
Government Services  
Canada

Travaux publics et  
Services gouvernementaux  
Canada

Canada



# GENERAL PROCEDURES & STANDARDS

## For Professional & Design Services

MMXI Edition

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





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## I INTRODUCTION

### I.1 GENERAL PROCEDURES AND STANDARDS

#### I.1.1 GENERAL

- .1 These PWGSC *General Procedures and Standards* (P&S) have been developed to:
  - .1 Facilitate the development of a rational, well-documented design process; and
  - .2 Ensure compliance with federal government standards, PWGSC Policies and Treasury Board directives.

#### I.1.2 HARMONIZATION WITH THE TERMS OF REFERENCE (TOR)

- .1 The P&S document must be used in conjunction with the TOR, as the two documents are complimentary.
- .2 The TOR describes project-specific requirements, services and deliverables while the GP&S document outlines with minimum standards and procedures common to all projects.
- .3 In the case of a conflict between the two documents, the requirements of the TOR override this document.

### I.2 PROJECT DELIVERY

#### I.2.1 GENERAL REQUIREMENTS

- .1 The project delivery requirements outlined in this section are applicable to the design and construction of all PWGSC projects in Western Region, unless otherwise indicated in the TOR.
- .2 Under the direction of the Consultant, the Consultant team shall provide fully integrated and coordinated professional and design services for the delivery of a project, in accordance with the requirements in the TOR and as contained herein.
- .3 The Consultant must:
  - .1 Obtain written authorization from the Departmental Representative before proceeding from one phase of work to the next phase of a project;
  - .2 Coordinate all services with the Departmental Representative;
  - .3 Deliver each project utilizing best practices in support of User Department needs, respecting the approved financial budget, schedule, scope, quality energy budget;
  - .4 Establish a cohesive functional partnership and open communication between all members of the project delivery team throughout all phases of the project life;
  - .5 Ensure that the Consultant team has an in-depth understanding and collective 'buy-in' of the project requirements, scope, budget and scheduling objectives, working constructively to build a collaborative and cooperative team approach with knowledgeable and timely input and contribution by all project team members, including representatives from PWGSC and the User Department;
  - .6 Conduct rigorous quality assurance reviews during the design and construction phases, including the application of value engineering principles during the design of all complex systems;
  - .7 Provide a written response to all PWGSC comments included in Quality Assurance reviews conducted throughout the design of the project;
  - .8 If any alterations are required during the development of the design, analyse the impact on all project components and resubmit for approval before proceeding further;
  - .9 Establish and maintain a change control procedure for scope changes;



- .10 Ensure that an experienced Project Architect or Project Engineer is assigned to each project, who shall be responsible for the production, coordination and delivery of all design and construction documents for all project disciplines;
- .11 Prepare a continuous risk identification and management program employing effective methodologies to ensure construction safety as well as claims avoidance;
- .12 Provide continuous and comprehensive documentation of the project at all stages of the project implementation;
- .13 Ensure continuity of key personnel and maintain a dedicated working team for the life of the project;

### **I.2.2 SERVICE DELIVERY FOR ALL PROJECTS**

- .1 For all projects, the Consultant shall:
  - .1 Deliver the project to be within;
    - .1 The established construction budget,
    - .2 The key milestones, according to the established project schedule.
  - .2 Ensure that each Consultant team member:
    - .1 Understands the project requirements, for seamless delivery of the required services;
    - .2 Functions as a cohesive partnership with open communication between all members of the project delivery team throughout all phases of the project life;
    - .3 Function as an integrated and focused team with an in-depth understanding and collective 'buy-in' of the project requirements, scope, budget and scheduling objectives.
- .3 Provide;
  - .1 Full co-ordination of services with other consultants engaged by PWGSC,
  - .2 A continuous risk management program to address the risks associated specifically with this project, including construction safety and claims avoidance issues.
- .4 Deliver the work in a professional manner during all phases of the project, employing best practices for budget, schedule, quality, and scope management;
- .5 Maintain continuity of key personnel and maintain a dedicated working team for the life of the project.

### **I.2.3 SERVICE DELIVERY (BUILDINGS)**

- .1 For Building projects, where an Architectural firm is the Prime Consultants, the Consultant team shall, as a minimum, adhere to the standards of services outlined in the "Canadian Handbook of Practice for Architects - Volume 2 Management" (latest edition) distributed by the Royal Architectural Institute of Canada (RAIC).

### **I.2.4 SERVICE DELIVERY (ENGINEERING)**

- .1 For Engineering projects, where an Engineering firm is the Prime Consultants, the Consultant team shall adhere to the standards of services established by the Professional Engineering Association in the Province or Territories where the project is located.

## **I.3 PROCUREMENT OF GOODS AND SERVICES**

### **I.3.1 PUBLIC PROCUREMENT**

- .1 Public procurement by Canada is legislated and guided by a number of international and national trade agreements, and acts, as well as policies, directives, and guidelines provided by the Treasury Board Secretariat (TBS) and PWGSC.



- .2 There is one over-arching principle for all PWGSC procurement activities: Integrity. Subordinate to this are guiding principles, which provide the framework for PWGSC procurement process.
- .3 For further information refer to the following web link;
  - .1 <http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>

### **I.3.2 INTEGRITY AND GUIDING PRINCIPLES**

- .1 PWGSC procurement processes will be open, fair and honest.
- .2 Client Service:
  - .1 PWGSC will make every reasonable effort to satisfy the operational requirements of its clients, while obtaining the best value in each procurement process.
- .3 National Objectives:
  - .1 PWGSC procurement activities will advance established government policies, within the limits imposed by international trade obligations.
- .4 Competition:
  - .1 PWGSC procurement will be competitive, with specific exceptions.
- .5 Equal Treatment:
  - .1 PWGSC must ensure that all potential bidders of a particular requirement are subject to the same conditions.
- .6 Accountability:
  - .1 PWGSC is accountable for the integrity of the contracting process.



## **2 REQUIRED SERVICES STANDARDS**

### **2.1 GENERAL**

- .1 Where Services are called for in the project specific TOR, the standards outlined in the following articles apply.

### **2.2 COST MANAGEMENT**

#### **2.2.1 GENERAL**

- .1 The following provides a general indication of the information needed by the Consultant's cost estimator to prepare specific classifications of estimates.
- .2 These are the minimum requirements only and should be supplemented where additional information exists or is warranted.
- .3 Construction cost estimates are to be prepared and submitted to PWGSC at various stages during the design process.
- .4 In addition to the Consultants' estimate, PWGSC may have independent estimates performed to compare with the Consultant estimate.

#### **2.2.2 TREASURY BOARD (TB) SUBMISSIONS**

- .1 Projects that are subject to TB approval are normally submitted twice.
  - .1 The first submission is for Preliminary Project Approval (PPA) at Pre-Design or Schematic Design stage of a project and must include an Indicative Estimate for the cost of the work.
  - .2 The second submission is for Effective Project Approval (EPA) at the completion of Design Development or Pre-Tender stage of a project and must include a Substantive Estimate for the cost of the work.
- .2 The Treasury Board estimate definitions are:
  - .1 Indicative Estimate;
    - .1 A low quality, order of magnitude estimate that is not sufficiently accurate to warrant TB approval as a Cost Objective.
  - .2 Substantive Estimate;
    - .1 An estimate which is of sufficiently high quality and reliability as to warrant TB approval as a Cost Objective for the project phase under consideration.
    - .2 It is based on detailed systems and component design, taking into account all project objectives and deliverables.
- .3 TB Terminology:
  - .1 Constant dollar estimate;
    - .1 This is an estimate expressed in terms of the dollars of a particular base fiscal year.
      - .1 It includes no provision for inflation.
      - .2 Cash flows over a number of fiscal years may also be expressed in constant dollars of the base year including no allowance for inflation in the calculation of costs.
  - .2 Budget-year (BY) dollar estimate:
    - .1 Budget year dollars is also be referred to as Nominal dollars or Current dollars.
      - .1 This is an estimate based on costs arising in each FY of the project schedule.
      - .2 It is escalated to account for inflation and other economic factors affecting the period covered by the estimate.
    - .2 The costs and benefits across all periods should initially be tabulated in budget year dollars for three following reasons:



- .1 First; this is the form in which financial data are usually available,
- .2 Second; adjustments, such as tax adjustments, are accurately and easily made in budget year dollars,
- .3 Finally; working in budget-year dollar enables the analyst to construct a realistic picture over time, taking into account changes in relative prices.

### **2.2.3 CLASSES OF ESTIMATES**

- .1 PWGSC applies a detailed, four level, classification using the terms Class A, B, C and D.
- .2 Apply these estimate classifications at the project stages as defined in the TOR.
- .3 For projects required to be submitted to TB for approval:
  - .1 An Indicative Estimate shall be at least a class 'D'; and
  - .2 A Substantive Estimate shall be at least a class 'B'.

### **2.2.4 CLASS 'D' (INDICATIVE) ESTIMATE**

- .1 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 of all the options being considered.
- .2 Submit Class 'D' cost estimates in elemental analysis format, in accordance with the 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.
- .3 Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.
- .4 The level of accuracy of a class D cost estimate shall be such that no more than a 20% design contingency allowance is required.

### **2.2.5 CLASS 'C' ESTIMATE**

- .1 Based on a comprehensive list of requirements and assumptions, including a full description of the preferred Schematic Design option, construction experience, design experience and market conditions, this estimate must be sufficient for making the correct investment decision.
- .2 Submit Class 'C' cost estimates in elemental analysis format, in accordance with the 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.
- .3 Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.
- .4 The level of accuracy of a class C cost estimate shall be such that no more than a 15% design contingency allowance is required.

### **2.2.6 CLASS 'B' (SUBSTANTIVE) ESTIMATE**

- .1 Based on design development drawings and outline specifications, which include the preliminary 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.
- .2 Submit Class 'B' cost estimates in both elemental analysis format and trade divisional format, in accordance with the latest edition issued by the Canadian Institute of Quantity Surveyors.
- .3 Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.
- .4 The level of accuracy of a class 'B' cost estimate shall be such that no more than a 10% design contingency allowance is required.

### **2.2.7 CLASS 'A' (PRE-TENDER) ESTIMATE**





- .1 Based on completed construction drawings and specifications prepared prior to calling competitive tenders, this estimate must be sufficient to allow a detailed reconciliation and/or negotiation with any contractor's tender.
- .2 Submit Class 'A' cost estimates in both elemental analysis format and trade divisional format, in accordance with the latest edition issued by the Canadian Institute of Quantity Surveyors.
- .3 Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.
- .4 The level of accuracy of a class 'A' cost estimate shall be such that no more than a 5% design contingency allowance is required.

## **2.3 SCHEDULE MANAGEMENT**

### **2.3.1 SCHEDULER**

- .1 The Scheduler shall provide a Project Planning and Control Schedule for the project, for the purpose of Planning, Scheduling, Progress Monitoring (Time Management), during all the design phases up to the construction procurement phase.
- .2 A qualified Scheduler, with experience commensurate with the complexity of the project, is required to develop and monitor the project schedule during the design process.
- .3 The Scheduler shall adhere to good industry practices for schedule development and maintenance, as recognized by the Project Management Institute (PMI).
- .4 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 either of these programs, using one of the many commercially available software packages.

### **2.3.2 PROJECT SCHEDULE**

- .1 A Detailed Project Schedule is a schedule developed in reasonable detail to ensure adequate Time Management planning and control of the project.
- .2 Project Schedules are used as a guide for the planning, design and implementation phases 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).
- .3 When building a Project Schedule, the Consultant must consider:
  - .1 The level of detail required for control and reporting;
  - .2 The reporting cycle shall be monthly, unless otherwise identified in the Terms of Reference;
  - .3 What is required for reporting in the Project Teams Communications Plan; and
  - .4 The nomenclature and coding structure for naming of scheduled activities, which must be submitted to the Project Manager for acceptance.

### **2.3.3 MILESTONES**

- .1 The Major Milestones are standard Deliverables and Control Points within NPMS and are required in all schedule development.
- .2 These Milestones will be used in Time Management Reporting within PWGSC as well as used for monitoring project progress using Variance Analysis.
- .3 Milestones may also be external constraints such as the completion of an activity, exterior to the project, affecting the project.

### **2.3.4 ACTIVITIES**

- .1 All activities will need to be developed based on:
  - .1 Project Objectives;
  - .2 Project Scope;



- .3 Milestones;
- .4 Meetings with the project team; and
- .5 The scheduler's full understanding of the project and its processes.
- .2 Subdivide the elements down into smaller more manageable pieces that organize and define the total scope of work in levels that can be scheduled, monitored and controlled.
  - .1 This process will develop the Activity List for the project.
- .3 Each activity will describe the work to be performed using a verb and noun combination (i.e. Review Design Development Report).
- .4 These elements will become activities, interdependently linked in the Project Schedule.

### **2.3.5 SCHEDULE REVIEW AND APPROVAL**

- .1 Once the scheduler has identified and properly coded all the activities to the acceptance of the Project Manager, the activities are then sorted into a logical order and appropriate duration are applied to complete the schedule.
- .2 The scheduler, together with the Project Team, can then analyze the schedule to see if the milestone dates meet the project timelines and then adjust the schedule accordingly by modifying durations or changing logic.
- .3 When the schedule has been satisfactorily prepared, the scheduler can present the detailed schedule back to the Project Team for acceptance and application as the project baseline.
- .4 There may be several iterations before the schedule meets with the Project Teams agreement and the critical project timelines.
- .5 The final agreed version must be copied and saved as the baseline to monitor variances during the design process.

### **2.3.6 SCHEDULE MONITORING AND CONTROL**

- .1 Once Baseline, the schedule can be better monitored, controlled and reports can be produced.
- .2 Monitoring is performed by, comparing the baseline activities completed 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.
- .3 There will be several schedules generated from the analysis of the baseline schedule as outlined in the Required Services Sections of the TOR.
- .4 Each updated schedule reflects the progress of each activity to date, any logic changes, both historic and planned, projections of progress and completion indicating the actual start and finish dates of all activities being monitored.
- .5 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 in accordance with the TOR.
- .6 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.
  - .1 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.



- .7 At each submission or deliverable stage, provide an updated schedule and exception report.

## **2.4 RISK MANAGEMENT**

### **2.4.1 CONTEXT**

- .1 The Departmental Representative prepares the Risk Management Plan.
- .2 The Departmental Representative may ask for assistance from the Consultant Team for identification of risk items and factors arising from the technical requirements of the project.

## **2.5 WASTE MANAGEMENT**

### **2.5.1 PROTOCOL**

- .1 The Construction, Renovation, and Demolition (CRD) Non-hazardous Solid Waste Management Protocol to which PWGSC is bound, provides direction on the undertaking of non-hazardous solid waste management actions on projects.
  - .1 The protocol is designed to meet the federal requirements, provincial/territorial policies and the objectives of the PWGSC Sustainable Development Strategy (SDS).
- .2 The contractor must implement a solid waste management program.
- .3 Contractors must be instructed to plan for extra project time when implementing CRD waste diversion initiatives.
  - .1 Added labour costs can be recuperated and waste management costs savings can be achieved through reduced tipping fees, avoided haulage costs, and the sale of reusable and recyclable materials.

### **2.5.2 CONSULTANT RESPONSIBILITIES**

- .1 Research and investigate hazardous waste disposal strategies in context of the project and make recommendations.
- .2 Include in the contract documents, a requirement for the contractor to develop a waste reduction and management plan during the construction of this project.
- .3 Identify, on the site plan where large (garbage) bins shall be stored, as well as easy disposal truck access/exit to/from same, to assist the Contractor in reducing waste or re-cycling of materials on and off site.

## **2.6 TECHNICAL REPORTS**

### **2.6.1 PURPOSE**

- .1 This section provides direction and standards for the preparation of reports delivered to PWGSC during all the various stages of project delivery and for specific services such as investigations, studies, analysis, strategies, audits, surveys, programs, plans, etc.
- .2 Technical Reports are official government documents, which are typically used to support an application for approval or to obtain authorization or acceptance and as such they must:
  - .1 Be complete, clear and professional in appearance and organization, with proper reference to related parts and contents in the report;
  - .2 Clearly outline the intent, objectives, process, results and recommendations;
  - .3 Present the flow of information and conclusions in a logical, easy to follow sequence;
  - .4 Be in written narrative, graphic, model (traditional and / or computer generated), and photographic format, which can be web enabled;
  - .5 Ensure that all pages are numbered in sequence; and
  - .6 Be printed double-sided, if hard copies are produced.

### **2.6.2 STANDARDS FOR PWGSC TECHNICAL REPORTS**

- .1 Standard practice for the organization of technical reports requires:



- .1 A cover page, clearly indicating the nature of the report, the date, the PWGSC reference number and who prepared the report;
- .2 A Table of Contents;
- .3 An Executive Summary;
- .4 The body of the report is to be structured such that the reader can easily review the document and locate, respond to and /or reference related information contained elsewhere in the report;
- .5 Appendices used for lengthy segments of the report, supplementary and supporting information and / or for separate related documents.
- .2 The report content must:
  - .1 Ensure that the executive summary is a true condensed version of the report following the identical structure, including only key points and results / recommendations requiring review and / or approval;
  - .2 Use a proper numbering system (preferably legal numbering), for ease of reference and cross-reference;
    - .1 The use of 'bullets' is to be avoided.
  - .3 Use proper grammar, including using complete sentences, in order to ensure clarity, avoid ambiguity and facilitate easy translation into French, if required;
    - .1 The use of undefined technical terms, industry jargon and cryptic phrases are to be avoided.
  - .4 Be written as efficiently as possible, with only essential information included in the body of the report and supporting information in an appendix if needed.

### 2.6.3 PRE-DESIGN REPORT CONTENT

- .1 Administrative aspects to be included (but not limited to) are:
  - .1 Quality management process for the consultant team;
  - .2 Confirmation that all necessary pre-design documentation required for this project is available and confirmation that the information is still current and up-to-date.
- .2 Regulatory Analysis aspects to be included (but not limited to) are:
  - .1 Preliminary summary of regulatory and statutory requirements, authorities having jurisdiction, and codes, regulations, and standards.
- .3 Program Analysis aspects to be included (but not limited to) are a review and analysis of:
  - .1 Functional program, User Department reports and studies, Space data sheets, Work stations, offices, common areas and commercial space requirements, Laboratories, Data Room requirements, etc.
- .4 Site Analysis aspects to be included (but not limited to) are a review and analysis of:
  - .1 Site features and restrictions (i.e. landscape features, topographical feature, climatic influences, setback requirements, easements, existing buildings, and / or structures.);
  - .2 Subsurface, geotechnical analysis of soils;
  - .3 Municipal infrastructure, subsurface and above grade services, including capacities and limitations (i.e. storm water drainage, fire protection, domestic water, power, telecommunications,);
  - .4 Historical/archaeological features, previous uses;
  - .5 Environmental features including sustainable design opportunities.
- .5 Building Analysis aspects to be included (but not limited to) are a review and analysis of:
  - .1 Substructure, including foundations and basement(s), parking;
  - .2 Shell, including superstructure, interior structural systems, exterior enclosure, roofing;
  - .3 Interiors, including interior construction, stairs, interior finishes;



- .4 Services, including conveying (elevators, escalators), plumbing, HVAC, fire protection, electrical, telecommunications, building automation;
- .5 Equipment and furnishings;
- .6 Special construction and demolition, materials abatement.
- .6 Budget, Schedule, and Risk Analysis aspects to be included (but not limited to) are:
  - .1 Updated Class 'D' estimate and revised schedule;
  - .2 Analysis of risk implications and preliminary mitigation strategies.
- .7 Sustainable Development Strategies
  - .1 Proposed policy for the project to minimize environmental impacts consistent with the project objectives and economic constraints, including:
    - .1 Recommendations on Sustainable Development Design standards to be applied to the project;
    - .2 Achievable levels for LEED® or Green Globes certification;
    - .3 Preliminary sustainability targets for water and energy use, waste reduction etc.
  - .2 Environmental impacts and application of the Canadian Environmental Assessment (CEA) Act.

#### **2.6.4 SCHEMATIC DESIGN REPORT CONTENT**

- .1 Standard practice for the organization of technical reports requires:
  - .1 Executive Summary;
  - .2 Regulatory Analysis;
    - .1 Preliminary building code analysis,
    - .2 Preliminary zoning analysis,
    - .3 Fire and life safety strategy, and
    - .4 Preliminary standards analysis.
  - .3 Program Analysis;
    - .1 Updated Functional Program requirements,
    - .2 Preliminary horizontal and vertical zoning diagrams,
    - .3 Spatial relationship diagrams,
    - .4 Facilities services strategy,
    - .5 Basic area calculations and analyses.
  - .4 Site Analysis;
    - .1 Drawings, renderings and supporting 3D visualization illustrating the building and site,
    - .2 Site features and restrictions (i.e. landscape features, topographical features, climatic influences, setback requirements, easements, existing buildings and/or structures etc.),
    - .3 Subsurface features,
    - .4 Municipal infrastructure, subsurface and above grade services, including capacities and limitations (i.e. storm water drainage, fire protection, domestic water, power, telecommunications etc.),
    - .5 Historical site features,
    - .6 Archaeological features,
    - .7 Environmental features including sustainable design strategies (i.e. storm water management, landscaping etc.).
- .2 Building Analysis and Design Options;
  - .1 Architectural,



- .1 Prepare a site plan indicating relationships, landscape concept, building outlines, main accesses, roadways, vehicular and pedestrian traffic patterns,
- .2 Provide building plans, showing relative disposition of main accommodation areas, circulation patterns, floors, horizontal and vertical space relationships, mechanical / electrical shafts,
- .3 Include elevations, sections and typical wall details for the building envelope,
- .4 Provide perspectives and / or 3D visualization diagrams, and
- .5 Calculate the gross building area and provide a net area summary of all accommodation areas required.
- .2 Civil,
  - .1 Describe the overall impact on the site systems infrastructure,
  - .2 Verify of all site services information,
  - .3 Provide a site plan showing the existing building, proposed site services, building service connections, site drainage, roads, parking and sidewalks, and
  - .4 Include a preliminary analysis of the impact on existing systems, where contributing to existing sewer lines.
- .3 Structural / Seismic,
  - .1 Describe the potential impact on the existing building structure and include any required structural modifications and /or upgrades,
  - .2 Provide a general description of structures, including systems considered and benefits/disadvantages,
  - .3 Include design loads for all load cases, and
  - .4 Prepare concept drawings of structural systems proposed, including typical floor plans, foundations, lateral systems and explanatory sketches.
- .4 Mechanical Engineering,
  - .1 Provide narratives describing the following,
    - .1 Overview,
    - .2 Code & Standards Considerations & Concerns,
    - .3 Potential Energy Conservation Measures,
    - .4 Description of three distinct mechanical options including,
      - .1 Narratives of each option,
      - .2 Discussion of advantages and disadvantages of each,
      - .3 System schematics sufficient to describe each option,
      - .4 Preliminary energy analysis for each,
      - .5 Discussion of recommendations.
- .5 Electrical Engineering,
  - .1 Provide an electrical design synopsis, describing the electrical work in sufficient detail for assessment and acceptance by the Departmental Representative,
    - .1 Include feasibility and economic studies of proposed systems complete with cost figures and loads, and in accordance with Sustainable Development requirements.
  - .2 Prepare a site plan showing the location of electrical and telecommunication service entrances.
  - .3 Prepare floor plans indicating locations and size of,
    - .1 Major electrical equipment and distribution centres,
    - .2 Telecommunications rooms, closets and major conduits,



- .4 Provide Normal and Emergency power distribution details, including a diagram showing the distribution up to distribution centres on each floor,
- .5 Indicate typical lighting concepts for the interior and exterior environments,
- .6 Indicate typical ceiling (or floor) distribution systems for lighting, power and telecommunications, and
- .7 Provide concept descriptions of Fire alarm and Security systems.
- .3 Commissioning;
  - .1 Provide preliminary commissioning plan.
- .4 Cost Management;
- .5 Schedule Management;
- .6 Furniture / Equipment;
  - .1 Prepare a Furniture Recommendation Report based on the Functional Program and on parameters developed in conjunction with the Departmental Representative and the Client / User. Report to include an examination of the following;
    - .1 Procurement process and requirements,
    - .2 Furniture type and layout,
    - .3 Panel screen height,
    - .4 Power requirements,
    - .5 Finishes.
  - .2 Recommendations are to take into consideration current inventory of furniture and reflect the client's vision, functional requirements, proposed planning alternatives, space allocation and project budget.
  - .3 Prepare a Class 'C' cost estimate for refurbishment of existing furniture and / or the purchase of new furniture and equipment.
  - .4 Document scheduling requirements for refurbishment of existing furniture and / or the procurement of new furniture and equipment.
- .7 Budget;
  - .1 Class 'C' Estimates for each option.
- .8 Schedule;
  - .1 Milestone project schedule including allowances for reviews and approvals for each stage of the project life cycle.
- .9 Risk Analysis;
  - .1 Report on any deviations that may affect cost or schedule and recommend corrective measures.
- .10 Sustainable Development Strategies;
  - .1 Indicate how each option can meet the sustainability targets, and
  - .2 Provide energy simulations of the proposed design options, including estimated annual energy cost as predicted by using current energy cost for the appropriate area.
- .11 Response to PWGSC Quality Assurance Report ; and
- .12 Project Log tracking all approved major decisions including those affecting changes to project scope, budget and schedule.

#### **2.6.5 DESIGN DEVELOPMENT REPORT CONTENT**

- .1 Executive Summary
- .2 Regulatory Analysis
  - .1 Preliminary building code analysis;





- .2 Preliminary zoning analysis;
- .3 Fire and life safety strategy;
- .4 Preliminary standards analysis
- .3 Program Analysis
  - .1 Updated Functional Program requirements
  - .2 Preliminary horizontal and vertical zoning diagrams;
  - .3 Facilities services strategy;
  - .4 Basic area calculations and analyses;
- .4 Site Analysis
  - .1 Drawings, renderings and supporting 3D visualization illustrating the building and site,
  - .2 Site features and restrictions (i.e. landscape features, topographical features, climatic influences, setback requirements, easements, existing buildings and/or structures etc.);
  - .3 Subsurface features;
  - .4 Municipal infrastructure, subsurface and above grade services, including capacities and limitations (i.e. storm water drainage, fire protection, domestic water, power, telecommunications etc.);
  - .5 Historical site features;
  - .6 Archaeological features;
  - .7 Environmental features including sustainable design strategies (i.e. storm water management, landscaping etc.);
- .5 Building Analysis and Design Options
  - .1 Architectural
    - .1 Prepare a site plan showing the building and Infrastructure items including the following:
      - .1 Pedestrian, vehicular, security, delivery service access,
    - .2 Provide floor plans of each level (including the roof) showing all accommodation required, including all necessary circulation areas, stairs, elevators, and ancillary spaces anticipated for service use. Indicate building grids, modules, and key dimensions.
    - .3 Provide reflected ceiling plans of ceilings with special features.
    - .4 Show elevations of all exterior building facades indicating all doors and windows, accurately sized and projected from the floor plans and sections.
      - .1 Clearly indicate levels for grade, all floors, ceilings, roof and penthouse levels.
    - .5 Develop cross-sections through the building to show floor levels, room heights, inner corridor elevations, etc.
    - .6 Identify primary architectural materials proposed for the exterior and interior of the building, including choice of finishes.
    - .7 Provide plans and preliminary details for millwork, built-in furniture and lab casework.
    - .8 Provide detail sections of walls with special design features requiring illustration and explanation at this stage, such as firewalls, acoustical barriers, security partitions, isolation or separation of laboratory spaces, etc.
    - .9 Special construction and demolition, including heritage conservation and rehabilitation requirements, hazardous materials abatement,
    - .10 Provide sections and details for any spaces requiring acoustic security.
      - .1 Include STC ratings for doors, transfer ducts and other assemblies
  - .2 Civil





- .1 Further refine site plans showing site services and building service connections referenced to proposed building outlines, site access roads and sidewalks, including existing and proposed grades and drainage improvements.
- .2 Indicate locations of manholes (complete with invert elevations), valves, and fire hydrant locations.
- .3 Identify proposed pipe sizes and slopes, where applicable, and include pipe invert elevations at building foundation.
- .4 Identify, by means of Design Summary Sheets, pipe capacity and estimated flows for storm and sanitary sewers. Where contributing to an existing sewer, include analysis of impact on existing systems.
- .5 Provide Hydraulic Analysis of any relevant alterations to existing water distribution system in the vicinity of the proposed building to confirm anticipated maximum available fire flow. Calculate and compare site flows to building site fire flow.
- .6 Provide typical trench and related details, including profiles of below grade services.
- .3 Structural
  - .1 Provide drawings indicating modifications to existing structure and new structural systems, structural materials, cladding details, fireproofing methods and other significant or unusual details.
  - .2 Indicate all design loads, e.g. dead and live loads on all plans with atypical loads marked. Live loads to include localized seismic, wind and snow.
  - .3 Provide brief design calculations including outputs from computerized analysis.
- .4 Mechanical
  - .1 Provide narratives describing the following
    - .1 Overview
    - .2 Code & Standards Analysis
    - .3 Site Services & Utilities
    - .4 Fire Protection Systems
    - .5 Plumbing Systems
    - .6 Heating Systems
    - .7 Cooling Systems
    - .8 Ventilation Systems
    - .9 Exhaust Systems
    - .10 Insulation
    - .11 Humidification Systems
    - .12 Acoustic and sound control measures
    - .13 Controls
    - .14 Energy Conservation Measures & Energy Analysis & Report
  - .2 Provide system schematics for heating water, chilled water, ventilation and plumbing systems.
  - .3 Provide catalogue cut sheets of representative equipment for each type of component to be used on the project.
  - .4 Provide preliminary layout drawings showing locations of all major components.
  - .5 Provide brief design calculations including outputs from computerized analysis.
- .5 Electrical
  - .1 Update the electrical design synopsis for the selected option. Provide data on the total connected load, the maximum demand and diversity factors, and the sizing of the emergency load.



- .2 Elaborate on proposed emergency power scheme and provide preliminary installation details for any emergency generator installation.
  - .3 Indicate metering locations on distribution diagram.
  - .4 Provide typical lighting, power and telecommunication system details for all workspaces.
  - .5 Include lighting design and control schemes for typical lighting arrangements.
  - .6 Elaborate on exterior lighting scheme. Provide typical fixture concepts.
  - .7 Provide a fire alarm riser diagram.
  - .8 Indicate security system major conduit requirements on floor plans.
  - .9 Provide typical security system details (conduit and boxes) that will be included on construction drawings.
  - .10 Provide brief design calculations including outputs from computerized analysis.
- .6 Sustainable Development Strategies:
- .1 Indicate how each option can meet the sustainability targets
  - .2 Provide energy simulations of the proposed design options, including estimated annual energy cost as predicted by using current energy cost for the appropriate area,
- .7 Response to PWGSC Quality Assurance Report

## **2.7 CODES, ACTS, STANDARDS, REGULATIONS**

### **2.7.1 GENERAL**

- .1 The Codes, Acts, Standards and Guidelines listed in the following articles, may apply to this project. The Consultant must identify and analyse the applicable documents in the Code Analysis.
- .2 In all cases the most stringent Code, standard and guideline shall apply.

### **2.7.2 PWGSC DOCUMENTS AVAILABLE FROM PWGSC PROJECT MANAGER:**

- .1 PWGSC Fit-Up Standards: Technical Reference Manual;
- .2 Public Works and Government Services MD Standards – Departmental Representative to provide on request;
  - .1 MD 15000; Environmental Standards for Office Accommodation,
  - .2 MD 15116-2006; Computer Room Air conditioning Systems,
  - .3 MD-15126; Laboratory HVAC (currently in draft form),
  - .4 MD 15128; Laboratory Fume Hoods: Guidelines for owners, design professionals and maintenance personnel – 2008,
  - .5 MD 15129; Guidelines for Perchloric Acid fumehoods and their exhaust systems – 2006,
  - .6 MD 15161; Control of Legionella in Mechanical Systems - 2006,
  - .7 MD 250005; Energy Monitoring and Control Systems Design Guidelines - 2009,
- .3 PWGSC Best Practice; Prescribing indoor humidity levels for Federal Buildings - 2006,
- .4 Public Works and Government Services Commissioning Standards and Guidelines,
- .5 PWGSC Commissioning Manual CP-I version 2006.

### **2.7.3 CODES AND REGULATIONS:**

- .1 The NRC National Building Code of Canada 2010;
- .2 The NRC National Fire Code of Canada, 2010;
- .3 The NRC National Plumbing Code of Canada 2010;
- .4 The NRC Model National Energy Code for Buildings 2011;
- .5 CSA C22.1-09, Canadian Electrical Code Part I Safety Standard for Electrical Installations and CE Code Handbook. Amendments for Provinces;



- .6 Canadian Code for Preferred Packaging;
- .7 National Electrical Manufacturers Association (NEMA);
- .8 Electrical and Electronic Manufacturers' Association of Canada (EEMAC);
- .9 American National Standards Institute/Institute of Electrical and Electronics Engineers (ANSI/IEEE) - ANSI/IEEE C62.41-1991, Surge Voltages in Low-Voltage AC Power Circuits;
- .10 American Society for Testing and Materials (ASTM);
- .11 ASTM F 1137-00(2006), Specification for Phosphate/Oil and Phosphate/Organic Corrosion Protective Coatings for Fasteners;
- .12 The Canada Labour Code;
- .13 <http://laws.justice.gc.ca/en/L-2/>
- .14 The Canada Occupational Health and Safety Regulations;
- .15 <http://laws.justice.gc.ca/eng/SOR-86-304/index.html>
- .16 All other Territorial and Municipal Acts, Codes, By-laws and regulations appropriate to the area of concern.

#### **2.7.4 STANDARDS AND GUIDELINES PRODUCED BY THE GOVERNMENT OF CANADA:**

- .1 Standards and Directives of the Treasury Board (TB):
  - .1 <http://www.tbs-sct.gc.ca/pol/index-eng.aspx?tree=standard>
  - .2 <http://www.tbs-sct.gc.ca/pol/index-eng.aspx?tree=directive>
  - .3 And including;
    - .1 Accessibility Standard for Real Property,
      - .1 <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12044>
    - .2 Fire Protection Standard.
      - .1 <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=17316>
- .2 Labour Canada's, Fire Commissioner of Canada Standards;
  - .1 [http://www.hrsdc.gc.ca/eng/labour/fire\\_protection/policies\\_standards/commissioner/index.shtml](http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/index.shtml).
  - .2 And including,
    - .1 FC-301 Standard for Construction Operations, June 1982,
    - .2 FC-302 Standard for Welding and Cutting, June 1982,
    - .3 FC-311 Standard for Record Storage, May 1979.
    - .4 FC-403 Fire Protection Standard for sprinkler Systems, November 1994
- .3 The Standards and Guidelines for the Conservation of Historic Places in Canada
  - .1 [www.historicplaces.ca](http://www.historicplaces.ca);
- .4 Labour Canada's, Technical Documents;
  - .1 [http://www.hrsdc.gc.ca/eng/labour/fire\\_protection/policies\\_standards/guidelines/index.shtml](http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/guidelines/index.shtml)
  - .2 And Including,
    - .1 Fire Protection for Information Technology Facilities and Equipment.
- .5 Canadian Food Inspection Agency's Containment Standard for Facilities Handling Plant Pests.
- .6 Public Health Agency of Canada's Laboratory Biosafety Guidelines, 3<sup>rd</sup> Edition,
- .7 Canadian Council of Animal Care's Guidelines on: Laboratory Animal Facilities – Characteristics, Design and Development.

#### **2.7.5 HEALTH CANADA STANDARDS AND GUIDELINES:**

- .1 Guidelines for Canadian Drinking Water Quality – Sixth Edition – 1996;
- .2 Guidelines for Canadian Drinking Water Quality – Summary Table – Dec 2010;



- .3 Guidance for Providing Safe Drinking Water in Areas Of Federal Jurisdiction – Version I – 2005;
- .4 The Canadian Council of Ministers of the Environment (CCME) ;
- .5 Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products (CCME, 2003);
- .6 Canada – Wide Strategy for the Management of municipal Waste Water Effluent;
- .7 The Canadian Environmental Protection Act (CEPA, 1999);
- .8 The Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations, published in Canada Gazette Part II on June 12, 2008 (Registration SOR/2008-197).

#### **2.7.6 STANDARDS AND GUIDELINES:**

- .1 Air Conditioning and Refrigeration Institute (ARI);
- .2 American Conference of Governmental Industrial Hygienists (ACGIH, Industrial Ventilation Handbook);
- .3 Air Diffusion Council (ADC);
- .4 Air Movement and Control Association (AMCA);
- .5 American Association of State Highway and Transportation Officials (AASHTO) Standards
- .6 American National Standards Institute (ANSI);
- .7 ANSI/AIHA Z9.5, Laboratory Ventilation;
- .8 .1 ANSI/NEMA C82.1-04, Electric Lamp Ballasts-Line Frequency Fluorescent Lamp Ballast;
- .9 .2 ANSI/NEMA C82.4-02, Ballasts for High-Intensity-Discharge and Low-Pressure Sodium Lamps;
- .10 ANSI/TIA/EIA-606- Administration Standard for the Telecommunications Infrastructure of Commercial Buildings;
- .11 ANSI Z358.1, Emergency Eyewash and Shower Equipment;
- .12 American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE), including but not limited to;
  - .1 ASHRAE Laboratory Design Guide,
  - .2 ASHRAE Standards and Guidelines,
  - .3 ASHRAE Applications Handbook – 2007,
  - .4 ASHRAE HVAC Systems and Equipment Handbook – 2008,
  - .5 ASHRAE Fundamentals Handbook – 2009,
  - .6 ASHRAE Refrigeration Handbook – 2010,
  - .7 ASHRAE 52.2 Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size – 2007,
  - .8 ANSI/ASHRAE 55, Thermal Environmental Conditions for Human Occupancy – 2004,
  - .9 ANSI/ASHRAE 62.1, Ventilation for Acceptable Indoor Air Quality – 2010,
  - .10 ASHRAE 90.1, Energy Efficient Design of New Buildings – 2010,
  - .11 ASHRAE 105: Standard Method of Measuring and Expressing Building Energy Performance,
  - .12 ASHRAE 110, Method of Testing Performance of Laboratory Fume Hoods,
  - .13 ASHRAE 111; Practices for Measurement, Testing, Adjusting and Balancing of Building HVAC&R Systems,
  - .14 ASHRAE 114; Energy Management Control Systems Instrumentation, and
  - .15 ASHRAE 135; BACnet: A Data Communication Protocol for Building Automation and Control Networks.
- .13 Asphalt Institute Standards for Hot Mix;



- .14 American Society of Mechanical Engineers (ASME);
- .15 American Society for Testing and Materials (ASTM);
- .16 American Water Works Association (AWWA) Standards;
- .17 American Welding Society (AWS);
- .18 Associated Air Balance Council (AABC);
- .19 Canadian Standards Association;
- .20 CSA A23.3-04 (2010) Design of Concrete Structures;
- .21 CSA B51-09 Boiler, pressure vessel and pressure piping Code;
- .22 CSA B52-05 Mechanical Refrigeration Code;
- .23 CSA B64-01 Backflow Preventers and Vacuum Breakers;
- .24 CSA B139-09 Installation Code for Oil Burning Equipment;
- .25 CSA B149.1-10 Natural Gas and Propane Installation Code;
- .26 CSA B651-04 Accessible Design for the Built Environment;
- .27 CSA C22.2 No. 41-07 Grounding and Bonding Equipment;
- .28 CSA S16-09 Design of Steel Structures;
- .29 CSA Z204-1994 Guideline for Managing Indoor Air Quality in Office Buildings;
- .30 CSA Z320-11 Building Commissioning Standard & Check Sheets;
- .31 CSA Z316.5-94, Fume Hoods and Associated Exhaust Systems;
- .32 CAN/CSA-23.1-04 and CAN/CSA-A23.2-04 Concrete materials and methods of concrete construction; and Methods of test and standard practice for concrete CAN/CSA-C22.2 No. 214-94 "Communications Cables";
- .33 CAN/CSA-C22.3 No.3-[98(R2007)], Electrical Co-ordination;
- .34 CAN/CSA-B651-04(R2010), Accessible Design for the Built Environment;
- .35 CAN3 C235-[83(R2010)], Preferred Voltage Levels for AC Systems, 0 to 50,000 V;
- .36 CAN/CSA-T528-93, "Design Guidelines for Administration of Telecommunications Infrastructure in Commercial Buildings", Canadian Standards Association;
- .37 CAN/ULC – S524-06 Standard for the Installation of Fire Alarm Systems;
- .38 CAN/ULC – S537-04 Fire Alarm System Verification Report;
- .39 CAN/ULC – S102-07 Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies;
- .40 CAN/ULC – S102.2-07 Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies  
CAN/ULC S112-M90 (R2001) Standard Methods of Fire Test of Fire-Damper Assemblies;
- .41 CAN/ULC S115-05 Standard Method of Fire Tests of Fire stop Systems;
- .42 International Mechanical Code – Latest Version;
- .43 Institute of Boiler and Radiation, Hydronic Institute (IBR);
- .44 Manufacturers Standardization Society of Valve and Fitting Industry (MSS);
- .45 National Fire Protection Association (NFPA), including;
  - .1 NFPA 10; Standard for Portable Fire Extinguishers – 2010,
  - .2 NFPA 13; Standard for Installation of Sprinkler Systems – 2010,
  - .3 NFPA 14; Standard for Installation of Standpipe and Hose Systems – 2010,
  - .4 NFPA 24: Standard for the Installation of Private Fire Service Mains and Their Appurtenances-2010,
  - .5 NFPA 30; Flammable and Combustible Liquids Code,
  - .6 NFPA 45; Standard on Fire Protection for Laboratories Using Chemicals,
  - .7 NFPA 1142: Standard on Water Supplies for Suburban and Rural Fire Fighting-2007.



- .46 SEFA I.2, Scientific Equipment & Furniture Association;
- .47 Sheet Metal and Air Conditioning Contractors National Association (SMACNA);
- .48 Transportation Association of Canada (TAC) Guide for Canadian Roads;
- .49 Manual of Uniform Traffic Control Devices (MUTCD);
- .50 Telecommunications Industry Association (TIA);
  - .1 Commercial Building Telecommunications Cabling Standard TIA/EIA-568,
    - .1 Part 1: General Requirements, TIA/EIA-568-B.1,
    - .2 Part 2: Balanced Twisted Pair Cabling Components, TIA/EIA-568-B.2,
    - .3 Addendum 1 - Transmission Performance Specification for 4-pair 100 Ohm Category 6 Cabling, TIA/EIA-568-B.2-1,
    - .4 Optical Fibre Cabling Components Standards, TIA/EIA-568-B.3.
  - .2 ANSI/TIA/EIA-569-A Commercial Building Standards for Telecommunications pathways and spaces,
  - .3 Pathways and Spaces, ANSI/TIA/EIA-569-B,
  - .4 Telecommunications Infrastructure Standard for Data centers TIA-942,
  - .5 J-STD-607-A Commercial Building Grounding and - Bonding Requirements for Telecommunications.
- .51 Underwriters' Laboratories of Canada (ULC);
- .52 ULC/CSA Approval is required for all electrical and mechanical equipment.

#### **2.7.7 STANDARDS AND GUIDELINES FOR TRANSPORTATION**

- .1 Canadian Highway Bridge Design Code
- .2 Transportation Association of Canada - Manuals, Guides and Handbooks.

### **2.8 COMMISSIONING PROCESS**

#### **2.8.1 GENERAL**

- .1 This section summarizes the PWGSC commissioning process, the requirements and associated roles and responsibilities as they relate to the various phases in the delivery of a project.
- .2 It is to be used as a guide in further developing the commissioning plan, specification and related documents for a project.
- .3 Commissioning is not a replacement for good design and construction practices.
  - .1 It requires coordinated efforts on the part of all parties involved in the Project.
- .4 The Commissioning overlaps the design phase through construction and into the operation phase.
- .5 The PWGSC Commissioning Manual CP.1 4<sup>th</sup> edition, November 2006, is available for free download at the following site:
  - .1 <http://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/bi-rp/tech/misceenservice-commissioning/manuel-manual-eng.html>
- .6 The PWGSC Commission Manual CP.2 – Commissioning Glossary is available for free download at the following site:
  - .1 <http://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/bi-rp/tech/misceenservice-commissioning/manuel-manual-b-eng.html>
- .7 “Commissioning” is a quality assurance process, in which the functional requirements of the Owner/occupant and the operational requirements of facility management are proven to function as intended.



- .8 The “commissioning process” is a planned program of quality management and information transfer that extends through all phases of a project’s development and delivery, up to and including the warranty period.
- .9 The process consists of a series of checks and balances to ensure that the work is designed, installed and proven to operate as intended.
- .10 Commissioning has two main components, functional and operational.
  - .1 The functional component deals with:
    - .1 Security, Health (indoor air quality) and occupant safety;
    - .2 Comfort (temperature, relative humidity, ventilation, air flow patterns, air purity and well being);
    - .3 Cost-effectiveness of design; and
    - .4 Systems and equipment supporting Owner’s functional requirements.
  - .2 The operational component deals with:
    - .1 Operation and Maintenance (O&M) issues; e.g., design review with a particular concern for the operation and maintenance of the systems today and in the future, when repairs are required;
    - .2 Performance evaluation of systems and equipment;
    - .3 Accessibility to O&M Documentation; and
    - .4 Review of the training plan against the current needs now and in the future.

### 2.8.2 COMMISSIONING PLAN

- .1 The Commissioning Plan will typically be developed by the Contractor through his own Commissioning Agent.
- .2 The Commissioning Plan is the project-specific document and which describes the process for verifying that all built works meet the Investor's requirements within the limits of the working documents.
- .3 It is essential that the Consultant provide specifications that detail requirements for all submittals and testing in each Specification Section in order for the Contractor to properly prepare a complete Commissioning Plan.
- .4 The Commissioning Plan will be reviewed and accepted by the Departmental Representative prior to commencement of construction.
- .5 The Commissioning Plan may require periodic update throughout design.

### 2.8.3 COMPONENT VERIFICATION

- .1 Component verification sheets (CV) sheets are developed by the Consultant and incorporated in the contract documents to ensure the facility is an operating entity and meets the requirements as described in the Agreement.
- .2 The CV sheets are intended to monitor and track the supply and shop drawing requirements associated with each component. The *Consultant* must verify that the components being installed in the built works are acceptable to their design and the approved shop drawings.
- .3 The commissioning process requires the documentation of all the components installed as part of a system that will have performance verification testing conducted.
- .4 Sample CV sheets for various types of components are to be provided by the Consultant in Div 01.

### 2.8.4 SYSTEM & INTEGRATED SYSTEM TESTING

- .1 The “performance verification tests” (PVTs) are developed by the Design-Builder to ensure the facility is an operating entity and meets the requirements as described in the Agreement.





- .2 The PVTs are intended to demonstrate the functional performance of the systems & integrated system during the various modes of operation, against the design intent. Each test must be uniquely identified and reflected in the contractor's commissioning schedule.
- .3 Once the contract has been awarded the Design-Builder must monitor the sub-contractor's process to help ensure the timely completion of these tests. The Design-Builder must witness each test. The Design-Builder must provide final certification of the test results. After an acceptable review of the test document, the PWGSC Commissioning Specialist will recommend to the Departmental Representative the acceptance or rejection of the test results.
- .4 Sample PVT sheets for various types of system are to be provided by the Consultant in Div 01.

### 2.8.5 TEST REQUIREMENTS

- .1 Each CV or PVT shall be uniquely named, numbered and categorized by discipline.
- .2 Tests shall define:
  - .1 Test Purpose;
  - .2 System design narrative;
  - .3 Test Prerequisites;
  - .4 Testing Procedures;
  - .5 Test Comments; and
  - .6 Test Sign-off Block.
- .3 System Performance Verifications Tests
  - .1 These tests have prerequisites that are to be completed and approved prior to conducting the tests, which, may include but are not limited to:
    - .1 CV and PVT sheets developed and accepted,
    - .2 Contractor proving start-up and tests,
    - .3 Manufacturers start-ups,
    - .4 Consultant has certified testing, adjusting & balancing (TAB) results, per TAB specification.
      - .1 TAB work must be completed and approved prior to the control system Pts.
    - .5 Associated control device calibrations and physical point verifications are completed and approved.
      - .1 Note, control system end to end checks to be completed and approved prior to the control system PVTs.
    - .6 Other specified deliverables, i.e. factory test reports, O&M submissions, etc.
    - .7 System performance tests associated with the integrated systems under test,
    - .8 Integrated System Performance Verifications,
    - .9 Fire alarm verifications.

### 2.8.6 COMMISSIONING (EVALUATION) REPORT

- .1 The Commissioning (Evaluation) Report must provide:
  - .1 An executive summary,
  - .2 Completed CV and PVT sheets,
  - .3 A complete assessment of the project,
  - .4 Lessons learned from this project and any necessary recommendations,
  - .5 Variances between the actual and planned levels of performance,
  - .6 An evaluation of the validation and acceptance process and of the commissioning phase.

### 2.8.7 OVERVIEW OF ROLES AND RESPONSIBILITIES





- .1 The following provides a general overview of the roles, responsibilities and implementation of the commissioning process. The commissioning process is a logical sequence of verifications from component verifications through to system & integrated system, performance verification testing.
- .2 At completion of the commissioning process all results are documented and audited for acceptance.

## **2.8.8 MAJOR TASKS AND RESPONSIBILITIES**

- .1 Schematic Design and Design Development Phase:
  - .1 Consultant;
    - .1 Develop commissioning strategy,
    - .2 Develop preliminary commissioning plan.
  - .2 Construction Documentation Phase:
    - .1 Consultant;
      - .1 Complete the final commissioning plan,
      - .2 Specify the Commissioning requirements in Div 01 and provide sample Commissioning CV and PCT sheets in Div 01 for Bidders purposes,
      - .3 Develop project specific CV and PVT sheets.
  - .3 Construction Phase:
    - .1 Consultant;
      - .1 Monitor and report on contract commissioning activities,
      - .2 Finalize development of job specific CV and PVT sheets,
      - .3 Review and certify component verification sheets as they are completed by the Contractor, and
      - .4 Review commissioning schedule
    - .2 Contractor;
      - .1 Comply with the requirements in the Specifications,
      - .2 Complete the component verification,
      - .3 Conduct the equipment system start-up and proving, and
      - .4 Develop the commissioning schedule, reflecting the PVTs.
  - .4 Commissioning Phase
    - .1 Consultant
      - .1 Witness all system and integrated systems tests,
      - .2 Review and certify commissioning test results,
      - .3 Track and compile all commissioning documentation submitted by the contractor and confirm that all commissioning tasks are completed,
      - .4 Incorporate all commissioning documentation into a preliminary commissioning report and recommend interim acceptance.
      - .5 Identify “deferred” commissioning tests due to seasonal constraints, etc.
    - .2 Contractor
      - .1 Comply with the requirements in the specifications,
      - .2 Conduct the system testing, and
      - .3 Conduct the integrated system testing.
  - .5 Operating Phase
    - .1 Consultant
      - .1 Provide advice and recommendations for fine tuning, if required,
      - .2 Witness “deferred” commissioning tests,



- .3 Review and certify “deferred” systems test results,
- .4 Incorporate deferred system test results and all other commissioning documentation into a final commissioning report with an executive summary recommending final acceptance.
- .2 Contractor
  - .1 Address warranty issues,
- .6 Evaluation Phase
  - .1 Consultant
    - .1 Provide advice and recommendations during the final evaluation.

## **2.9 CONSTRUCTION DOCUMENTS**

### **2.9.1 PURPOSE**

- .1 This section provides direction in the preparation of construction contract documents (namely specifications, drawings and addenda) for PWGSC.
- .2 Drawings, specifications and addenda must be complete and clear, in order that a contractor can prepare a bid without guesswork. Standard practice for the preparation of construction contract documents requires that:
  - .1 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.
  - .2 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.
  - .3 Addenda are changes to the construction contract documents or tendering procedures, issued during the tendering process.

### **2.9.2 PRINCIPLES FOR PWGSC CONTRACT DOCUMENTS**

- .1 PWGSC’s contract documents are based on common public procurement principles.
- .2 PWGSC does not use Canadian Construction Document Committee (CCDC) documents.
- .3 The construction contract and the terms and conditions are prepared and issued by PWGSC, along with all other related bidding and contractual documents.
  - .1 For more detailed information, the clauses are available on the following web site:
  - .2 <http://ccua-sacc.tpsgc-pwgsc.gc.ca/pub/acho-eng.jsp>
  - .3 Any questions should be directed through the PWGSC Project Manager.

### **2.9.3 QUALITY ASSURANCE**

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

### **2.9.4 ADDENDA**

- .1 Format
  - .1 Prepare addenda using the format shown in Appendix ‘C’.
  - .2 No signature type information is to appear.
  - .3 Every page of the addendum (including attachments) must be numbered consecutively.
  - .4 All pages must have the PWGSC project number and the appropriate addendum number.
  - .5 Sketches shall appear in the PWGSC format, stamped and signed.
  - .6 No Consultant information (name, address, phone #, consultant project # etc.) may appear in the addendum or its attachments (except on sketches).
- .2 Content



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

## **2.9.5 SUBMISSIONS**

- .1 For each construction document submission, the Consultant shall provide:
  - .1 A completed and signed Checklist for the Submission of Construction Documents (See Appendix 'B')
  - .2 Original specification; printed one side on 216 mm x 280 mm white bond paper.
  - .3 Index, as per Appendix 'C'
  - .4 Reproducible original drawings; sealed and signed by the design authority.
  - .5 Addenda (if required), as per Appendix 'D;' (to be issued by PWGSC)
- .2 Tender information:
  - .1 Include a description of all units and estimated quantities to be included in unit price table.
  - .2 Include a list of significant trades including costs.
    - .1 PWGSC will then determine which trades, if any, will be tendered through the Bid Depository.
- .3 Government Electronic Tendering System (MERX):
  - .1 Consultants shall 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.
  - .2 The electronic copy of drawings and specifications is for bidding purposes only and do not require to be signed and sealed.

## **2.9.6 PWGSC ROLE**

- .1 PWGSC shall provide:
  - .1 General and Special Instructions to Bidders
  - .2 Bid and Acceptance Form
  - .3 Standard Construction Contract Documents

## **2.10 SPECIFICATIONS**

### **2.10.1 GENERAL**

- .1 In preparing project specifications, the Consultant must use the current edition of the National Master Specification (NMS) in accordance with the "NMS User's Guide".

### **2.10.2 NATIONAL MASTER SPECIFICATION (NMS)**

- .1 In preparing project specifications, the Consultant must use the current edition of the National Master Specification (NMS) in accordance with the "NMS User's Guide".
- .2 The NMS is a master construction specification available in both official languages, which is divided into 48 Divisions (Masterformat 2004) and is used for a wide range of construction and/or renovation projects.
- .3 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 of conflict and ambiguity.

### **2.10.3 SPECIFICATION ORGANIZATION**

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



- .3 For specifications not included in the NMS, but required for the project, follow the number and title recommendations of Masterformat 2004
- .4 Number each page and start each Section on a new page
- .5 Bind specifications
- .6 Include Division I, edited to PWGSC requirements.
- .7 Note: Consultant's name is not to be indicated in the specifications..

#### **2.10.4 TERMINOLOGY**

- .1 Use the term "Departmental Representative" instead of Engineer, PWGSC, Owner, Consultant or Architect.
- .2 "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.
- .3 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.
- .4 Specifications must permit bidders to calculate all quantities and bid accurately.
  - .1 If quantities are impossible to identify (i.e. cracks to be repaired) give an estimated quantity for bid purposes (unit prices).
- .5 Ensure that the terminology used throughout the specifications is consistent and does not contradict the applicable standard construction contract documents.

#### **2.10.5 DIMENSIONS**

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

#### **2.10.6 STANDARDS**

- .1 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.
- .2 Canadian standards should be used wherever possible.

#### **2.10.7 SPECIFYING MATERIALS**

- .1 The practice of specifying actual brand names, model numbers, etc., is against departmental policy except for special circumstances.
- .2 The method of specifying materials shall be by using industry recognized standards.
- .3 If the above method cannot be used and where no standards exist, specify by a non-restrictive, non-trade name "prescription" or "performance" specifications.
- .4 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
- .5 Include all known materials acceptable for the purpose intended, and in the case of equipment, identify by type and model number.

#### **2.10.8 ACCEPTABLE PRODUCTS AND MATERIALS**

- .1 The term "Acceptable Manufacturers" must not be used, as this restricts competition and does not ensure the actual material or product will be acceptable.
  - .1 A list of words and phrases that should be avoided is included in the NMS User's Guide.
- .2 Listing of acceptable products or materials is to be an exception, due to a unique specification or for the purpose of assisting bidders in identifying lesser known potential products or materials.



- .3 For exceptions, provide justifiable reasons for listing products and materials and submit to the *Departmental Representative* for acceptance.
- .4 When authorized to list acceptable products or materials, list all, with a minimum of three (3), trade names of products and materials acceptable for the intended purpose.

#### **2.10.9 ALTERNATE PRODUCTS AND MATERIALS**

- .1 Alternates must be approved by addendum issued by the *Departmental Representative* in accordance with Instructions to bidders.
- .2 Review applications for approval of alternate products and materials and provide recommendations to the *Departmental Representative*.
- .3 Compare products/materials to specifications. Do not compare product-to-product or material-to-material.

#### **2.10.10 SEPARATE AND ALTERNATE PRICES**

- .1 Do not include Separate or Alternate Pricing .

#### **2.10.11 SOLE SOURCING**

- .1 Sole sourcing for materials and work may be used for proprietary systems (i.e. fire alarm systems, EMCS systems).
- .2 Substantiation and/or justification will be required.
- .3 Prior to including sole source materials and/or work, the Consultant must contact the *Departmental Representative* to obtain the approval for the sole sourcing.

#### **2.10.12 UNIT PRICES**

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

#### **2.10.13 CASH ALLOWANCES**

- .1 Construction contract documents should be complete and contain all of the requirements for the contractual work.
- .2 Cash allowances are to be used only under exceptional circumstances (i.e. utility companies, municipalities), where no other method of specifying is appropriate.
- .3 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.

#### **2.10.14 WARRANTIES**

- .1 It is the practice of PWGSC to have a 12-month warranty and to avoid extending warranties for more than 24 months.
- .2 When it is deemed necessary to extend a warranty beyond the 12 month period provided for in the General Conditions of the contract, obtain approval from the Project Manager.
- .3 Delete all references to manufacturers' guarantees.

#### **2.10.15 SCOPE OF WORK**

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

#### **2.10.16 SUMMARY AND SECTION INCLUDES**

- .1 In Part - I All Sections; do not use (delete):
  - .1 "Summary" and
  - .2 "Section Includes."

#### **2.10.17 RELATED SECTIONS**

- .1 In Part I All Sections; do not use (delete)

#### **2.10.18 INDEX**



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

#### **2.10.19 HEALTH AND SAFETY**

- .1 Confirm with the Project Manager to determine if there are any instructions to meet regional requirements.

#### **2.10.20 EXPERIENCE AND QUALIFICATIONS**

- .1 Remove experience and qualification requirements from specification sections.

#### **2.10.21 PREQUALIFICATION**

- .1 Do not include in the specification any mandatory contractor and/or subcontractor prequalification requirements that could become a contract award condition.
- .2 If a prequalification process is required, contact the Project Manager.
- .3 There should be no references to certificates, transcripts or license numbers of a trade or subcontractor being included with the bid.

#### **2.10.22 CONTRACTING ISSUES**

- .1 Specifications describe the workmanship and quality of the work.
  - .1 Contracting issues should not appear in the specifications.
- .2 Division 00 of the NMS is not used for PWGSC projects.
- .3 Remove all references within the specifications, to the following:
  - .1 General Instructions to Bidders
  - .2 General Conditions
  - .3 CCDC documents
  - .4 Health and Safety requirements
  - .5 Priority of documents
  - .6 Security clauses
  - .7 Terms of payment or holdback
  - .8 Tendering process
  - .9 Bonding requirements
  - .10 Insurance requirements
  - .11 Alternative and separate pricing
  - .12 Site visit (Mandatory or Optional)
  - .13 Release of Lien and deficiency holdbacks

### **2.11 DRAWINGS**

#### **2.11.1 GENERAL**

- .1 Drawings shall be in accordance with PWGSC Western CADD Standards and CSA B78.3.
- .2 Refer to:
  - .1 <http://www.tpsgc-pwgsc.gc.ca/cdao-cadd/ouest-western/tdm-toc-eng.html>
  - .2 The above link is subject to change
  - .3 The Consultant shall check with the Project Manager to ensure that the link is current.
- .3 Download and use the Toolkit which includes drawing border templates, layer utility and drawing standards checker.

#### **2.11.2 TITLE BLOCKS**

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

#### **2.11.3 DIMENSIONS**

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

#### **2.11.4 TRADE NAMES**



- .1 Trade names on drawings are not acceptable.
- .2 Refer to SECTION 2.3, SPECIFICATIONS; 2.3.6 Specifying Materials for specifying materials by trade name.

#### **2.11.5 SPECIFICATION NOTES**

- .1 No specification type notes are to appear on any drawing.

#### **2.11.6 TERMINOLOGY**

- .1 Use the term "Departmental Representative" instead of Engineer, PWGSC, Owner, Consultant or Architect.
- .2 "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.
- .3 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", may not be indicated on the drawings or in the specifications as this promotes inaccurate and inflated bids.
- .4 Specifications & drawings must permit bidders to calculate all quantities and bid accurately.
- .5 If quantities are impossible to identify (i.e. cracks to be repaired) give an estimated quantity for bid purposes (unit prices).
- .6 Ensure that the terminology used throughout the drawings & specifications is consistent and does not contradict the applicable standard construction contract documents.

#### **2.11.7 INFORMATION TO BE INCLUDED**

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

#### **2.11.8 DRAWING NUMBERS**

- .1 Number drawings in sets according to the type of drawing and the discipline involved as follows:
  - .1 The requirements of SECTION 2 PWGSC NATIONAL CADD STANDARD will supersede these requirements, where warranted.
- .2 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.

#### **2.11.9 PRINTS**



- .1 Print with black lines on white paper.
- .2 Blue prints are acceptable for document submissions at stages outlined in the TOR.
- .3 Confirm with Departmental Representative the size of prints to be provided for review purposes.

#### **2.11.10 BINDING**

- .1 Staple or otherwise bind prints into sets.
- .2 Where presentations exceed 20 sheets, the drawings for each discipline may be bound separately for convenience and ease of handling.

#### **2.11.11 LEGENDS**

- .1 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.

#### **2.11.12 SCHEDULES**

- .1 Where schedules occupy entire sheets, locate them next to the plan sheets or at the back of each set of drawings for convenient reference.
  - .1 See CGSB 33-GP-7 Architectural Drawing Practices for schedule arrangements.

#### **2.11.13 NORTH POINTS**

- .1 On all plans include a north point.
- .2 Orient all plans in the same direction for easy cross-referencing.
- .3 Wherever possible, lay out plans so that the north point is at the top of the sheet.

#### **2.11.14 DRAWING SYMBOLS**

- .1 Follow generally accepted drawing conventions, understandable by the construction trades, and in accordance with PWGSC publications.





## **3 PROJECT ADMINISTRATION**

### **3.1 GENERAL REQUIREMENTS FOR ALL PROJECTS**

- .1 The administration requirements outlined in this section are applicable to all PWGSC projects in Western Region, unless otherwise indicated in the TOR.
- .2 “Project Team” refers to key representatives involved in this project.
- .3 All team members must maintain a professional, cordial and collaborative relationship.

### **3.2 LANGUAGE**

- .1 Construction documents must be prepared in English.

### **3.3 MEDIA**

- .1 The Consultant shall not respond to any media inquiry.
- .2 Direct all media requests to the Departmental Representative.

### **3.4 PROJECT MANAGEMENT**

#### **3.4.1 GENERAL**

- .1 Public Works and Government Services Canada administers the project on behalf of Canada and exercises continuing control over the project during all phases of development.
- .2 This project is to be organized, managed and implemented in a collaborative manner.
- .3 The PWGSC project management team, the Consultant, the Contractor and the User Department teams are to work cooperatively at every stage of the design and construction process in order to assure the creation of a successful and meaningful work of architecture.
- .4 Under the leadership of the PWGSC Departmental Representative, all team members are responsible for establishing and maintaining a professional and cordial relationship.

#### **3.4.2 NATIONAL PROJECT MANAGEMENT SYSTEM**

- .1 PWGSC uses the National Project Management System (NPMS) for management of its building projects in order to align with the Federal Government approvals processes. Refer to the PWGSC NPMS web site for more details.
- .2 <http://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/index-eng.html>
- .3 This GP&S document speaks to services that are normally provided by the professional during the Project Delivery Phase of the NPMS.

#### **3.4.3 DESIGN STAGE**

- .1 Pre-design Process
  - .1 The purpose of this phase is to analyze all project requirements including codes, regulations, programming, sustainability, cost, time management and risk to demonstrate a full understanding of the project
  - .2 The approved deliverable will become the formal project work plan and will be utilized throughout the project to guide the delivery.
- .2 Schematic Design Process
  - .1 The purpose of this phase is to explore three distinctly different design options and to analyze them against the project requirements.
  - .2 The Schematic Design will be in sufficient detail to illustrate and communicate the project characteristics.
    - .1 Provide a detailed review and analysis of the project requirements including all updates and amendments to ensure all requirements are fully integrated into the Schematic Design.



- .2 Out of this process the Schematic Design will be accepted and authorization to proceed to Design Development will be based on the accepted Schematic Design.
- .3 The *Departmental Representative*, in concert with others shall choose one option to be further developed.
  - .1 Although the *Consultant* is required to identify a preferred option, the *Departmental Representative* may select another option.
  - .2 The approved deliverable will become the formal project work plan and will be utilized throughout the project to guide the delivery.

#### 3.4.4 IMPLEMENTATION STAGE

- .1 Design Development Process
  - .1 The purpose of this phase is to further develop the design option selected for refinement at the Schematic Design stage.
  - .2 The Design Development documents consist of drawings and other documents to describe the scope, quality and cost of the project in sufficient detail to facilitate design approval, confirmation of code compliance, detailed planning of construction and project approval.
  - .3 This design will be used as the basis for preparation of construction documents.
  - .4 The approved deliverable will become the formal project work plan and will be utilized throughout the project to guide the delivery.
- .2 Commissioning Process
  - .1 “Commissioning” is a quality assurance process, in which the functional requirements of the Owner/occupant and the operational requirements of facility management are tested, verified and proven to function as intended.
  - .2 Commissioning deliverables occur at various phases throughout the project as detailed in section 2.8.
  - .3 Commissioning shall be in accordance with the PWGSC Commissioning Manual CP.1 (2003).
- .3 Construction Document Process
  - .1 The purpose of this phase is to translate design development documents into construction drawings and specifications, for use by the contractor to determine a cost for the work and to construct the building.
- .4 Contract Procurement Process
  - .1 The purpose of this phase is to obtain and evaluate bids/proposals from qualified contractors to construct the project, as per the Construction Contract Documents and to award the construction contract according to government regulations.
- .5 Construction Contract Administration Process
  - .1 The purpose of this phase is to implement the project in compliance with the Construction Contract Documents and to direct and monitor all necessary or requested changes to the scope of work during construction, commissioning and closeout.

#### 3.4.5 CLOSEOUT STAGE

- .1 Post Construction Process
  - .1 The purpose of this phase is to ensure the orderly completion and recording of all aspects of the work during the construction and liaise with the Public Works And Government Services Canada and other agencies as appropriate to close out the project.

#### 3.4.6 ENGINEERING PROJECTS



- .1 Refer to the project specific TOR where the stages for an Engineering Project differs slightly.

### **3.5 LINES OF COMMUNICATION**

- .1 In general, communications will be through the Departmental Representative, unless directed otherwise.
  - .1 This includes formal contact between the Consultant, the Contractor, the PWGSC Project Team and the User Department.
- .2 Direct communication between members of the PWGSC Project Team on routine matters may be required for resolution of technical issues.
  - .1 However, this shall not alter project scope, budget or schedules, unless confirmed in writing by the Departmental Representative.
- .3 During construction tender call, PWGSC will conduct all correspondence with bidders and award the contract.

### **3.6 MEETINGS**

- .1 The Departmental Representative will arrange meetings throughout the project, with representatives from:
  - .1 The User Department;
  - .2 PWGSC
  - .3 The Consultant team; and
  - .4 The Contractor (during the construction phase)
- .2 Standing agenda items shall include:
  - .1 Project Schedule,
  - .2 Cost,
  - .3 Risk,
  - .4 Quality,
  - .5 Health and safety

### **3.7 CONSULTANT RESPONSIBILITIES**

- .1 The “Consultant Team” includes the Consultant’s staff, sub-consultants and specialists.
  - .1 This team must maintain its expertise for the duration of the project.
  - .2 The team must include qualified registered architectural and engineering professionals, with extensive relevant experience, capable of providing all required services.
  - .3 Team members may be qualified to provide services in more than one discipline.
  - .4 The Consultant may expand the team to include additional disciplines.
- .2 The Consultant is responsible for:
  - .1 Obtaining Departmental Representative acceptance for each project phase before proceeding to the next phase.
  - .2 Accurately communicating design, budget, and scheduling issues to staff, sub-consultants and specialists.
  - .3 Co-ordinating input for the Departmental Representative’s Risk Management Plan
  - .4 Co-ordinating the quality assurance process and ensuring that submissions of sub-consultants are complete and signed-off by reviewers;
  - .5 During the design phases:
    - .1 Attend meetings,
    - .2 Record the issues and decisions,
    - .3 Prepare and distribute minutes within two working days of the meeting,



- .4 Ensure all meetings are green i.e. using electronic documents or double-sided hard copies and
- .5 Ensure sub-consultants attend required meetings.
- .6 During the construction phase:
  - .1 Attend meetings and provide site inspection services
  - .2 Ensure sub-consultants provide site inspection services and attend required meetings.
- .3 The Consultant is responsible for:
  - .1 Coordinating and directing the work of all team activities, sub-consultants and specialists
  - .2 Preparing a design that meets project requirements.
  - .3 Obtaining approvals on behalf of the Departmental Representative from the User and other levels of government such as provincial and municipal governments
    - .1 The Consultant shall adjust the documentation to meet the requirements of these authorities.

### **3.8 PWGSC RESPONSIBILITIES**

- .1 Administration
  - .1 PWGSC administers the project and exercises continuing control over the project during all phases of development.
  - .2 The following administrative requirements apply during all phases of the project delivery.
- .2 Reviews
  - .1 PWGSC will review the work at various stages and reserves the right to reject unsatisfactory work at any stage.
  - .2 If later reviews show that earlier acceptances must be withdrawn, the Consultant shall re-design and re-submit at no extra cost.
- .3 Acceptance
  - .1 PWGSC acceptance of submissions from the Consultant simply indicates that, based on a general review, the material complies with governmental objectives and practices, and meets overall project objectives
  - .2 Acceptance does not relieve the Consultant of professional responsibility for the work and for compliance with the contract.
- .4 PWGSC Project Management
  - .1 The Project Manager assigned to the project is the Departmental Representative.
  - .2 The Departmental Representative is directly responsible for:
    - .1 The progress and administration of the project, on behalf of PWGSC
    - .2 Day-to-day project management and is the Consultant's single point of contact for project direction.
    - .3 Providing authorizations to the Consultant on various tasks throughout the project.
  - .3 Unless directed otherwise by the Departmental Representative, the Consultant obtains all Federal approvals necessary for the work.
- .5 PWGSC Professional & Technical Resources Team
  - .1 Provides professional advice and quality assurance reviews of consultant deliverables by Architectural and Engineering professional disciplines.
  - .2 Offers expert technical advice on related project issues, such as functional programming, options analysis, risk management, cost planning, scheduling, contract interpretation, specifications, terms of reference, commissioning, claims management, project delivery approach and project compliance.



- .3 Participates regularly in design phases and may attend (during construction), contractor meetings and conduct field reviews on behalf of the Departmental Representative.
- .4 Provides a Design Manager for the project, who will coordinate the services of the Professional & Technical Resources Team through the Departmental Representative;
  - .1 The Design Manager is the assembler and coordinator of the Resources Team of Architects, Engineers, Interior Designers, Project Planners, Cost Planners and Commissioning Specialists, all with specific areas of expertise.
- .6 PWGSC Commissioning Specialist represents the Departmental Representative's interests in the commissioning process for buildings by:
  - .1 Providing technical advice on O&M matters, operational criteria and quality assurance on the commissioning process throughout the project life cycle;
  - .2 Coordinating and overseeing internal PWGSC commissioning activities during all project phases to ensure that O&M concerns are addressed;
  - .3 Working closely with the Consultant, the Consultant's Commissioning Manager, the Contractor, and the Departmental Representative for Commissioning activities and,
  - .4 Reviews all documentation and reported results relative to commissioning throughout the project delivery.

### **3.9 USER DEPARTMENT RESPONSIBILITIES**

- .1 The User Department Project Leader
  - .1 Is accountable for the expenditure of public funds and delivery of the project in accordance with terms accepted by the Treasury Board
  - .2 Reports to senior User Department executive management
  - .3 Will play several critical roles for the successful implementation of the project, as follows:
    - .1 Coordinate the quality, timing and completeness of information and decisions relating to issues related to the functional performance of the facility;

### **3.10 REVIEW AND APPROVAL BY PROVINCIAL AND MUNICIPAL AUTHORITIES**

- .1 The federal government generally defers to provincial and municipal authorities for specific regulations, standards and inspections but in areas of conflict, the more stringent authority prevails.
- .2 Municipal authority review
  - .1 The purpose of this review is information and awareness;
  - .2 Submissions will be reviewed at the completion of specific phases as outlined in the Required Services Section of the TOR.

### **3.11 BUILDING PERMITS AND OCCUPANCY PERMITS**

- .1 The Consultant will support the Contractor in applying for building permits by providing the required documentation.
  - .1 These documents will be submitted at phases as requested by the municipal authorities.
  - .2 The Consultant will negotiate and resolve building permit related issues.
- .2 The Consultant shall support the Contractor in its application for an occupancy permit and coordinate the resolution of all outstanding issues relating to the permit.
- .3 The Contractor shall pay for the permits on behalf of PWGSC.

### **3.12 TECHNICAL AND FUNCTIONAL REVIEWS**

- .1 This includes both COE reviews and User Department reviews.



- .1 The Purpose of these reviews is technical and functional quality assurance;
- .2 Submissions will be reviewed at the completion of specific phases as outlined in the Required Services Section of the TOR.
- .2 HRSDC Reviews of building projects
  - .1 The purpose of these reviews is for fire protection, health and life safety;
  - .2 Submissions will be reviewed at the completion of specific phases as outlined in the Required Services Section of the TOR.



## APPENDIX A CHECKLISTS

### A.1 CHECKLIST FOR THE SUBMISSION OF CONSTRUCTION DOCUMENTS

#### A1.1 TITLE BLOCK

<b>Project Title:</b>		<b>Date:</b>
<b>Project Location:</b>		<b>Project Number:</b>
<b>Consultant's Name:</b>		<b>Contract Number:</b>
<b>PWGSC PM:</b>	<b>Review Stage:</b>	

#### A1.2 STANDARDS & GUIDELINES

ITEM	Checked by:	Progress Submission	Pre-Tender or Tender Ready Submission	Comments:
<b>I. General</b>				
The design meets the requirements of;				
.1 National Building Code - 2005				
.2 National Fire Code - 2005				
.3 National Plumbing Code - 2005				
.4 Canada Labour Code				
.5 NFPA 10 - Standard for Portable Fire Extinguishers - 2002				
.6 NFPA 13 - Standard for the Installation of Sprinkler Systems - 2007				
.7 NFPA 14 – Standard for the Installation of Standpipe and Hose Systems - 2003				
<b>2. Treasury Board</b>				
The design meets the requirements of;				
.1 Chapter 3-6: Fire Protection Standard for Correctional Institutions. <a href="http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13580">http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13580</a>				
.2 Chapter 3-2: Fire Protection Standard for Design & Construction. <a href="http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13581">http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13581</a>				
.3 Fire Protection Standard for Electronic Data Processing				



Equipment. <a href="http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13582">http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13582</a>				
<b>3. HRSDC Fire Protection Engineer Standards</b>  The design meets the requirements of;				
.1 Federal Fire Protection Standards. <a href="http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/index.shtml">http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/index.shtml</a>				
.2 FC-403 Standard for Sprinkler Systems. <a href="http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/403/page00.shtml">http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/403/page00.shtml</a>				
.3 FC-311-M Standard for Record Storage. <a href="http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/311/page00.shtml">http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/311/page00.shtml</a>				
<b>4. Labour Canada Standards</b>  The design meets the requirements of;				
.1 Canada Labour Code. <a href="http://laws.justice.gc.ca/en/L-2/">http://laws.justice.gc.ca/en/L-2/</a>				
.2 Canada Occupational Health and Safety Regulations. <a href="http://laws.justice.gc.ca/eng/SOR-86-304/index.html">http://laws.justice.gc.ca/eng/SOR-86-304/index.html</a>				
.3 Movable Storage Units Standard. <a href="http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/guidelines/mobile.shtml">http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/guidelines/mobile.shtml</a>				
<b>5. ASHRAE Standards</b>  The design meets the requirements of;				
.1 ANSI/ASHRAE 55 – 2004 Thermal Environmental Conditions for Human Occupancy				
.2 ASHRAE 62.1 – 2007 – Ventilation for Acceptable Indoor Air Quality				
.3 ASHRAE Applications Handbook				
.4 ASHRAE Fundamentals Handbook				





<b>6. PWGSC MD Standards</b>					
The design meets the requirements of;					
.1	MD 15116 – Computer Room Air Conditioning Systems - 2006				
.2	MD 15128 – Minimum Guidelines for Laboratory Fume Hoods – March 2004				
.3	MD 15129 – Perchloric Acid Fume Hoods - 2006				
.4	MD 15161 – Guidelines for the control of Legionella in mechanical systems				
.5	MD 250005 – Energy Monitoring and Control Systems Design Guidelines - 2009				

### A1.3 SPECIFICATIONS – ALL DISCIPLINES

ITEM	Checked by:	Progress Submission	Pre-Tender or Tender Ready Submission	Comments:
<b>1. General</b>				
The Specifications meet the requirements of;				
.1	The NMS Users Guide. .			
.2	Masterformat 2004			
.3	The current edition of the NMS database			
.4	Deletion of “Related Sections” and “Section Includes” throughout.			
.5	PWGSC GCs for projects tendered through PWGSC			
.6	Consistent use of CCDC or other for privately tendered projects.			
.7	Non-proprietary Specifications.			
.8	Being completely edited with removal of all square choice brackets and Spec Notes.			
.9	Including all relevant Sections as evident by the by the scope of work indicated by the drawings.			
.10	Not referring to the Tender Submission (Contract B)			
.11	Use of command imperative style of language.			
.12	Formatting in either the NMS			



	1/3 - 2/3 page format or the Construction Specifications Canada full page format.				
.13	Each Section starting on a new page and the Project Number, Section Title, Section Number and Page Number show on the header of each page only.				
.14	Specification headers not including date or consultant's name.				
.15	Departmental Representative being used throughout instead of Engineer, PWGSC, Owner, Consultant or Architect. (That is; the contractual entity)				
.16	Non use of notations such as: "verify on site", "as instructed", "to match existing", "example", "equal to", "equivalent to" and "to be determined on site by".				
.17	Dimensions being provided in metric only.				
.18	Indicating the latest edition of all references noted in Part 1 of each Section and that un-used reference Standards are deleted.				
.19	No bolding of text.				
.20	Use of Western Regions standard payments procedures clause.				

#### AI.4 DRAWINGS GENERAL – ALL DISCIPLINES

ITEM	Checked by:	Progress Submission	Pre-Tender or Tender Ready Submission	Comments:
<b>1. General</b> The Drawings meet the requirements of;				
.1 PWGSC Western Region AutoCAD drafting standards.				
.2 Using the "toolkit" and the "drawing checker".				
.3 All dimensions in SI. No dual dimensioning has been used.				
.4 Providing a north arrow.				
.5 Providing a legend on all relevant sheets.				
.6 Indicating grid lines on all				



	sheets.				
.7	Using standard scales. (1:50, 1:100 etc.)				
.8	Cross referencing and detailing is consistent.				
.9	No Specifications on drawings.				
.10	All notes being written in the command imperative style of speech.				
.11	Not naming the "Contractor" or "sub trades" in the notes.				
.12	Numbering all rooms on all floor plans.				
.13	Using appropriate line weights to differentiate new versus existing versus demolition.				
.14	Using font sizes and types following PWGSC drafting standards.				
.15	Providing separate drawings for demolition and new work.				
.16	Drawing acceptance by the FPE of HRSDC.				

#### AI.5 DRAWINGS - DISCIPLINE SPECIFIC

ITEM	Checked by:	Progress Submission	Pre-Tender or Tender Ready Submission	Comments:
<b>1. Architectural</b> The Drawings meet the requirements of;				
.1 Providing a Building Code Analysis.				
.2 Indicating fire separations and firewalls and rating.				
.3 Providing a complete site plan with all related details.				
.4 Providing a fully detailed reflected ceiling plan showing lighting, diffusers, sprinkler heads, etc.				
.5 Wall sections being coordinated with the structural and other disciplines drawings.				
.6 Building elevations showing all mechanical and electrical ancillaries.				
.7 Sub surface drainage being shown on the foundation plans and coordinated with all other disciplines.				



.8	Accessibility conforming to CAN/CSA 651-04.				
.9	Coordination of door, finish, hardware schedules in conjunction with fire separations and other disciplines.				
.10	All conflict points identified by BIM have been resolved.				
<b>2. Structural</b> The Drawings meet the requirements of;					
.1	Ensuring that General Notes provide additional information that is NOT covered in Specifications.				
.2	Remove all information that is or should be covered by the Specifications.				
.3	Note loads used for design.				
.4	PWGSC policy of using general product descriptions, not proprietary product names followed.				
.5	Table of Abbreviations used provided.				
.6	Section bubbles properly cross referenced.				
.7	Coordination with all other disciplines.				
<b>3. Mechanical</b> The Drawings meet the requirements of;					
.1	Separate drawings for Plumbing, HVAC, Fire Suppression, etc.				
.2	Provision for humidification with a clean source of water and no standing water				
.3	Provision of separate HVAC zoning for each unique thermal zone.				
.4	Providing Ventilation to ASHRAE 62.1.				
.5	Meets all requirements of ASHRAE 62.1, Section 5.				
.6	All thermostats are wall mounted.				
.7	The building and systems and equipment meeting all requirements of Section 5 of ASHRAE 62.1.				
.8	Conformance to ASHRAE 55 for; .1 Operative				



	temperature .2 Air motion .3 Radiant Temperature Asymmetry .4 Draft .5 Vertical Temperature Difference .6 Floor Surface Temperature .7 Temperature Variations with Time .8 Cyclic Variations .9 Drifts and Ramps				
.9	Providing building cross-sections at all key locations showing clearances for the mechanical installation and access for maintenance.				
.10	Providing sufficient access to mechanical equipment for maintenance.				
.11	Providing mechanical schematics showing design pressure and temperatures as well as all instrumentation and control points labels.				
.12	Design complies with all referenced PWGSC MD Standards.				
.13	Equipment schedules on the drawings coordinate and agree with the Book Specifications.				
.14	Duct attenuation is designed to conform to the STC requirements shown on the architectural drawings.				
.15	Coordination with all other disciplines.				
<b>4. Electrical</b> The Drawings meet the requirements of;					
.1	Separate drawings for Lighting, Power, Fire Alarm System, Communication and Data, Security & CCTV etc.				
.2	Verification and acceptance of the Grounding condition for this project.				
.3	The Overcurrent and Short Circuit Study and confirming all components are fully coordinated.				
.4	The Arch-Flash Study and confirming all components are fully coordinated.				
.5	Providing Arch protection				



	warning signs and labeling.				
.6	Providing lighting Levels in accordance with the National Building Code and IESNA recommendations.				
.7	Not using Armored Cable. Using Armored Cable will be allowed only for jumping from one light fixture to the other in a distance up to 3m.				
.8	Providing identification for each circuit including: .1 Name .2 Voltage, .3 Phase, .4 Amps, .5 Circuit-s .6 Fed from Panel, Destination.				
.9	The Voltage Drop Calculation for each circuit and conformance to CEC requirements.				
.10	Providing phase load and total load for each panel and ensuring proper balance of the Electrical System.				
.11	Coordination with all other disciplines.				
	<b>5. Civil</b> The Drawings meet the requirements of;				
.1	The design criteria. (e.g. design vehicle for surface structures, design period and other data for WM.WW, SW and other systems including data and calculations showing design requirements and provided capacities)				
.2	The reference standards. (e.g. minimum service connection pipe or minimum WM size, etc have been used for municipal works, name the local authority whose standards are used.)				
.3	Indicating existing sub-grade soil properties and strength that has been used for the design is indicated on drawings or in a report.				
.4	Indicating Bench Marks used for the Topographic Survey are shown with Northing, Easting and elevation data.				
.5	Indicating the Final				



	Geometric layout for existing and new infrastructures and facilities including centerline of all access roads and pipes. The data provided includes Northing and Easting of all points including start and end point and for all other points wherever there is change in direction, and all horizontal curve data				
.6	Providing typical X-sections for all structures, including type, thickness of various materials for pavement structures, and pipe diameter, material types and thickness and SDR values.				
.7	Providing design grades and slopes.				
.8	Providing details for all infrastructures and facilities indicating all works and type of materials and all geometrics and dimensions..				
.9	Coordination with all other disciplines.				



## APPENDIX B SPECIFICATION TOC STANDARDS

### B.1 GENERAL

#### B1.1 SPECIFICATIONS

- .1 List all Divisions, Sections (by number and title) and number of pages.

#### B1.2 DRAWINGS

- .1 List all Drawings by number and title.

### B.2 SAMPLE OF TABLE OF CONTENTS

Project No:	Table of Contents	Index
R.xxxxxx		Page I of xx

#### SPECIFICATIONS:

- .3
- .4
- No. Pages
- .5 Division 01 – GENERAL REQUIREMENTS
- .6 01 11 00 – Summary of Work xx pages
- .7 01 14 00 – Work Restrictions xx pages
- .8 01 29 00 – Payment Procedures xx pages
- .9 Division 02 – EXISTING CONDITIONS
- .10 ETC.
- .11

#### DRAWINGS:

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





## APPENDIX C ADDENDUM FORMAT STANDARD

### C.1 SAMPLE OF ADDENDUM FORMAT

#### CI.1 DRAWINGS

- .1 Indicate drawing number and title, then list changes or indicate revision number and date, and re-issue drawing with addendum.

#### CI.2 SPECIFICATIONS

- .1 Indicate section number and title.
- .2 List all changes (i.e. delete, add or change) by article or paragraph

<b>Project Title:</b>	<b>Addendum No:</b>
<b>Project Location:</b>	<b>Project Number:</b>
<b>Consultant's Name:</b>	<b>Date:</b>
<b>The following changes in the bid documents are effective immediately. This addendum will form part of the contract documents</b>	
<b>Drawings</b>	
1 AI Architectural	
<b>Specifications</b>	
1 Section 01 00 10 - General Instructions	
.1 Delete article (xx) entirely.	
.2 Refer to paragraph (xx) and revise "xxx", to read "xxxx"..	
2 Section 23 05 00 - Common Work Results - Mechanical	
.1 Add new article (x.xx) as follows:	



## APPENDIX D DIGITAL TENDER DOCUMENTS STANDARDS

### D.1 CONVENTION STANDARDS FOR TENDER DOCUMENTS

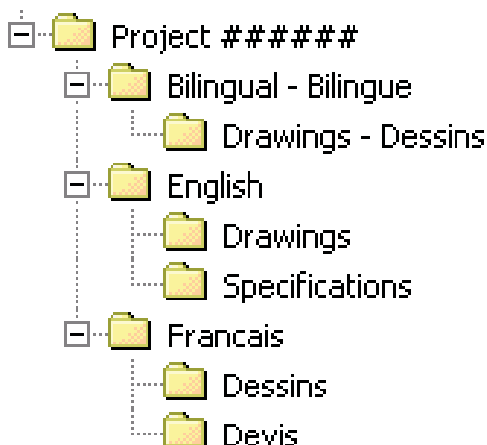
#### D1.1 USER MANUAL

- .1 Refer to the User manual on directory structure and naming convention standards for construction tender documents on CD ROM.
  - .1 Issued by: Real Property Contracting Directorate, PWGSC,
  - .2 Version 1.0, May 2005.

#### D1.2 PREFACE

- .1 The Government of Canada (GoC) has committed to move towards an electronic environment for the majority of the services it offers.
- .2 This covers the advertisement and distribution of contract opportunities, including construction solicitations.
- .3 As a result, it is now 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).
- .4 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.
- .5 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.
- .6 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.
- .7 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.

#### D1.3 DIRECTORY STRUCTURE



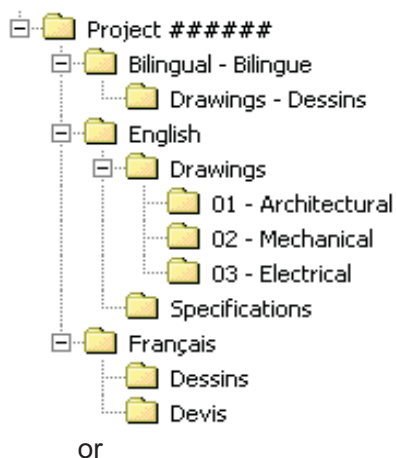


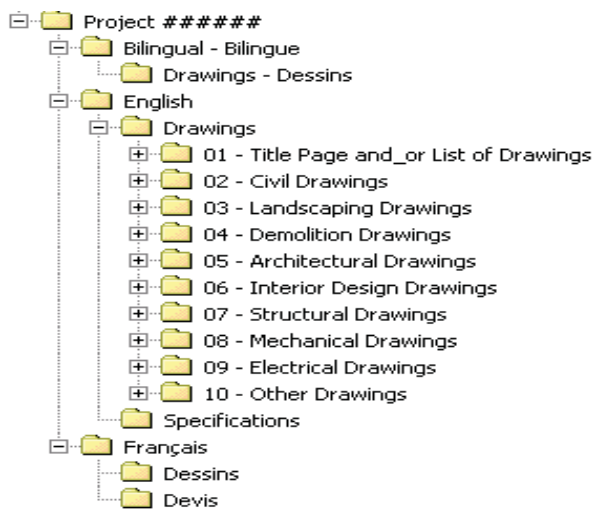
#### D1.4 1<sup>ST</sup>, 2<sup>ND</sup> AND 3<sup>RD</sup> TIER SUB-FOLDERS

- .1 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:
- .2 The following important points are to be noted about the Directory Structure:
  - .1 The “Project #####” folder is considered the 1<sup>st</sup> Tier of the Directory Structure where ##### represents each digit of the Project Number.
  - .2 The Project Number must always be used to name the 1<sup>st</sup> Tier folder and it is always required.
  - .3 Free text can be added following the Project Number, to include such things as a brief description or the project title;
- .3 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;
- .4 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.
- .5 IMPORTANT NOTE:
  - .1 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.

#### D1.5 4<sup>TH</sup> TIER SUB-FOLDERS FOR DRAWINGS

- .1 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.
- .2 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.
- .3 Note:
  - .1 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.
- .4 Examples of 4<sup>th</sup> Tier sub-folders for drawings:





## DI.6 NAMING CONVENTION - 4<sup>TH</sup> TIER DRAWINGS

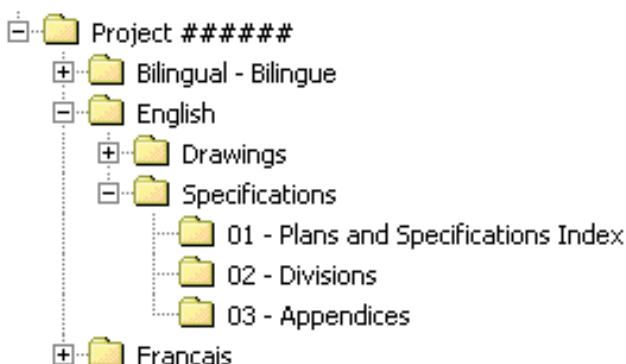
- .1 The 4<sup>th</sup> Tier sub-folders for drawings must adhere to the following standard naming convention.
  - .1 For the “Drawings” and “Dessins” folders:
    - 1 ## - Y, Where:
      - 1 ## = A two digit number ranging from 01 to 99 (leading zeros must be included)
      - 2 Y = The title of the folder
    - 2 Example: 03 – Mechanical
  - .2 For the “Drawings - Dessins” folder:
    - 1 ## - Y – Z, Where:
      - 1 ## = A two digit number ranging from 01 to 99 (leading zeros must be included)
      - 2 Y = The English title of the folder
      - 3 Z = The French title of the folder
    - 2 Example: 04 - Electrical – Électricité
- .2 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.
- .3 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:
  - .1 The alphanumerical sorting is done on an ascending order;
  - .2 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...);
  - .3 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



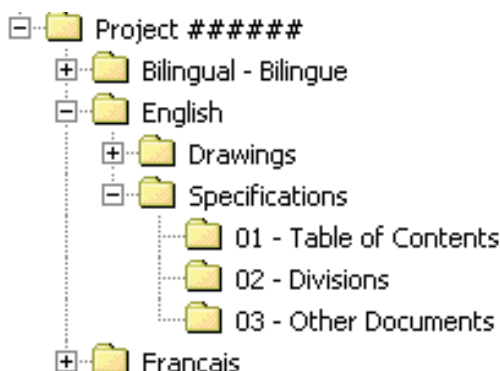
(i.e. Drawing A001 will be printed before Drawing A002, Drawing M02 before Drawing M03, etc...).

#### D1.7 4<sup>TH</sup> TIER SUB-FOLDERS FOR SPECIFICATIONS

- .1 The “Specifications” and “Devis” folders must have 4<sup>th</sup> Tier sub-folders created to reflect the various elements of the specifications.
- .2 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.
- .3 Examples of 4<sup>th</sup> Tier sub-folders for specifications:



or



#### D1.8 NAMING CONVENTION - 4<sup>TH</sup> TIER SPECIFICATIONS

- .1 The 4<sup>th</sup> Tier sub-folders for specifications must adhere to the following standard naming convention.
  - .1 For the “Specifications” and “Devis” folders:
    - 1 ## - Y, Where:
      - 1 ## = A two digit number ranging from 01 to 99 (leading zeros must be included)
      - 2 Y = The title of the folder
    - 2 Example: 02 – Divisions
  - .2 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.



- .3 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 screen display and printing as per the following rules:
- .4 The alphanumerical sorting is done on an ascending order;
  - .1 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...);
  - .2 Each specifications PDF file within each sub-folder will also be sorted alphanumerically.
    - 1 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...).

## **DI.9 NAMING CONVENTION FOR PDF FILES**

- .1 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.

## **DI.10 DRAWINGS**

- .1 Each drawing must be a separate single page PDF file.
- .2 The naming convention of each drawing must be:
  - .1 X### - Y, Where;
    - 1 X = The letter or letters from the drawing title block ("A" for Architectural or "ID" for Interior Design for example) associated with the discipline,
    - 2 ### = The drawing number from the drawing title block (one to three digits),
    - 3 Y = The drawing name from the drawing title block (for bilingual drawings, the name in both English and French is to appear).
  - .2 Example; A001 - First Floor Details.
- .3 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.
- .4 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).
- .5 The following important points about drawings are to be noted:
  - .1 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.
    - 1 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);
  - .2 If drawing PDF files are included in the "*Bilingual - Bilingue*" folder, these cannot be included as well in the "*English*" and/or "*Français*" folders;
  - .3 If drawings not associated with a particular discipline are not numbered (Title Page or List of Drawings for example), these will be sorted alphabetically.
    - 1 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.

1 ## - Y, Where:

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

2 Y = The name of the drawing

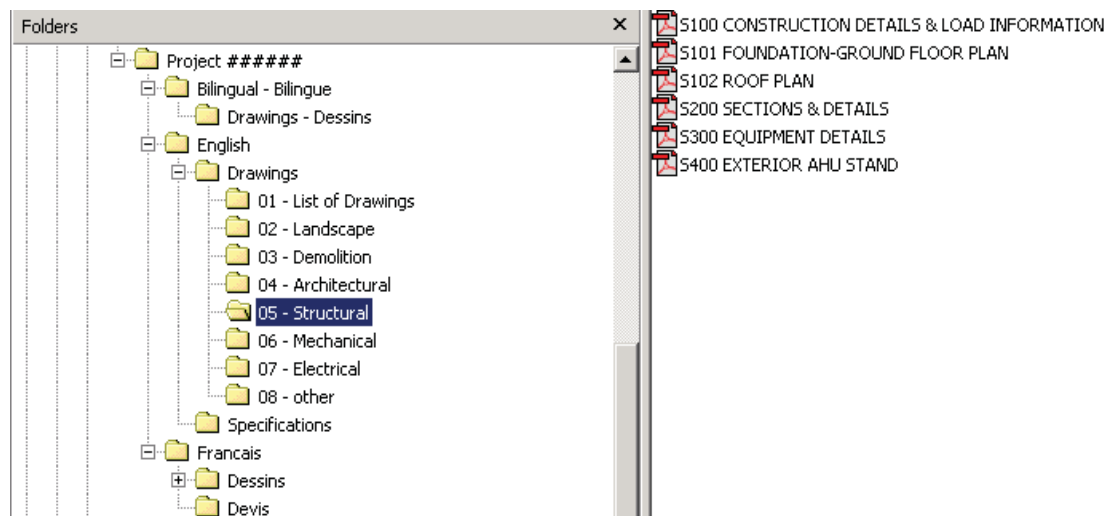
2 Example:

1 01 - Title Page

2 02 - List of Drawings

.4 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.

#### DI.11 EXAMPLE OF A 4<sup>TH</sup> TIER DRAWINGS SUBFOLDER’S CONTENT:



#### DI.12 SPECIFICATIONS

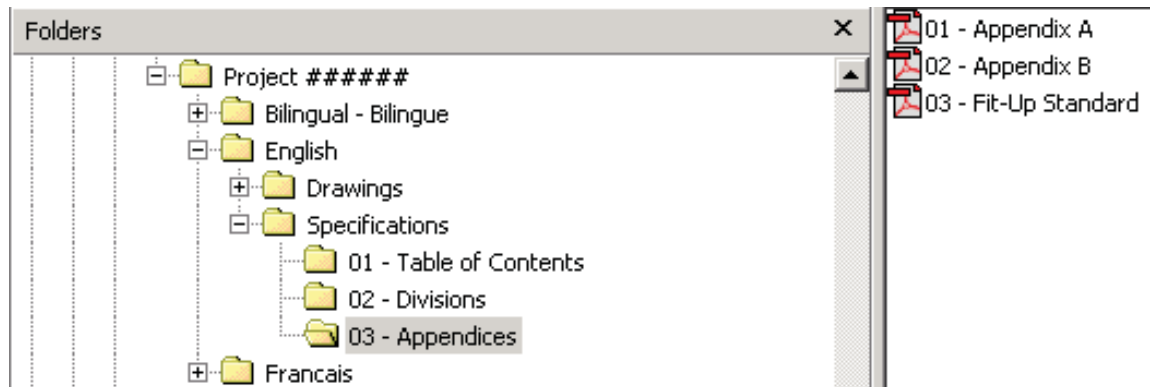
- .1 Each Specifications Division must be a separate PDF file and all pages contained in each PDF file must have the same physical size (height, width).
- .2 The Plans and Specifications Index must also be a separate PDF file.
- .3 If there are other documents that are part of the Specifications (e.g. Appendix or other) these are to be separate PDF files as well.

#### DI.13 DOCUMENTS OTHER THAN SPECIFICATIONS DIVISIONS

- .1 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:
  - .1 ## - Y, Where:
    - 1 ## = Two digit number ranging from 01 to 99 with leading zeros required
    - 2 Y = Name of the document
  - .2 Example: 01 - Plans and Specifications Index



#### DI.14 EXAMPLE OF A SUB-FOLDER CONTENT (SUB-FOLDER OTHER THAN “DIVISIONS”):



#### DI.15 SPECIFICATIONS DIVISIONS

- .1 The Specifications Divisions must be named as follows:
  - .1 Division ## - Y, Where:
    - 1 Division ## = The actual word “Division” followed by a space and a two digit number ranging from 01 to 99 (with leading zeros required)
    - 2 Y = Name of the Specifications Division as per CSC/CSI MasterFormat™
  - .2 Example: Division 05 – Metals
- .2 The following important point about specifications is to be noted:
  - .1 The Numbering of the Divisions cannot be altered from CSC/CSI MasterFormat™ even if some Divisions are not used in a given project.
    - 1 For example, Division 05 will always remain Division 05 even if Division 04 is not used for a given project.

#### DI.16 EXAMPLE OF A “DIVISIONS” SUB-FOLDER CONTENT:







## DI.17 CD-ROM LABEL

- .1 Each CD-ROM is to be labelled with the following information:
  - .1 Project Number;
  - .2 Project Title;
  - .3 Documents for Tender;
  - .4 CD X of X.
- .2 Example:
  - .1 Project 123456;
  - .2 Repair Alexandra Bridge;
  - .3 Documents for Tender;
  - .4 CD 1 of 1.



## APPENDIX E PDF CREATION STANDARDS

### E.1 CONVERTING CONSTRUCTION DRAWINGS INTO PDF

#### E1.1 REFERENCE GUIDE

- .1 Refer to the basic reference guide on converting construction drawings into portable document format (PDF), Issued by Real Property Contracting Directorate. PWGSC, Version 1.0, May 2005.

#### E1.2 PREFACE

- .1 Portable Document Format (PDF) is the standard format for documents that are posted on the Government Electronic Tendering System (GETS).
- .2 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.
- .3 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.
- .4 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.
  - .1 It actually should not take any longer than it would take to create a plot file or to send a drawing to a printer.
  - .2 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.
  - .3 The conversion of specifications is not covered in this basic reference guide since it does not require any special configuration or setting.
- .5 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.
  - .1 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.

#### E1.3 PRINTER DRIVERS

- .1 Adobe Acrobat provides two different printer drivers that are able to convert CADD drawing into PDF format, Acrobat PDF Writer and Acrobat Distiller.
- .2 Before creating a PDF file from a CADD drawing, a choice must be made as to which one will be used.
- .3 Acrobat PDF Writer is a non-PostScript printer driver that works best with documents that don't contain complex graphics.
- .4 Acrobat Distiller is a PostScript printer driver that works best with documents that contain PostScript fills, Encapsulated PostScript (EPS) graphics, or other complex elements.
- .5 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.



#### EI.4 PRINTER CONFIGURATION

- .1 Before converting a CADD drawing to PDF, an Acrobat printer configuration file for the PDF paper size needs to be created.
- .2 This function can be done in the CADD software rather than using a custom paper size defined for the Acrobat distiller feature.
- .3 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.
- .4 The configuration can then be re-used to simplify the conversion process for future files that use the same page size.
- .5 As an alternative, although not recommended, a custom-defined size can be created in Acrobat Distiller in the *properties* menu.

#### EI.5 CREATING PDF FILES

- .1 Once the printer configuration has been done in the CADD software, open Acrobat Distiller and make the necessary settings in the *preferences* and *job options* sub-menu.
  - .1 Ensure that the page size match the sheet size selected in the CADD software to create the file.
  - .2 Particular settings can be saved under different names for future use.
- .2 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.
- .3 A progress bar will show during the conversion and the newly converted PDF file should open up and be displayed for verification.

#### EI.6 PDF FILES SETTINGS

- .1 Security
  - .1 Adobe Acrobat contains security features that can be used to secure the files by restricting any changes to the files.
  - .2 Since the files will be posted on MERX and will be used for printing copies, the files must not be password protected and must allow printing.

#### EI.7 DRAWING ORIENTATION

- .1 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.

#### EI.8 FONT TYPE

- .1 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.

#### EI.9 RESOLUTION

- .1 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).

#### EI.10 SCALE

- .1 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.

#### EI.11 SCANNING



- .1 Scanning is not recommended and should be done only when the drawing is not available electronically.
- .2 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.
- .3 It is recommended that each scanned drawing be opened and verified to ensure that the resolution, scale and border are of an acceptable quality.

#### **EI.12 FINAL CHECKLIST**

- .1 When the drawing file has gone through the PDF conversion, it is recommended to open it and verify the following:
  - .1 That the sheet size displayed is what was intended to be created (the size is viewable in the lower left corner of the drawing);
  - .2 That the orientation of the sheet is correct;
  - .3 That the line types, line weights and fonts match the CADD drawing.
  - .4 That the PDF file is in black and white;
  - .5 That each drawing is a single PDF file;
  - .6 That the PDF file is not password protected and printable.
- .2 If all the items are verified, the PDF file is useable.

#### **EI.13 ADDITIONAL INFORMATION**

- .1 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 F DEFINITIONS

### F.1 TERMINOLOGY

TERMS	DESCRIPTION
As-builts/Record Drawings	See Record Drawings
Base Building	Refers to the building shell, as opposed to the tenant fit-up. It includes finished floors, exterior walls, interior core, finished ceilings with lighting, and other building systems for the planned general use of the building. Generally, the work for the base building is separate from the work for tenant-fit-ups
Circulation	Space used, primarily by people, to move from one area to another. It includes major as well as secondary aisles.
Client	A term that refers to the client, the client department or user department
Co-location	Placing items together for better organization
Consultant	The word refers both to an individual consultant, or a consultant team. The consultant is generally selected by PWGSC using a Request for Proposal.
Contractor	The company, organization or firm who is responsible for the construction of the project
Consolidation	Reducing the number of co-located items by placing them in a common floor facility to eliminate duplication of space.
Constant dollar estimate	This is an estimate expressed in terms of the dollars of a particular base fiscal year.
Cost Specialist	Refers to the cost estimating, planning and control team or an individual performing these functions.
Current dollar estimate	Refer to: <i>budget year dollars</i>
Budget-year dollars	This is an estimate based on costs arising in each FY of the project schedule, which is escalated to account for inflation and other economic factors affecting the period covered by the estimate <b>Budget year</b> dollars is also be referred to as <b>Nominal</b> dollars or <b>Current</b> dollars
Departmental Representative	The person designated in the contract, or by written notice to the Consultant or Contractor, to act for PWGSC for the purposes of the contract. It can also be a person designated in writing by the Departmental Representative to act on his/her behalf. In most cases, the PWGSC Project Manager is the Departmental Representative
EMV	Expected monetary value of risk event (i.e. cost or saving to the project if risk event occurs)



Final Certificate of Completion	A document issued by the Project Manager after the final inspection by the Project Acceptance Board. The final payment to the Contractor by PWGSC is based on the final certificate of completion
Final Inspection	The inspection performed by the Project Acceptance Board after project completion and after correction of deficiencies identified during Interim Inspection
Fit-up for initial occupancy	The preparation of accommodation for initial occupancy, in accordance with the federal Fit-up Standards. This fit-up may include alternations to the base building and its building systems.
Fit-up of existing space for reuse, Refit	Work required to alter space previously occupied by one organization to meet the requirements of a different organization.
Fit-Up Cost Limits	The funding limits for the fit-up of office accommodation. The limits are based on the average cost per useable square meter, for fit-up elements in specific urban centres across Canada, and are updated from time to time. The limits do not include soft costs or items funded by clients or under base building costs.
Fit-Up Items	Components that are installed removed or relocated to prepare the space for occupancy. They include partition walls, doors, frames, hardware, counters and cabinetry, modifications to base building systems, etc. as detailed in the Fit-up standards. Some base building components are included in consultant scope of work, such as the flooring and the ceiling finishes or telecommunications spaces and related environmental controls.
Focus Group	Group sessions held to establish qualitative requirements. They are most effective at the strategic planning level. They are used primarily to translate the Client Department's mission statement into organizational requirements and to assess planning alternatives
Full-time equivalent.	It measures of labour utilization in the federal government which approximates the actual number of persons "employed" by the government for carrying out the unit of work
Functional space equation	Identifies space requirements (in usable m2) by group along with summary of the total space required for all groups.
Gross Space	The total floor space
High risk	A project (or element of a project) may be assessed as high risk if one or more hazards exist in a significant way and, unless mitigated, would result in probable failure to achieve project objectives
Impact	The result of the occurrence of an event on the project either positive or negative (i.e. a schedule delay as a result of late delivery of a piece of equipment may have a high negative impact on a project; increased access to a construction site due to early departure of occupants in an office space may have positive



	impact on a project). The Impact of individual Risk Events can be qualified as low, medium, high or quantified in terms of time, cost (immediate cost or in-service cost (O&M)) or performance.
Interim Certificate of Completion	The certificates issued by Project manager following the Interim Inspection. Interim payment to the Contractor by PWGSC is based on the interim certificates. This payment takes place of a regular progress claim.
Interim Inspection	The inspection performed by the Project Acceptance Board after substantial completion of the project. A list of deficiencies is prepared, and subject to the Contractor's agreement to correct these, the Project Manager accepts the work and prepares the interim certificates
LEED®	Leadership in Energy & Environmental Design; an environmental rating system
Low risk	A project (or element of a project) should be assessed as low risk if hazards do not exist or have been reduced to the point where routine project management control should be capable of preventing any negative effect on the attainment of project objectives
Medium risk	A project (or element of a project) may be assessed as medium risk if some hazards exist but have been mitigated to the point that allocated resources and focused risk management planning should prevent significant negative effect on the attainment of project objectives
National Project Management System	The system used by PWGSC for management of its projects. It replaces the earlier Project Delivery System (PDS).
PI Forms	Product Information forms; used in commissioning documentation
Probability	The likelihood that an event will occur (i.e. Low, Medium, High)
Project Acceptance Board	A team assembled by the Project Manager to perform interim and final inspections of the Client Department's improvements.
PV Forms	Performance Verification forms; used in commissioning documentation
Record drawings	Drawings used to record field deviations, dimensional data, and changes or deviations from the 'Construction Document-Issued for Construction'. They indicate the work as 'actually' installed. They are also called as-builts
Rentable Space	Usable space plus space occupied by columns, convectors, elevator lobbies and washrooms. It also includes some common base building areas such as telephone and janitorial closets.
Request for Proposal	The document used for requesting consultant services. It includes the Terms of Reference as well as other contracting documents



Risk management	The art and science of identifying, analysing, and responding to risk factors throughout the life of a project and in the best interests of its objectives
Risk Event	A discrete occurrence that may affect the project for better or worse (i.e. late delivery of a piece of equipment is a “risk event” that may cause a schedule delay)
Scheduler	Refers to the Time Scheduler; also referred to as Time Specialist
Space Equation	A spreadsheet that reflects the Client’s organizational structure, functional requirements, and proposed planning alternatives. It is used to determine the total usable area required to accommodate the following: Open and enclosed workstations/worksettings; Support space; Special purpose space circulation factor; Building loss factor; Total population; and Total space required; and Summary by group
Space Optimization	Maximizing the utilization of space.
Special Purpose Spaces	Non-standard spaces required to accommodate activities that are essential to departmental programs. This space is often not suitable for conversion to office accommodation because of its special requirements. Examples include: laboratories, health units or clinics, meeting or training complexes which serve outside groups, processing space, departmental libraries, gymnasiums, warehouses, file or storage areas not allowed by the PWGSC Fit-Up Standards, trade shops, mailrooms, computer training rooms, cash offices and similar spaces requiring special service and security features and hearing rooms.
Support Space	Space for typical office support functions not included in workstation or circulation space but necessary for office operation. The Fit-Up Standards identify specific sizes and ratios for kitchenette / recycling centre / lunchroom / resource areas, shared equipment spaces, meeting rooms, quiet / touch down rooms, printer stations, reception / mail drop / waiting / display areas and coat / storage closets. Limited allowances for “Other” support spaces including non-dedicated workstations, storage rooms, LAN rooms, breakout rooms, interview rooms, training rooms, reading rooms etc. are also identified in the Fit-Up Standards.
Terms of Reference	A document prepared by PWGSC when requesting Consultant services, which forms part of the RFP and is also included in the Consultant Agreement with PWGSC.
Universal Footprint	One standard module which can be multiplied to accommodate





	all office functions including workstations, support space and special purpose space
Usable space, “Walk-on” Space	The space, in M <sup>2</sup> , that is actually usable by the occupant. Measurement calculations do not include columns and convectors, building service areas and accessory areas.
Worksettings	Common work areas that support both collaboration and privacy. They include: teaming areas, non-dedicated workstations, privacy nooks, resource areas and multipurpose areas.
Workstations	An enclosed or open area dedicated for the use of individual employees.

## F.2 ACRONYMS

ACRONYM	DESCRIPTION
A&E	Architecture & Engineering
AHJ	Authorities Having Jurisdiction
AMP	Asset Management Report
ASAE	American Society of Agricultural Engineers
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
ASPE	American Society of Plumbing Engineers
BCC	Building components and connectivity
BCR	Building Condition Report
BMM	Building Maintenance Manual
CAD	Computer aided drawing
CCDC	Canadian Construction Document Committee
CBIP	Commercial building incentive program
COE	PWGSC Centre of Expertise
EMCS	Energy Monitoring & Control System
EPA	Effective Project Approval
FHBRO	Federal Heritage Building Restoration Office
FOBS	Federal Office Building Standards (PWGSC)
FTE	Full-time equivalent
HCP	Heritage Conservation Program
HRSDC	Human Resources and Skills Development Canada
IT/MM	Information Technology/Multi-media
MMS	Maintenance management system
NBC	National Building Code
NCA	National Capital Area;
NCR	National Capital Region;
NFBC	National Farm Building Code
NGMA	National Greenhouse Manufacturers' Association
NMS	The National Master Specification used by PWGSC



NPMS	National Project Management System
OAA	Ontario Association of Architects
O&M	Operation and Maintenance
P&S	General Procedures and Standards
PA	Project administration
PI	Product Information
PD	Project Description
PM	Project Manager
PV	Performance verification
PWGSC	Public Works and Government Services Canada
RAIC	Royal Architectural Institute of Canada
RAS	Requirements and Standards
RS	Required Services
RSR	Resident site services
RPCD	Real Property Contracting Directorate
TOR	Terms of Reference



# Mechanical and Electrical Engineering Services **TERMS OF REFERENCE**

## Mechanical and Electrical Standing Offer Agreement

For:  
Various Federal Projects  
In the Western Region

October 2016



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## 1 PROJECT DESCRIPTION

### 1.1 GENERAL

#### 1.1.1 PURPOSE OF TERMS OF REFERENCE (TOR)

- .1 Public Works & Government Services Canada (PWGSC) requires the services of a firm (Consultant) with expertise in the mechanical and electrical discipline to act in the capacity of Prime Consultant and engineer of record for the provision of services.
- .2 This generic Terms of Reference (TOR) provides the Terms of Reference for the common services required for the various projects.
- .3 The Consultant will be engaged through individual project specific "Call-Ups" which will include a project specific TOR.

#### 1.1.2 THE PWGSC GENERAL PROCEDURES AND STANDARDS DOCUMENT (GP&S)

- .1 The project specific TOR, issued at the time of the Call-Up, will describe project-specific requirements, services and deliverables while the GP&S document outlines minimum standards and procedures common to all projects.
- .2 This generic Terms of Reference (TOR) document must be used in conjunction with the GP&S, as the two documents are complementary.
- .3 In the case of a conflict between the two documents, the requirements of the TOR override the GP&S Document.

#### 1.1.3 PROCUREMENT OF GOODS AND SERVICES

- .1 Public Procurement
  - .1 For further information refer to the following web link:
    - .1 <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494#>

#### 1.1.4 PROJECT INFORMATION

Project Information	
Project Title:	Consultant Standing Offer Agreement for Various Projects
Project Address:	Various locations throughout Alberta, Saskatchewan and Manitoba
Solicitation Number:	TBD
PWGSC Project Number:	TBD
PWGSC Contracting Officer:	TBD

### 1.2 BACKGROUND INFORMATION

#### 1.2.1 NEEDS & GOALS

- .1 Public Works and Government Services Canada (PWGSC) requires the services of a mechanical and electrical engineering firm, acting in the capacity of the prime consultant and coordinating engineer of record, together with a multi-disciplinary team of sub-consultants for the provision of services required for the various Call-Ups.
- .2 Services will be required for a variety of project types within commercial, institutional and laboratory type buildings.



- .3 A project may consist of;
  - .1 An investigation/report,
  - .2 Engineering Services for Building Projects and
  - .3 Prime Consultant Services.

### **1.2.2 INVESTIGATIONS AND REPORTS**

- .1 The goals of the investigation and report will be outlined in the Call-Up.
- .2 Examples of past investigations and reports:
  - .1 Options Analysis for replacement of a fire pump at a Federal Correctional Institution.
  - .2 Options Analysis for upgrade and/or replacement of an Energy Monitoring and Control Systems at an Agriculture and Agri-Food Canada Federal Complex.
  - .3 Electrical Engineering Systems Study for Grain Commission building Winnipeg Manitoba,
  - .4 Electrical Site System Assessment for Edmonton Institution for Women (EIFW)

### **1.2.3 ENGINEERING SERVICES FOR BUILDING PROJECTS**

- .1 The project design requirements will be identified in the Call-Up. Examples of project which may be required are:
  - .1 Renovation Work
    - .1 Replacement of boilers and chillers at a Federal Office Building and production of Contract Documentation.
    - .2 Renovation of the mechanical systems in a laboratory at a Federal Building and production of Contract Documentation;
    - .3 Main Service and Distribution - Normal and Emergency Power Upgrade at Federal Building and production of Contract Documentation.
    - .4 Sustainable lighting design and control for a Federal Office and a Laboratory and production of Contract Documentation.
    - .5 Security System CCTV upgrade at a Federal Building and production of Contract Documentation.

### **1.2.4 USER DEPARTMENT**

- .1 The User Department will vary and be identified in the project specific TOR.

### **1.2.5 EXISTING CONDITIONS**

- .1 The location and specific details will be outlined in the project specific TOR.

### **1.2.6 CONSTRAINTS AND CHALLENGES**

- .1 The Consultant will be required to become familiar with the project site and obtain local information as required.
- .2 The Consultant may be required to obtain security clearances for all his/her firm's personnel as well as any sub-consultants to visit the project site for reasons, such as, site reviews, attendance for site design meetings, etc. Security clearance checks may include credit checks.
- .3 All site visits must be arranged through the Departmental Representative.
- .4 Typically, the construction on the project site will be performed during the full operation of the facilities. Project phasing must be planned to ensure that disruption to the daily operation of the facilities is kept to a minimum.
- .5 Typically, the work will be carried out during normal working hours, when the facility is fully occupied and operational.



- .6 The project scope must be tailored to meet the User Department's budget. Diligent cost estimating and cost control is required.
- .7 Additional project specific constraints and challenges will be identified in the project specific TOR.

#### **1.2.7 HAZARDOUS MATERIALS**

- .1 Known hazardous materials will be identified in the project specific TOR.
- .2 There is always the possibility of encountering unknown hazardous materials such as mould and asbestos.

#### **1.2.8 PROJECT DELIVERY APPROACH**

- .1 The projects will use a design-bid-build approach. Construction will be procured through a Call-Up or through a publicly advertised bid process.

### **1.3 SUMMARY OF DESIGN WORK**

#### **1.3.1 GENERAL**

- .1 The Consultant shall produce designs that:
  - .1 Are effective and efficient;
  - .2 Meet current Codes, Standards and guidelines;
  - .3 Optimize performance of the systems;
  - .4 Are designed for ease of maintenance;
  - .5 Minimize long-term maintenance costs through provision of suitable corrosion prevention and durability features;
  - .6 Use industry proven materials and avoidance of experimental materials; and
  - .7 Are cost effective considering both initial cost and operation & maintenance costs over a life cycle of 25 years.

#### **1.3.2 ENVIRONMENTAL/SUSTAINABLE DEVELOPMENT**

- .1 Environmental and sustainability targets will be described in the project specific TOR.

#### **1.3.3 STEWARDSHIP EXCELLENCE**

- .1 Through the application of Stewardship Excellence, real property design and implementation solutions will consider the following to support the project mandate:
  - .1 The appropriateness of the real property solution for its use and place;
  - .2 The technical competence of the project team and their deliverables;
  - .3 The economic viability of the real property solutions considered and/or developed;
  - .4 The successful incorporation of environmentally sustainable solutions;
  - .5 The maintenance and development of effective and efficient facilities;
  - .6 The appropriate incorporation of innovation within project delivery and solutions;
  - .7 The achievement of excellence in the design and delivery of public policy, program and services to Canadian citizens resulting in inspiring and timeless solutions.
- .2 The following questions are to be considered in the delivery of federal real property services by Real Property Branch and/or any private sector service provider. The questions have been developed to support the assessment of whether the services promote Stewardship Excellence.
  - .1 Appropriate for its use and place
    - .1 How does the solution integrate with its unique context?
    - .1 How does the visual expression of the design relate to its surroundings?



- .2 How and what systems have been selected that fit with the local climate conditions?
- .3 Does the design provide clarity and consistency of form and detail?
- .4 How does the solution support the Treasury Board Secretariat Policy on Management of Real Property as it applies to federal heritage buildings?
- .2 Technically competent;
  - .1 Is the Project team composed of members who have relevant experience to support project scope and complexity?
  - .2 Are the deliverables completed to professional standards to outline, demonstrate or support solutions that address the project scope?
  - .3 How are workmanship and craftsmanship addressed in this project?
  - .4 How does the solution meet all applicable codes and standards?
- .3 Economically viable;
  - .1 Does the proposed solutions provide best value to the Crown?
  - .2 Can the proposed solution, or recommendation, be supported through a documented life cycle cost analysis?
- .4 Environmentally sustainable;
  - .1 Has a recognized standard sustainability evaluation tool been used?
  - .2 Has the departmental sustainability objectives/targets been achieved?
  - .3 How does the design response to local weather conditions?
  - .4 How does the choice of systems contribute to longevity of the real property asset?
  - .5 How is the design adaptable and flexible to support future program requirements?
- .5 Effective and efficient
  - .1 How does the design solution satisfy the project requirements?
  - .2 How does the solution address the project scope/program?
  - .3 Is the solution flexible and adaptable?
  - .4 Is the solution able to respond to changes in the needs of the user and potential technological developments?
- .6 Innovative;
  - .1 How has innovation been incorporated into the solution?
  - .2 How is the solution different from comparable projects?

## **1.4 SUMMARY OF SERVICES AND QUALIFICATIONS**

### **1.4.1 GENERAL SERVICES**

- .1 The prime consultant will provide professional mechanical and electrical engineering services and a full consulting team relevant to the nature of the project, including the following consultant services and specialties:
  - .1 Professional Engineering Services





- .1 Mechanical Engineering
  - .1 Laboratory Specialist
  - .2 Controls Specialist
- .2 Electrical Engineering
  - .1 Fire Alarm Specialist:
  - .2 Security Specialist
- .2 The consultant team shall be comprised of qualified technical experts with experience relevant to the project who are eligible to work in the applicable province.
- .3 The consultant team is required to maintain its expertise for the duration of the project.
- .2 Each project will require other specialties which will be engaged as required through Consultant Sub-Agreements as described in the project specific TOR. Sub-consultants may be required for the following specialist services;
  - .1 Professional Architectural Services
  - .2 Civil, Structural Engineering;
  - .3 Geotechnical Engineering;
  - .4 Commissioning;
  - .5 Surveying;
  - .6 Cost Estimating / Quantity Surveying;
  - .7 Schedule Management;
  - .8 Risk Management;
  - .9 Others as required.

#### **1.4.2 SECURITY**

- .1 Security requirements are specific to the specific user department and nature of the project.
- .2 The consultant will be subject to security clearance checks as necessitated by the nature of the project and identified in the project specific TOR.
- .3 The consultant team is expected to reasonably protect documents in their care and information related to the user department and project to which they have access.

### **1.5 SCHEDULE**

#### **1.5.1 GENERAL**

- .1 The project is to be delivered and ready for acceptance in accordance with the project specific TOR.
- .2 The consultant will be required to prepare a schedule in accordance with the milestone list provided in the project specific TOR.

### **1.6 COST**

#### **1.6.1 CONSTRUCTION BUDGET**

- .1 The construction budget will be identified in the project specific TOR, if known.

### **1.7 EXISTING DOCUMENTATION**

#### **1.7.1 AVAILABLE FOR THE CONSULTANT**

- .1 Documentation relative to the project and as available will be detailed in the project specific TOR.

### **1.8 CODES, ACTS, STANDARDS, REGULATIONS**



### 1.8.1 GENERAL

- .1 A listing of Codes, Acts, Standards and Guidelines potentially applicable to this project are contained in the GP&S Document. If additional standards are required they will be added to the project specific TOR.
- .2 The Authorities Having Jurisdiction (AHJ) on this project are:
  - .1 The local AHJs;
  - .2 The designated Crown Fire Protection Engineer (where applicable);
  - .3 Treasury Board of Canada Secretariat, accessed through the Departmental Representative;
- .3 The Consultant must identify, analyse and design the project in accordance with the requirements of all AHJs and all applicable Codes, Acts, Standards and Guidelines and Legislation:
  - .1 The applicability of various Codes, Acts, Standards and Guidelines listed in the GP&S document arise out of direct and indirect references in documents which apply to Federal buildings, such as the Canada Labour Code;
  - .2 The consultant team must be fully versed with the legislation and requirements that are unique to Federal Government buildings in Canada;
  - .3 The consultant team must be fully versed with the legislation and requirements that are unique to Federal Government projects tendered through Public Works & Government Services Canada.



## 2 REQUIRED SERVICES

### 2.1 REVISIONS TO THE GP&S - SECTION 2

#### 2.1.1 COST MANAGEMENT

- .1 Include in Class A and B estimates a cost breakdown for Commissioning Activities.

#### 2.1.2 CODES, ACTS, STANDARDS, REGULATIONS

- .1 Article 2.7.3 Codes and Regulations
  - .1 Update to "NRC National Building Code of Canada, 2015 edition."
  - .2 Update to "NRC National Fire Code of Canada, 2015 edition."
  - .3 Update to "NRC National Plumbing Code of Canada, 2015 edition."
  - .4 Update to "NRC Model National Energy Code for Buildings, 2015 edition."
- .2 Article 2.7.6 Standards and Guidelines
  - .1 Update item 26 to "CSA B651-12."

#### 2.1.3 COMMISSIONING PROCESS

- .1 Replace with "Commissioning is to comply with CSA Z320-11 as applicable to the project design and as described in the Terms of Reference."

#### 2.1.4 CONSTRUCTION DOCUMENTS

- .1 Replace item 2.9.5 "Government Electronic Tendering Systems (MERX)" with
  - .1 "Tendering will be using the internet based procurement system  
<https://buyandsell.gc.ca/>"
    - .1 Consultants shall 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, search, or printing restrictions.
    - .2 The electronic copy of drawings and specifications is for bidding purposes only and do not require to be signed and sealed.

#### 2.1.5 SPECIFICATIONS

- .1 Add item 2.10.7.6 "Effective April 1, 2016, all Public Works and Government Services Canada (PWGSC) contracts for new construction and major rehabilitation will prohibit the use of asbestos-containing materials. Further information can be found at <http://www.tpsgc-pwgsc.gc.ca/comm/vedette-features/2016-04-19-00-eng.html>"

### 2.2 GENERAL REQUIREMENTS

#### 2.2.1 GENERAL

- .1 The project specific TOR will identify the project specific requirements including:
  - .1 Services Required;
  - .2 Project Stages and Deliverables.

#### 2.2.2 SERVICES

- .1 Following is a list of Services typically required for a project which may be required for an Investigation, a Report or for Design and Contract Documentation. The project TOR will outline the consultant services required to suit project scale and scope:
  - .1 Commissioning Service;
  - .2 Pre-Design Service;
  - .3 Schematic Design Service;



- .4 Design Development Service;
- .5 Construction Document Service;
- .6 Tender Services;
- .7 Construction Support Service;
- .8 Post Construction Service.

## **2.3 PROJECT REVIEW AND ACCEPTANCE**

### **2.3.1 GENERAL**

- .1 Comply with all applicable laws and regulatory requirements as required by the General Conditions of the Request for Standing Offer.

### **2.3.2 FEDERAL GOVERNMENT**

- .1 The federal authorities having jurisdiction over this project are:
  - .1 Crown Fire Protection Engineer for fire prevention engineering services and life safety;
  - .2 User Department; and
  - .3 PWGSC.
- .2 Any additional federal authorities having jurisdiction will be project specific and will be identified in the project specific TOR.

### **2.3.3 PWGSC REVIEWS, ACCEPTANCE AND PRESENTATIONS**

- .1 Each submission at each stage of the project is subject to reviews by, the Departmental Representative, the User Department site personnel, the User Department technical experts and the PWGSC Architectural and Engineering Centre of Expertise (A&ECoE) group.
- .2 Project delivery team acceptance includes both the PWGSC Architectural & Engineering Centre of Expertise (A&ECoE) reviews and User Department acceptance:
  - .1 The purpose of each review is technical quality (including fire protection, health and life safety) and to ascertain for PWGSC that the Consultant has reasonably fulfilled the objectives of this project;
  - .2 Expected turnaround time for each review is two (2) weeks;
  - .3 The consultant team will receive review comments in the form of an editable MS Word document or MS Excel document;
  - .4 The consultant shall provide a single coordinated written response to the comments within two (2) weeks;
    - .1 Add comments to the active document provided and returned as an active document once all consulting team comments are included and complete.

## **2.4 COMMISSIONING SERVICE**

### **2.4.1 GENERAL**

- .1 The purpose of the Commissioning Service is to ensure that a fully functioning project is delivered to the Client.
- .2 Commissioning (Cx) is an integral part of the Consultants' required services and therefore, required activities and deliverables are listed within each project phase service.
- .3 Provide Commissioning Service on the basis of CSA Z320-11, Canadian Standards Association Building Commissioning Standard.
- .4 Scope, Services and Deliverables are described in each of the following project stages.



## **2.5 PRE-DESIGN SERVICE**

### **2.5.1 GENERAL**

- .1 Pre-Design Services occur before the commencement of the Schematic Design Stage.
- .2 The Consultant team will review and analyse all available project information, consult with the Departmental Representative and deliver a comprehensive Pre-Design Report.
- .3 The Consultant team may be required to meet with representatives of the User Department to confirm and document functional requirements or develop a Functional Program (to be included with the Pre-Design report);
- .4 The Pre-Design Report will consolidate and confirm the project scope, identify applicable codes, standards and guidelines to support the project scope and will be utilized as the benchmark project control document to monitor progress of the project.

### **2.5.2 SCOPE AND ACTIVITIES (MAY INCLUDE THE FOLLOWING)**

- .1 Visit the site(s).
- .2 Meet with the Departmental Representative and any identified User Department representatives as defined in the project specific TOR.
- .3 Confirm and document project specific Objectives and Goals outlined in the project specific TOR.
- .4 Analyse the project requirements including any amendments.
- .5 Investigate existing condition for all Mechanical and Electrical Systems and identify preliminary design results and solutions.
- .6 Conduct a site analysis and/or master plan.
- .7 Conduct a Feasibility Study.
- .8 Review all other available existing material related to the project including requirements identified in the TOR.
- .9 Identify and verify all Authorities Having Jurisdiction (AHJ) for the project.
- .10 Identify and analyze all Codes, Acts, Standards and Guidelines that apply to this project.
- .11 Identify any additional information that will be needed to deliver the project.
- .12 Provide three options, including recommended options along with cost estimate for each option.
- .13 Conduct information gathering sessions and prepare a Functional Program.
- .14 Establish the sustainability targets based on requirements in the project specific TOR.
- .15 Initiate the Commissioning process;
  - .1 Define the Commissioning Team (including roles and responsibilities) for all project phases,
  - .2 Review project objectives and functional requirements to outline a preliminary commissioning scope,
  - .3 Develop a draft Commissioning (Cx) Plan as per CSA Z320-11 and the Owner Project Requirements based upon the functional requirements / functional program.
  - .4 Establish and develop a draft commissioning cost estimate for all components, systems and integrated systems within the context of each discipline.

### **2.5.3 DELIVERABLES**



- .1 A Pre-Design Report that will contain at a minimum:
  - .1 Content as per the GP&S document;
  - .2 Necessary sections to document and present the items listed in the "Scope and Activities" section;
  - .3 Preliminary commissioning approach or outline;
  - .4 A summary of key Owner Project Requirements (OPR), in priority sequence, for evaluation of the project success;
  - .5 A Basis of Design (BOD) report component which directly responds to the OPR, which records any and all assumptions being used to inform the design and which will form the basis on which to commission the building;
  - .6 Class D cost estimate;
  - .7 Preliminary project schedule;
  - .8 Functional Program (if required).

## **2.6 SCHEMATIC DESIGN SERVICE**

### **2.6.1 GENERAL**

- .1 Formal direction from the Departmental Representative to proceed to the Schematic Design Stage must be received in advance of commencing Schematic Design Services.

### **2.6.2 SCOPE & ACTIVITIES**

- .1 Update the Basis of Design (BOD) to confirm completeness of project definition in the functional program to provide sufficient detail to start a Commissioning Plan.
- .2 Synthesize project requirements and develop distinct design options to support project requirements.
  - .1 Based on the approved Functional Program explore, develop, compare and present viable, distinct, diagrammatic design options to meet the project's functional, operational,
  - .2 Develop each schematic design option in sufficient detail to clearly indicate all key elements in the design, in sufficient detail including; but not limited to:
    - .1 Conduct preliminary analysis to ensure compliance to all applicable codes, standards and regulatory requirements.
    - .2 Prepare preliminary generic layouts, such as:
      - .1 Equipment and service room locations.
      - .2 Mechanical, electrical and telecommunication requirements.
      - .3 Security, fire safety, acoustic, structural up-upgrades and primary infrastructure distribution requirements.
      - .4 Other specialty design systems.
    - .3 Identify engineering requirements.
    - .4 Analyze design options against project parameters such as:
      - .1 Functional program,
      - .2 Project requirements identified in the project specific Call-up,
      - .3 The seven (7) components of Stewardship Excellence (see Section 1.1.3).
      - .4 Provide Class "C" cost estimates for each option.
    - .5 Identify viable construction procurement strategies for each design option.
  - .3 Based upon the options analysis, recommend one design option for further detail development and evaluation.



- .4 Update Project schedule.
- .5 Analyze all design options to ensure compliance with all applicable design and operational Occupying Tenant Occupational Health and Safety Requirements, Security, Fire Protection and Fire Safety Requirements.
- .3 Compile and present information as part of a Schematic Design Report to be signed-off and deemed ready to proceed to Design Development Services.
- .4 Facilitate an options presentation meeting involving Departmental Representative and project Stakeholders.
- .5 Conduct minor revisions prior to the preferred design for Sign-off.
- .6 Develop a preliminary sustainability strategy for the project requirements.
- .7 Update the risk analysis and identify any conflicts that will need to be addressed with respect to scope, quality, schedule, cost.
  - .1 Prepare/update risk issues log and participate in the Departmental Representative's Risk Management Plan session.
- .8 Obtain Departmental Representative's approval to proceed to Design Development Service.
- .9 Develop a Commissioning (Cx) Plan as per CSA Z320-11.

### **2.6.3 DELIVERABLES**

- .1 Meeting minutes and support agenda.
- .2 Schematic Design Report including distinct and viable design options complete with the following:
  - .1 Content as per the GP&S document;
  - .2 Necessary sections to document and present the items listed in the "Scope and Activities" section above;
  - .3 Options analysis and supporting documentation;
  - .4 Updated Owner Project Requirements (OPR), goals and objectives including updated preliminary Cx Plan and Cx Cost Estimate.
  - .5 Updated project schedule.

## **2.7 DESIGN DEVELOPMENT SERVICE**

### **2.7.1 GENERAL**

- .1 Further develop the option selected for refinement at the completion of Schematic Design. The design is to be finalized with the integration of all major components.
- .2 The Consultant must obtain written authorization from the Departmental Representative's before proceeding with Design Development Services.

### **2.7.2 SCOPE AND ACTIVITIES**

- .1 The Consultant shall:
  - .1 Further develop the selected schematic design option and expand the intent for each design discipline to complete the Design for this project;
  - .2 Finalize the selected design option in an integrated manner to ensure that all major components have been considered in a collaborative environment and that the design continues to support the project specific Objectives and Goals documented in the approved Pre-Design report;
  - .3 Present / submit the design for review and approval to review groups and authorities having jurisdiction as required;





- .4 Prepare a class 'B' cost estimate, update the schedule, the risk analysis and identify any conflicts that will need to be addressed with respect to scope, quality, schedule and cost;
- .5 Continue to review all applicable statutes, regulations and by-laws in relation to the design of the project and conduct a detailed code analysis to demonstrate compliance;
  - .1 If there are non-compliance issues, develop alternative solutions to support the design and submit for approval to the local AHJ.
- .6 Analyse the constructability of the project and advise on the construction phasing process and duration;
- .7 Develop outline specifications for all systems, principle components and equipment, including manufacturers literature;
- .8 Update the sustainable design strategy and report on sustainability targets.
- .9 Update Basis of Design (BOD) document and Owner Project Requirements (OPR).
- .10 Commissioning;
  - .1 Identify and provide a system components list to be commissioned,
  - .2 Commissioning issues logs and tracking logs specific to the project,
  - .3 Develop pre-functional and functional verification and test forms specific to each component, system and integrated systems as per CSA Z320-11,
  - .4 Develop draft Commissioning project Risks and Cost Estimate;
  - .5 Prepare outline draft Commissioning construction documents.

### 2.7.3 DELIVERABLES

- .1 Design Development Report complete with coordinated architecture, engineering and interior design drawings outlining the project design. Describe components, systems and finishes in sufficient detail to meet Design Development Service objectives and include:
  - .1 Content as per the GP&S document;
  - .2 Sections necessary to document and present the items listed in the "Scope and Activities" section above.
  - .3 Building Code Analysis Report and Alternative Solutions Report (if relevant);
  - .4 Approved Owner Project Requirements (OPR) and Basis of Design documentation;
    - .1 Include a more detailed and updated Basis of Design, with an analysis that confirms the adequacy of the developed design solution for each key project requirement, goal and objective;
  - .5 An updated milestone project schedule including allowances for reviews and approvals for each stage of the project life cycle;
  - .6 An updated risk analysis including deviations that may affect cost or schedule;
    - .1 Recommend corrective measures.
  - .7 An updated project log tracking approved major decisions.
  - .8 Commissioning:
    - .1 Commissioning Plan;
    - .2 Updated Cx issues log and tracking log for each discipline;
    - .3 Include a Cx cost breakout for each discipline in the cost estimate;
    - .4 Include commissioning specifications in the outline specifications;
    - .5 Include Cx schedule in the milestone project schedule.





## **2.8 CONSTRUCTION DOCUMENTS SERVICE**

### **2.8.1 GENERAL**

- .1 The objective of this stage is to translate the Design Development phase into construction drawings and specifications for the purpose of tendering.
- .2 The Consultant must obtain written authorization from the Departmental Representative before proceeding with Construction Documents.

### **2.8.2 SCOPE AND ACTIVITIES (MAY INCLUDE THE FOLLOWING)**

- .1 Create construction documents in accordance with the GP&S document.
- .2 Update the cost estimates:
  - .1 Provide a cost breakdown by unit rate and/or trade for review of bids and comparison with the successful Contractor's cost breakdown.
  - .2 For fit-up projects breakout costs as per the Government of Canada Workplace 2.0 Standards funding accountabilities (i.e. User Department funded costs, PWGSC funded costs, Base Building funded costs).
- .3 Update the project schedule.
- .4 Establish a quality control process for the construction and contract administration stage.
- .5 The Consultant shall:
  - .1 Participate in partnering, team building and value engineering sessions when required in a project specific TOR;
  - .2 Design according to the budget and schedule;
  - .3 Coordinate the work of various disciplines including scope changes required to remain within budget;
  - .4 In consultation with the Departmental Representative approve construction materials, processes and specifications considering sustainability and commissioning;
  - .5 Apply a process of continuing cost control with increasing level of detail during production of contract/construction documents;
    - .1 At each review prepare an up-to-date estimate demonstrating compliance with the Construction Cost Plan,
  - .6 Continue to review all applicable statutes, codes, regulations and by-laws in relation to the design of the project and revise the building code analysis accordingly;
  - .7 Advise Departmental Representative and resolve issues other governmental authority officials raise, and adjust Construction Documents as required;
  - .8 Participate in the risk management process;
  - .9 Update project log tracking approved major decisions;
  - .10 Provide updated energy simulation including estimated annual energy cost using current energy cost for the project location;
  - .11 Provide commissioning forms and check lists specific to each component, system and integrated system including;
    - .1 Component verification,
    - .2 Installation verification,
    - .3 Start up,
    - .4 Pre-functional system performance verification for static operation;
    - .5 Integrated System Functional performance verification for dynamic operation,



- .6 Expected design performance parameters,
- .7 Observed performance including indication of whether or not this performance is acceptable,
- .8 Design Engineer of Record date and signatures along with those performing and witnessing the test.
- .12 Update and incorporate Cx Plan, Cx forms and training requirements into Cx construction documents within the context of Division 01.

### 2.8.3 DELIVERABLES

- .1 Construction documents are to be submitted at various stages as identified in the project specific TOR.
- .2 Include items listed in the "Scope and Activities" section above, the PWGSC GP&S document and items listed below.
- .3 Updated report at each submission noting any deviations from earlier Basis of Design submissions and, as necessary, reconfirming key Owner Project Requirements, goals and objectives, along with:
  - .1 An updated estimate demonstrating compliance with the Construction Cost Plan;
  - .2 An updated project log, tracking approved major decisions.
- .4 33% and 66% complete Construction Documents:
  - .1 Updated Class "B" estimate;
  - .2 Updated OPR and BOD documents;
  - .3 Updated project schedule;
  - .4 Construction Drawings;
    - .1 Drawings should reflect 33%/66% completeness with all planned and required drawings / sheets shown.
  - .5 Specifications;
    - .1 Index to specifications (identifying all sections to be used for the project),
    - .2 Draft Division 01 including,
      - .1 Health and Safety Requirements (Section 01 35 29),
      - .2 Commissioning sections.
    - .3 Updated Commissioning document,
      - .1 Cx Building Envelope,
      - .2 Cx cost estimate,
      - .3 Cx risk and complexity assessment,
      - .4 Draft Cx Construction Document specification Division 01,
      - .5 LEED Cx related specification check sheets and forms as applicable.
- .5 99% complete Construction Documents (fully coordinated as if ready for tender):
  - .1 This submission incorporates all revisions required by the review of the previous submission and a written response to the PWGSC 66% review;
  - .2 The Consultant shall submit documents to the Departmental Representative, local municipality, or any other Authority having jurisdiction;
  - .3 Class "A" estimate;
  - .4 An updated project schedule;
  - .5 Construction Drawings;
    - .1 Drawings should reflect 99% completeness as a complete design without any incomplete drawings (as if ready for tendering).
  - .6 Complete Specifications;



- .1 Specifications should be complete with all sections and thoroughly coordinated with the drawings,
- .2 Bidders' price breakdown form (for submission at tender closing);
- .3 Commissioning specifications, including forms applicable to static verification, start-up and functional performance testing.
- .7 Updated Commissioning Plan.
- .6 Final (100%) Construction Documents ready for tendering:
  - .1 This submission incorporates all revisions required by the review of the previous submission and a written response for the PWGSC 99% QA review;
  - .2 Advise the Departmental Representative of all issues raised by other officials;
  - .3 The submittal shall include:
    - .1 Signed and sealed documents,
    - .2 An updated Class 'A' cost estimate (include Cx cost breakout),
    - .3 An updated project schedule,
    - .4 Construction Drawings & Specifications as per the GP&S document.
    - .5 An updated Commissioning Plan;
      - .1 Updated Cx issues and resolution log.
    - .6 Commissioning;
      - .1 Updated draft from previous 99% submission to the 100% completion submission.
  - .4 The Consultant must confirm in writing that:
    - .1 The documents are ready to be issued for tender,
    - .2 The checklist in the GP&S Document has been reviewed in concert with the requirements of the Consultant Agreement and
    - .3 A full review and coordination of the Contract Documents are complete and in accordance with professional standard of care.

## **2.9 TENDER SERVICES**

### **2.9.1 GENERAL**

- .1 The object of this phase is to support the Departmental Representative with the tender.
- .2 The Contract Authority for this project is the PWGSC Real Property Contracting (RPC) branch.
- .3 Tendering will be using the Public Works and Government Services internet procurement system (<https://buyandsell.gc.ca>).

### **2.9.2 SCOPE AND ACTIVITIES**

- .1 When requested, the Consultant will be required to:
  - .1 Provide the Departmental Representative with information required by bidders to interpret construction documents;
  - .2 Prepare addenda in response to all questions within two (2) business days during the bidding period and submit to the Departmental Representative;
  - .3 Attend pre-tender site visits;
  - .4 If PWGSC decides to re-tender the project, or any specific tender package, provide full services to the Departmental Representative;
  - .5 During Bid Review and Analysis assist the Departmental Representative as required by analyzing and reconciling any differences between pre-tender estimates and submitted bids.



## **2.9.1 DELIVERABLES**

- .1 Addenda.
- .2 Written responses to all questions.
- .3 Bid analysis and/or recommendations.

## **2.10 CONSTRUCTION SUPPORT SERVICE**

### **2.10.1 GENERAL**

- .1 The object of this phase is to support the Departmental Representative with the construction phase and ensure the quality, budget and schedule meet the project requirements.

### **2.10.2 SCOPE AND ACTIVITIES**

- .1 The Consultant shall share all project information with PWGSC:
  - .1 All material specifications, mixes and test results shall be turned over to the Departmental Representative for future maintenance by PWGSC and others.
- .2 General Services:
  - .1 Review shop drawings, test reports and other submissions;
  - .2 Update the project log tracking approved major decisions, including those impacting project scope, budget and schedule;
  - .3 Prepare and issue a communications protocol and a shop drawing review protocol in consultation with the Departmental Representative;
  - .4 Review and comment on Contractor's commissioning submittals including:
    - .1 Contractor's Commissioning Plan;
    - .2 Project and Project Commissioning Issues Logs;
    - .3 Cx Report;
    - .4 Cx Schedule reflecting the Performance Verification Tests;
    - .5 Outstanding activities.
  - .5 Assist the Contractor and provide required documentation in order to obtain the building permit.
- .3 Construction & Contract Administration:
  - .1 Provide field reviews (frequency may be specified in the project specific TOR) and as required to fulfill the Consultant's professional obligations to monitor the construction activities throughout the construction period and keep the Departmental Representative informed of work progress;
    - .1 Reject unsatisfactory work,
    - .2 Provide written reports.
  - .2 Provide construction progress reports based on Contractor's submissions and on-site performance;
  - .3 Furnish supplemental instructions to the Contractor with reasonable promptness or in accordance with a schedule for such instructions agreed to by PWGSC and the Contractor;
  - .4 Provide additional drawings to clarify, interpret or supplement the contract documents;
  - .5 Review and comment on various documents such as the Contractor's Progress Claims and updated schedules;
  - .6 Offer timely technical advice on all disputes and claims between PWGSC and the Contractor;



- .7 Authorize special tests, inspections and minor works that do not impact project cost and schedule;
- .8 Determine the amounts owing to the Contractor based on work progress and certify payments to the Contractor;
- .9 Assist the Departmental Representative to prepare the Certificate of Substantial Completion and provide sign-off;
- .10 Provide a Post-Construction Evaluation report.
- .4 Cost Services:
  - .1 After issue of contract provide details for evaluating the project's cost performance;
  - .2 Assist the construction team with cost management advice, if requested;
  - .3 Evaluate change orders, claims, work completed and cash flow.
- .5 Changes to the Work:
  - .1 Assist the Departmental Representative to prepare Contemplated Change Notices (CCNs) and Change Orders (COs) to be issued by the Departmental Representative.
- .6 Final Commissioning Report documenting all commissioning work, testing, verification and results achieved during the project construction specific to component(s), system(s), different levels of integration between system(s) and assemblies. Include at a minimum the following:
  - .1 Engineer of Record to review, approve and sign off all submittals for performance parameters before and after execution of test and for adherence to OPR and BOD;
  - .2 Conduct field reviews, witness and complete reports with Cx forms verifying tests for compliance with the OPR and the BOD including but not limited to;
    - .1 All factory test reports and data,
    - .2 Installation, pre-functional, functional performance testing and TAB,
      - .1 Component(s) based checks,
      - .2 System(s) based checks,
      - .3 Integrated system(s) based checks,
      - .4 Seasonal/deferred commissioning for those systems that have been functionally tested and/or handed over in seasons where retesting and commissioning will be required during the opposite season.
  - .3 Prepare and update Cx Tracking Log and Cx issue log specific to component(s), system(s) and integrated system(s) that failed the tests and documents how the failed test impacted other component(s) either upstream to or downstream of the component in question;
  - .4 Provide bi-weekly Cx issues report and meeting minutes for distribution;
  - .5 Provide Trending Report to confirm the design performance parameters;
  - .6 Review and comments to Operation and Maintenance Manual (O&M) and Training Manual for completeness and accuracy in advance to ensure;
    - .1 Complete system, assembly, maintenance and inspection procedures,
    - .2 Complete repair procedures including disassembly, component(s) removal replacement and reassembly,
    - .3 Complete emergency instructions for operating the facility during various standard and/or nonstandard and emergency conditions,
    - .4 Key Warranty requirements.



- .7 Review with the Contractor's standard submittals for enhanced commissioning specific to LEED as required.
- .7 Certify Substantial Completion for Interim Acceptance Report sign off and ensuring:
  - .1 All component(s), system(s), integrated system(s) are fully commissioned, completed and functional as per Construction Specification Document, OPR and BOD;
  - .2 All test certificates, final project commissioning reports, training and project O&M manual complete;
  - .3 Successful completion of life safety systems and their components (i.e. fire alarm systems, sprinklers, standpipes, smoke control, ventilation, pressurization, hold open devices, elevators recalls, smoke fire shutters and dampers, emergency power, emergency lights, etc.);
  - .4 Engineer(s) of Record shall provide a Letter of Acceptance or Rejection more specifically that the OPR and the BOD has and/or has not been met and by extension system functionality has and/or has not been materialized;
  - .5 Recommendation of acceptance of the project to the Departmental Representative.

### 2.10.3 DELIVERABLES

- .1 Approved shop drawings, test reports/certificates and other submissions.
  - .1 Approved sprinkler shop drawings and hydraulic calculations to be submitted a minimum of 2 weeks before work commences.
- .2 Clarifications, Supplemental Instructions, Contemplated Change Notices and Change Order Recommendations.
- .3 Site Visit/Field Review Reports.
- .4 Reviewed Contractor Progress Claims.
- .5 Comments to Contractor Schedule, Change Orders.
- .6 Completed Certificate of Substantial Completion.
- .7 Cx Deliverables:
  - .1 Final Commissioning Report;
  - .2 Final OPR and BOD;
  - .3 Certified Substantial Completion;
  - .4 Complete document and forms to achieve LEED Certification as applicable.

## 2.11 POST CONSTRUCTION SERVICE

### 2.11.1 GENERAL

- .1 The purpose of this phase is to support the Departmental Representative in obtaining all final documents required for project close out.

### 2.11.2 SCOPE AND ACTIVITIES

- .1 Project Close-out Services:
  - .1 Revise documentation to reflect all changes, revisions and adjustments after completion of commissioning;
  - .2 Prepare record drawings (AutoCAD format as per GP&S requirements) and specifications based on Contractor's as-builts;
  - .3 Prepare and submit final Certificate of Completion and final records;
  - .4 Review the Operations and Maintenance manual;
  - .5 Review the integrated commissioning manual;
  - .6 Sign-off Final Commissioning Report;



- .7 Participate in Lessons Learned workshops if requested.
- .2 Warranty Services:
  - .1 Monitor and certify rectification of deficiencies before expiry of warranties;
  - .2 Monitor environmental and life safety system checks to be carried out by Contractor / O&M staff before expiration of warranties;
  - .3 Sign-off on the Final Completion of the construction contract;
  - .4 Participate in warranty inspections with the Departmental Representative and Contractor;
  - .5 Provide warranty deficiency list;
  - .6 Assist with the final PWGSC Cx evaluation.
- .3 Commissioning:
  - .1 Coordinate deferred commissioning for those systems that have been functionally tested and/or turned over where retesting and commissioning is required;
  - .2 Resolution of any warranty issues on commissioned systems during the warranty period;
  - .3 Develop and present a Cx lesson learn workshops;
  - .4 Ensure that all completed operating and maintenance manuals, warranties, guarantees and other required submittals are turned over to the Departmental Representative;
  - .5 Provide ongoing consultation with the construction teams in support of their project closeout activities and submittals related to systems and assemblies commissioning specific deliverables in compliance to the Commissioning Plan, Construction Specifications document, Owner's Project Requirements (OPR) and BOD;
  - .6 Finalize the Commissioning Report;
  - .7 Prepare final Commissioning Manual as per CSA Z320-11 including and are not limited to;
    - .1 Final O&M Manual,
    - .2 Post occupancy changes,
    - .3 Lesson learned document.
  - .8 For LEED certification purposes only;
    - .1 Contractors post-occupancy Functional Performance Testing to evaluate and document energy and operational performance as compared to designed performance defined in the BOD and Construction Documents. Evaluations will occur at:
      - .1 Three (3) months and
      - .2 Ten (10) months of warranty expiration.



### 2.11.3 DELIVERABLES

- .1 Warranty Deficiency List.
- .2 Final Certificate.
- .3 As-Builts:
  - .1 Hard copies (as specified in the project specific TOR) – full size sets, and an electronic PDF copy of each record document on CD or DVD;
  - .2 Record drawings in AutoCAD - DWG file format.
    - .1 Refer to the GP&S document for AutoCAD drawing requirements and standards.
- .4 Comments to O&M Manual.
- .5 Final Certification of installation and warranty from manufacturers.
- .6 Final Commissioning Manual.
- .7 Sign-off on Warranty.





## **3 PROJECT ADMINISTRATION**

### **3.1 GENERAL REQUIREMENTS**

#### **3.1.1 PWGSC PROCEDURES AND STANDARDS**

- .1 The consultant shall comply with the amendments and/or additions in this section in addition to adhering to the requirements contained in the GP&S section 3 (Project Administration).

#### **3.1.2 LANGUAGE**

- .1 Generally no variation from the GP&S.

#### **3.1.3 MEDIA**

- .1 Generally no variation from the GP&S.

#### **3.1.4 PROJECT MANAGEMENT**

- .1 Generally no variation from the GP&S.

#### **3.1.5 LINES OF COMMUNICATION**

- .1 Generally no variation from the GP&S.

#### **3.1.6 MEETINGS**

- .1 Meeting locations and frequency will be described in the project specific TOR.

#### **3.1.7 CONSULTANT RESPONSIBILITIES**

- .1 Generally no variation from the GP&S.

#### **3.1.8 PWGSC RESPONSIBILITIES**

- .1 Generally no variation from the GP&S.

#### **3.1.9 USER DEPARTMENT RESPONSIBILITIES**

- .1 Generally no variation from the GP&S.

#### **3.1.10 REVIEW AND APPROVAL BY PROVINCIAL AND MUNICIPAL AUTHORITIES**

- .1 Generally no variation from the GP&S.

#### **3.1.11 BUILDING PERMITS AND OCCUPANCY PERMITS**

- .1 Generally no variation from the GP&S.

#### **3.1.12 TECHNICAL AND FUNCTIONAL REVIEWS**

- .1 Remove article 3.12.2.