

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

**Bid Receiving Public Works and Government  
Services Canada/Réception des soumissions Travaux  
publics et Services gouvernementaux Canada  
800 Burrard Street, 2nd floor  
800, rue Burrard, 2e étage  
Vancouver, B.C.  
Vancouver  
British Columbia  
V6Z 0B9  
Bid Fax: (604) 775-9381**

## Request For a Standing Offer Demande d'offre à commandes

Departmental Individual Standing Offer (DISO)

Offre à commandes individuelle du département(OCID)

Canada, as represented by the Minister of Public Works and Government Services Canada, hereby requests a Standing Offer on behalf of the Identified Users herein.

Le Canada, représenté par le ministre des Travaux Publics et Services Gouvernementaux Canada, autorise par la présente, une offre à commandes au nom des utilisateurs identifiés énumérés ci-après.

## Comments - Commentaires

**Vendor/Firm Name and Address**

Raison sociale et adresse du fournisseur/de l'entrepreneur

**Issuing Office - Bureau de distribution**

Public Works and Government Services Canada - Pacific  
Region  
800 Burrard Street, 12th floor  
800,rue Burrard, 12e étage  
Vancouver, B.C.  
V6Z 0B9  
British C

<b>Title - Sujet</b> Structural Engineering SOA	
<b>Solicitation No. - N° de l'invitation</b> EZ899-133642/A	<b>Date</b> 2013-06-13
<b>Client Reference No. - N° de référence du client</b>	<b>GETS Ref. No. - N° de réf. de SEAG</b> PW-\$TPV-019-7029
<b>File No. - N° de dossier</b> TPV-3-36035 (019)	<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 2013-07-26</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Pacific Daylight Saving Time PDT
<b>Delivery Required - Livraison exigée</b> See Herein	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Ngan, Ken (TPV)	<b>Buyer Id - Id de l'acheteur</b> tpv019
<b>Telephone No. - N° de téléphone</b> (604)658-2755 ( )	<b>FAX No. - N° de FAX</b> (604)775-6633
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> PWGSC - Various Locations, BC and The Yukon	
<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: See Herein**

**Instructions: Voir aux présentes**

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

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

### **SI 1 CODE OF CONDUCT AND CERTIFICATIONS - RELATED DOCUMENTATION**

**Refer to section entitled Code of Conduct and Certifications - Proposal under the General Instructions to Proponents.**

By submitting a proposal, the Proponent certifies, for himself and his affiliates, to be in compliance with the Code of Conduct and Certifications clause of the General Instructions to Proponents. The related documentation therein required will help Canada in confirming that the certifications are true.

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## GENERAL INSTRUCTIONS TO PROPONENTS

### Code of Conduct and Certifications - Proposal

1. Proponents must comply with the Code of Conduct for Procurement (<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>). In addition to the Code of Conduct for Procurement, proponents must a) respond to Requests for Standing Offers (RFSO) in an honest, fair and comprehensive manner, b) accurately reflect their capacity to satisfy the requirements stipulated in the RFSOs, Standing Offers and resulting contracts, c) submit proposals and enter into contracts only if they will fulfill all obligations of the Contract.
2. Proponents further understand that, to ensure fairness, openness and transparency in the procurement process, the commission of certain acts or offences will render them ineligible to be issued a Standing Offer and awarded a contract. Canada will declare non-responsive any proposal in respect of which the information herein requested is missing or inaccurate, or in respect of which the information contained in the certifications specified hereinafter is found to be untrue, in any respect, by Canada. If it is determined, after issuance of a Standing Offer, that the Proponent made a false declaration, Canada will have the right to set aside the Standing Offer and to terminate for default any resulting contracts. The Proponent will be required to diligently maintain up-to-date the information herein requested. The Proponent and any of the Proponent's affiliates, will also be required to remain free and clear of any acts or convictions specified herein during the period of any Standing Offer arising from this RFSO and any call-ups made against the Standing Offer.
3. For the purpose of this section, everyone, including but not limited to organizations, bodies corporate, societies, companies, firms, partnerships, associations of persons, parent companies and subsidiaries, whether partly or wholly-owned, as well as individuals and directors, are Proponent's affiliates if:
  - a. directly or indirectly either one controls or has the power to control the other, or
  - b. a third party has the power to control both.

Indicia of control, include, but are not limited to, interlocking management or ownership, identity of interests among family members, shared facilities and equipment, common use of employees, or a business entity created following the acts or convictions specified in this section which has the same or similar management, ownership, or principal employees, as the case may be.

4. Proponents who are incorporated, including those submitting proposals as a joint venture, must provide with their proposal or promptly thereafter a complete list of names of all individuals who are currently directors of the Proponent. Proponents submitting proposals as sole proprietorship, including those submitting proposals as a joint venture, must provide with their proposal or promptly thereafter the name of the owner. Proponents submitting proposals as societies, firms, or partnerships do not need to provide lists of names. If the required names 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 will render the proposal non-responsive. Providing the required names is a mandatory requirement for a Standing Offer to be issued.

Canada may, at any time, request that an Proponent provide properly completed and Signed Consent Forms (Consent to a Criminal Record Verification form - PWGSC-TPSGC 229) for any or all individuals aforementioned within the time specified. Failure to provide such Consent

Forms within the time period provided will result in the proposal being declared non-responsive.

5. The Proponent must diligently maintain an up-to-date list of names by informing Canada in writing of any change occurring during the validity period of the proposal as well as during the period of any Standing Offer arising from this RFSO and any call-ups made against the Standing Offer. The Proponent must also, when so requested, provide Canada with the corresponding Consent Forms.
6. By submitting a proposal, the Proponent certifies that it is aware, and that its affiliates are aware, that Canada may request additional information, certifications, consent forms and other evidentiary elements proving identity or eligibility. Canada may also verify the information provided by the Proponent, including the information relating to the acts or convictions specified herein, through independent research, use of any government resources or by contacting third parties.
7. By submitting a proposal, the Proponent certifies that neither the Proponent nor any of the Proponent's affiliates have directly or indirectly, paid or agreed to pay, and will not, directly or indirectly, pay a contingency fee to any individual for the solicitation, negotiation or obtaining of the Standing Offer and any call-ups made against the Standing Offer if the payment of the fee would require the individual to file a return under section 5 of the Lobbying Act.
8. By submitting a proposal, the Proponent certifies that no one convicted under any of the provisions under a) or b) are to receive any benefit under a Standing Offer arising from this RFSO and any call-ups made against the Standing Offer. In addition, the Proponent certifies that except for those offences where a criminal pardon or a record suspension has been obtained or capacities restored by the Governor in Council, neither the Proponent nor any of the Proponent's affiliates has ever been convicted of an offence under any of the following provisions:
  - a. paragraph 80(1)(d) (*False entry, certificate or return*), subsection 80(2) (*Fraud against Her Majesty*) or section 154.01 (*Fraud against Her Majesty*) of the *Financial Administration Act*, or
  - b. section 121 (*Frauds on the government and Contractor subscribing to election fund*), section 124 (*Selling or Purchasing Office*), section 380 (*Fraud*) for fraud committed against Her Majesty or section 418 (*Selling defective stores to Her Majesty*) of the *Criminal Code of Canada*, or
  - c. section 462.31 (*Laundering proceeds of crime*) or sections 467.11 to 467.13 (*Participation in activities of criminal organization*) of the *Criminal Code of Canada*, or
  - d. section 45 (*Conspiracies, agreements or arrangements between competitors*), 46 (*Foreign directives*) 47 (*Bid rigging*), 49 (*Agreements or arrangements of federal financial institutions*), 52 (*False or misleading representation*), 53 (*Deceptive notice of winning a prize*) under the *Competition Act*, or
  - e. section 239 (*False or deceptive statements*) of the *Income Tax Act*, or
  - f. section 327 (*False or deceptive statements*) of the *Excise Tax Act*, or
  - g. section 3 (*Bribing a foreign public official*) of the *Corruption of Foreign Public Officials Act*, or
  - h. section 5 (*Trafficking in substance*), section 6 (*Importing and exporting*), or section 7 (*Production of substance*) of the *Controlled Drugs and Substance Act*.
9. In circumstances where a criminal pardon or a record suspension has been obtained, or capacities have been restored by the Governor in Council, the Proponent must provide with its proposal or promptly thereafter a copy of confirming documentation from an official source. If such documentation has 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 will render the proposal non-responsive

10. Proponents understand that Canada may contract outside of the present solicitation process with a supplier who has been convicted of an offense enumerated under c) to h) of the paragraph hereinabove, or who is affiliated with someone who has been convicted of an offense enumerated under c) to h) of the paragraph hereinabove, when required to do so by law or legal proceedings, or when Canada considers it necessary to the public interest for reasons which include, but are not limited to:

- o Only one person is capable of performing the contract;
- o Emergency;
- o National security;
- o Health and safety;
- o Economic harm.

Canada reserves the right to impose additional conditions or measures to ensure the integrity of the procurement process.

## **GI 1 INTRODUCTION**

1. Public Works and Government Services Canada (PWGSC) is inviting consulting firms with Structural Engineering expertise to submit proposals for Standing Offers. The selected consultants shall provide a range of services as identified in the Required Services section of this document for building and short span bridge projects in the British Columbia & Yukon Area.
2. Proponents shall be licensed or eligible to be licensed to practise in the province of British Columbia and the territory of Yukon. If a Proponent is licensed to practise in only one of the province / territory, then that Proponent must be eligible and willing to be licensed in the province / territory in which they are not licensed. Firms should be able to demonstrate successful delivery of these services for a broad variety of projects over the last five (5) 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 two (2) Standing Offers, each for a period of two (2) years from the date of issuing the Standing Offers. The total dollar value of all Standing Offers is estimated to be \$2,625,000.00 (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. This procurement is subject to the provisions of the North American Free Trade Agreement (NAFTA), and the World Trade Organization - Agreement on Government Procurement (WTO-AGP).

## **GI 2 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 3 CONTRACTING AUTHORITY**

1. The Contracting Authority for this Request for Standing Offer is:

Public Works and Government Services Canada  
Real Property Contracting Directorate  
219-800 Burrard Street  
Vancouver, British Columbia  
V6Z 0B9, Mr. Ken Ngen Tel: 604-658-2755

2. The Contracting Authority is responsible for the establishment of the Standing Offer, its administration, and any contractual issues relating to individual call-ups.

**GI 4 DEPARTMENTAL REPRESENTATIVE**

1. A Departmental Representative will be identified at time of each individual Call-Up.
2. 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.

**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 the replies to such enquiries will be provided simultaneously to proponents to which the RFSO has been sent, without revealing the sources of the enquiries.

## **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 Government Electronic Tendering Service (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;
  - 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.

#### **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.

#### **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;
  - (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;

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- (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 FEDERAL CONTRACTORS PROGRAM**

1. The Federal Contractors Program (FCP) requires that some firms, including a Proponent who is a member of a joint venture, bidding for federal government contracts, valued at \$200,000 or more (including all Applicable Taxes), make a formal commitment to implement employment equity. This is a condition precedent to the issuance of a standing offer. If the Proponent, or, if the Proponent is a joint venture and if any member of the joint venture, is subject to the FCP, evidence of its commitment must be provided before the issuance of a standing offer.

Firms who have been declared ineligible contractors by Human Resources and Skills Development Canada (HRSDC) are no longer eligible to receive government contracts over the threshold for solicitation of bids as set out in the *Government Contracts Regulations*. Firms may be declared ineligible contractors either as a result of a finding of non-compliance by HRSDC, or following their voluntary withdrawal from the FCP for a reason other than the reduction of their workforce to less than 100 employees. Any bids from ineligible contractors, including a bid from a joint venture that has a member who is an ineligible contractor, will be declared non-responsive.

2. The Proponent certifies its status with the FCP by completing the Declaration/certifications form in the Request for Standing Offer.

## **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.

## **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 DEFINITION OF PROPONENT AND LEGAL CAPACITY**

"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. 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**

A debriefing will be provided, on request, only following entry by PWGSC into a contractual arrangement with the successful Proponent. 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.

## 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.

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, 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.

## **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 for reasons beyond its control, the Proponent is unable to provide the services of an individual named in its proposal, the Proponent may propose a substitute with similar qualifications and experience. The Proponent must advise the Contracting



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Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Proponent: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

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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.

### 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 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; 60% of the business for the top ranked consultant, and 40% for the 2nd ranked consultant. In the event fewer than two (2) consultants are successful, the undistributed % of business will be redistributed amongst the offeror(s) 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 for reasons beyond its control, 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 the purposes of this clause, only the following reasons will be considered as beyond the control of the Consultant: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default. 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.
- 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)

**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
GC 12	Rights to Intellectual Property
GC 13	Conflict of Interest and Values and Ethics Codes for the Public Service
GC 14	Status of Consultant
GC 15	Declaration by Consultant
GC 16	Insurance Requirements
GC 17	Resolution of Disagreements
GC 18	Amendments
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	Federal Contractors Program
GC 26	International Sanctions
GC 27	Code of Conduct and Certifications - Standing Offer and Contract

## 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;

**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*;

**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;

**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*;

**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 to perform the *Departmental Representative's* duties under each Call-Up;

**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*.

## 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.

**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 two (2) 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.

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 an other 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.

#### 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.
- (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.

### 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*.

### **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 adverse material changes."

**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.

## **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

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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 Federal Contractors Program**

Where the *Consultant* has certified in its proposal its status with the Federal Contractors Program; the *Consultant* acknowledges that Canada has relied upon such certification to enter into a Standing Offer and/or Call-Up. Such certification may be verified in such manner as Canada may reasonably require. The *Consultant* acknowledges that in the event of a misrepresentation, Canada shall have the right to terminate the Standing Offer and/or Call-Up.

## **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>).
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 Code of Conduct and Certifications - Standing Offer and Contract**

1. 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>) and to be bound by its terms. In addition to complying with the Code of Conduct for Procurement, the Consultant must also comply with the terms set out in this section.
2. The Consultant further understands that, to ensure fairness, openness and transparency in the procurement process, the commission of certain acts or offences may result in setting aside the Standing Offer and terminating for default any resulting contracts. If the Consultant made a false declaration in its proposal, makes a false declaration under the contract, fails to diligently maintain up to date the information herein requested, or if the Consultant or any of the Consultant's affiliates fail to remain free and clear of any acts or convictions specified herein during the period of the Standing Offer, such false declaration or failure to comply may result in

the setting aside of the Standing Offer and the termination for default of any resulting contracts. The Consultant understands that a termination for default will not restrict Canada's right to exercise any other remedies that may be available against the Consultant and agrees to immediately return any advance payments.

3. For the purpose of this section, everyone, including but not limited to organizations, bodies corporate, societies, companies, firms, partnerships, associations of persons, parent companies and subsidiaries, whether partly or wholly-owned, as well as individuals and directors, are Consultant's affiliates if:

- a. directly or indirectly either one controls or has the power to control the other, or
- b. a third party has the power to control both.

Indicia of control, include, but are not limited to, interlocking management or ownership, identity of interests among family members, shared facilities and equipment, common use of employees, or a business entity created following the acts or convictions specified in this section which has the same or similar management, ownership, or principal employees, as the case may be.

4. The Consultant must diligently maintain an up-to-date list of names by informing Canada in writing of any change occurring during the period of the Standing Offer and the period of any resulting contracts. The Consultant must also, when so requested, provide Canada with the corresponding Consent Forms.
5. The Consultant certifies that it is aware, and that its affiliates are aware, that Canada may verify the information provided by the Consultant, including the information relating to the acts or convictions specified herein through independent research, use of any government resources or by contacting third parties.
6. The Consultant certifies that neither the Consultant nor any of the Consultant's affiliates have directly or indirectly, paid or agreed to pay, and will not, directly or indirectly, pay a contingency fee to any individual for the solicitation, negotiation or obtaining of the Standing Offer and any call-ups made against the Standing Offer if the payment of the fee would require the individual to file a return under section 5 of the Lobbying Act.
7. The Consultant certifies that no one convicted under any of the provisions under a) or b) are to receive any benefit under a contract arising from this Standing Offer. In addition, the Consultant certifies that except for those offences where a criminal pardon or a record suspension has been obtained or capacities restored by the Governor in Council, neither the Consultant nor any of the Consultant's affiliates has ever been convicted of an offence under any of the following provisions:
  - a. paragraph 80(1)(d) (*False entry, certificate or return*), subsection 80(2) (*Fraud against Her Majesty*) or section 154.01 (*Fraud against Her Majesty*) of the *Financial Administration Act*, or
  - b. section 121 (*Frauds on the government and Offeror subscribing to election fund*), section 124 (*Selling or Purchasing Office*), section 380 (*Fraud*) for fraud committed against Her Majesty or section 418 (*Selling defective stores to Her Majesty*) of the *Criminal Code* of Canada, or
  - c. section 462.31 (*Laundrying proceeds of crime*) or sections 467.11 to 467.13 (*Participation in activities of criminal organization*) of the *Criminal Code* of Canada, or
  - d. section 45 (*Conspiracies, agreements or arrangements between competitors*), 46 (*Foreign directives*) 47 (*Bid rigging*), 49 (*Agreements or arrangements of federal financial*

*institutions), 52 (False or misleading representation), 53 (Deceptive notice of winning a prize) under the Competition Act, or*

- e. *section 239 (False or deceptive statements) of the Income Tax Act, or*
- f. *section 327 (False or deceptive statements) of the Excise Tax Act, or*
- g. *section 3 (Bribing a foreign public official) of the Corruption of Foreign Public Officials Act, or*
- h. *section 5 (Trafficking in substance), section 6 (Importing and exporting), or section 7 (Production of substance) of the Controlled Drugs and Substance Act.*



Solicitation No. - N° de l'invitation

EZ899-133642/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

tpv019

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

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

TPV-3-36035

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## **0000DA          SUPPLEMENTARY CONDITIONS**

### **SC 1      Supplementary Conditions**

There are no supplementary conditions.

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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.

### 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.
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.
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.

**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.
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*.

## 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.

Solicitation No. - N° de l'invitation

EZ899-133642/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

tpv019

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

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

TPV-3-36035

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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

## 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 five (5) bound copies of the proposal
  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 432 mm (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.

#### 2.2 Specific Requirements for Proposal Format

The maximum number of pages (including text and graphics) to be submitted for the Rated Requirements under SRE 3.2 is thirty-five (35) pages.

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

Covering letter

Declaration/Certifications Form (Appendix A)

Code of Conduct Certifications

- 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:

1. 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 a structural engineer, licensed, or eligible to be licensed, certified or otherwise authorized to provide the necessary professional services to the full extent that may be required by provincial or territorial law in the province of British Columbia and in the territory of Yukon. If the Proponent is licensed to practise in only one of the two province / territory then that Proponent must be eligible and willing to be licensed in the province / territory in which they are not licensed.

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

#### **3.1.3 Code of Conduct and Certifications - Proposal**

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

### **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:*  
Demonstration that over at least the past five (5) 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.
2. *What the Proponent should provide:*
  - (a) A brief description of a maximum of five (5) significant projects completed / undertaken over the last five (5) 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 20) 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 20). Past expertise and experience of personnel not within the Proponent's (or joint venture Proponent's) organization will not be considered in the evaluation.
4. Senior personnel will typically take a review role or an active senior design role for the complex designs.

### 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 20). Past expertise and experience of personnel not within the Proponent's (or joint venture Proponent's) organization will not be considered in the evaluation.
4. Project personnel will typically carry out most of the work for each Call-up.
5. Project personnel will include the following categories:
  - (a) Intermediate personnel - typically a full licensed professional or technologist with over 5 years experience.
  - (b) Junior Personnel - typically a Professional in Training or technologist with less than 5 years experience.

### 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**

*PWGSC A & E's received an emergency call from a Federal Building Property Manager regarding "unusual cracks" discovered in the structural concrete floor slab. The building is a nine story concrete structure constructed under an outdated Building Code. Currently it is fully occupied by several Federal Departments.*



*The building Health & Safety Committee of the facility is very concern with this damage finding and would like to know if they need to evacuate all the tenants.*

*PWGSC is the property owner and wish to mitigate the situation and able to provide a safe accommodation to the tenants.*

**Services required:**

*Advise and provide solutions to manage the situation which involve -Investigation, Report on the extensive damage. Risk assessment; Communication and coordination with all stakeholders; provide Option analysis and technical solutions to address short and long term remediation.*

## **PROJECT 2**

*PWGSC is participating in Working Group that chaired by the Province of BC to develop an Integrated Provincial Damage Assessment and Inspection protocol for structures in BC. PWGSC is also exploring the possibility of supplementing the internal engineering resource capacity via Structural engineering SOA with an "as and when" requirement for the post -earthquake building assessment.*

**Services required:**

*Facilitate earthquake damage response for PWGSC in the event of an 7.5 earthquake occurred in Vancouver BC; Carryout post earthquake safety evaluation for critical Federal Buildings ( Rapid, Detailed & Engineering evaluation); Carryout seismic investigation/evaluation for critical Federal Buildings and provide upgrade measures.*

## **PROJECT 3**

*PWGSC has an existing Heritage Federal Building that needs to be upgraded to meet the current Building Code Standard, particularly in the area of seismic capacity.*

*A preliminary seismic report was produced under the direction of a non technical Building Manager. This report was produced under inadequate investigation that carried out on site and have made several analysis assumptions that you have found to be incorreccted.*

**Service required:**

*Describe how you would proceed with the verification or investigation of site conditions. Describe the level of strength demand capacity that you would recommended as the trigger level to upgrade a Federal Heritage Building. Taking into the consideration of Vancouver City Building Code requirement. Describe steps to take to confirm in agreement or disagreement with the preliminary report and how you would bring your ideas and findings to the stakeholders for acceptance /approval.*

### **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:

Criterion	Weight Factor	Rating	Weighted Rating
Comprehension of the Scope of Services	1.0	0-10	0-10

Team Approach / Management of Services	1.5	0 - 10	0 - 15
Past Experience	1.5	0 - 10	0 - 15
Senior Personnel Expertise and Experience	1.5	0 - 10	0 - 15
Project Personnel Expertise and Experience	2.0	0 - 10	0 - 20
Hypothetical Projects	2.5	0 - 10	0 - 25
<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:

NON RESPONSIVE	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 fifty (50) 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 fifty (50) points.**

#### SRE 4 PRICE OF SERVICES

All price proposal envelopes corresponding to responsive proposals which have achieved the pass mark of fifty (50) 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:

Rating	Possible Range	% of Total Score	Score (Points)
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 Two (2) Standing Offers.

## **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

☒ **Code of Conduct and Certifications/Proposal - list of directors / owners**

☐ Proposal - 1 original + [5] copies

☐ 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

Solicitation No. - N° de l'invitation

EZ899-133642/A

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Amd. No. - N° de la modif.

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TPV-3-36035

Buyer ID - Id de l'acheteur

tpv019

CCC No./N° CCC - FMS No/ N° VME

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## **APPENDIX A**

### **Declaration/Certifications Form**

Solicitation No. - N° de l'invitation

EZ899-133642/A

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tpv019

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### Declaration / Certifications Form (page 1 of 5)

---

**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 5)

#### Federal Contractors Program (FCP) - Certification

1. The Proponent, or, if the Proponent is a joint venture the member of the joint venture, certifies its status with FCP, as follows:

The Proponent or the member of the joint venture

- (a) ☐ is not subject to the FCP, having a workforce of less than 100 full- time or part-time permanent employees, and/or temporary employees having worked 12 weeks or more in Canada,
- (b) ☐ is not subject to the FCP, being a regulated employer under the Employment Equity Act, S.C. 1995, c.44 (<http://laws.justice.gc.ca/en/E-5.401/index.html>);
- (c) ☐ is subject to the requirements of the FCP, having a workforce of 100 or more full time or part-time permanent employees, or temporary employees having worked 12 weeks or more in Canada, but has not previously obtained a certificate number from HRSDC, (having not bid on requirements of \$200,000 or more), in which case a duly signed certificate of commitment is attached;
- (d) ☐ is subject to the FCP, and has a valid certificate number as follows: \_\_\_\_\_ (e.g. has not been declared an ineligible contractor by HRSDC).

Please check the appropriate item above. Further information on the FCP is available on the HRSDC Web site (<http://www.hrsdc.gc.ca/eng/labour/equality/fcp/index.shtml>).

2. If the Proponent does not fall within the exceptions enumerated in 1. (a) or (b), or does not have a valid certificate number confirming its adherence to the FCP, the Proponent must fax (819-953-8768) a copy of the signed form LAB 1168 (<http://www.servicecanada.gc.ca/cgi-bin/search/eforms/index.cgi?app=profile&form=lab1168&dept=sc&lang=e>), Certificate of Commitment to Implement Employment Equity, to the Labour Branch of HRSDC.

## Declaration / Certifications Form (page 3 of 5)

### Former Public Servant (FPS) - Certification

Contracts with 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 with FPS, proponents must provide the information required below.

### 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.



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CCC No./N° CCC - FMS No/ N° VME

TPV-3-36035

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### **Work Force Reduction Program**

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

If so, the Proponent must provide the following information:

**Declaration / Certifications Form (page 4 of 5)**

- (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 reduction 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 5 of 5)**

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**Name of Proponent:**  

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**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 so inform the Proponent and provide the Proponent with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the proposal non-responsive.

Solicitation No. - N° de l'invitation

**EZ899-133642/A**

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**tpv019**

CCC No./N° CCC - FMS No/ N° VME

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## **APPENDIX B**

### Price Proposal Form

**APPENDIX B - PRICE PROPOSAL****INSTRUCTIONS**

1. Complete price proposal form and submit in a separate sealed envelope, with the Proponent's name, Solicitation Number, and "Price Proposal Form" typed on the outside.
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. 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 Personnel, the hourly rate provided must be equal to or greater than the hourly rate provided for the Junior Personnel. Failure to insert an hourly rate for each position listed will render your proposal non-responsive.
5. The hourly rates identified will be 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 Victoria (1230 Government Street) or 50 km radius of Vancouver (800 Burrard Street) 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.
7. Fixed hourly rates for each category are to be provided in column B and are then multiplied by the weight factor in column A (provided for evaluation purpose only).

**APPENDIX B - PRICE PROPOSAL**

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

Address: \_\_\_\_\_

Category of Personnel	Weight Factor (A)	Fixed Hourly Rate (B)	Total (A X B)
Partners or principals of the firm	5	\$	\$
Senior Personnel	25	\$	\$
Intermediate Personnel	40	\$	\$
Junior Personnel	25	\$	\$
Administrative Support	5	\$	\$
<b>Total</b>	100		\$

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

..... signature .....

..... capacity .....

..... signature .....

..... capacity .....

**END OF PRICE PROPOSAL FORM**

**TECHNICAL ENVELOPE LABEL**

NOTE TO Tenderers: Use the mailing label below and affix it securely to the outside of the envelope or package containing your tender. For revisions to tenders submitted by facsimile (fax # (604) 775-9381), use this sheet as the cover sheet. Always ensure your company name, return address, tender number and closing date appear legibly on the outside of your bid submission.

**REAL PROPERTY CONTRACTING**  
**Public Works & Government Services Canada**  
**Room 219 - 800 Burrard Street**  
**Vancouver, BC V6Z 0B9**

**Solicitation No. : EZ899-133642/A**  
**RFSO Closing Date & Time: July 26, 2013 AT 2:00 PM PDST**  
**Project Description: Various Locations in BC & Yukon.**  
**Structural Engineering Services Standing Offer**

**Technical Component**  
**KN**

AVIS AUX SOUMISSIONNAIRES : Veuillez utiliser l'étiquette d'adresse ci-dessous et bien l'affixer à l'extérieur de l'enveloppe ou du paquet renfermant votre offre. Dans le cas de modifications à des offres soumises par télécopieur (fax : (604) 775-9381), servez-vous de la feuille comme page couverture. Assurez-vous de toujours inscrire lisiblement le nom de votre compagnie, l'adresse de retour, le numéro de l'offre et la date limite sur l'extérieur de votre offre.

**Marchés immobiliers**  
**Travaux publics et Services gouvernementaux Canada**  
**800, rue Burrard, bureau 219**  
**Vancouver (C.-B.) V6Z 0B9**

**Offre n°: EZ899-133642/A**  
**Date et heure limites de reception des soumissions: au 26 juillet 2013 à 14h00**  
**Demande de proposition: Divers emplacements en Colombie-Britannique & Yukon**  
**Offre à commandes - Services de génie structurale**

**Technique composant**  
**KN**

## **COST ENVELOPE LABEL**

NOTE TO Tenderers: Use the mailing label below and affix it securely to the outside of the envelope or package containing your tender. For revisions to tenders submitted by facsimile (fax # (604) 775-9381), use this sheet as the cover sheet. Always ensure your company name, return address, tender number and closing date appear legibly on the outside of your bid submission.

**REAL PROPERTY CONTRACTING**  
**Public Works & Government Services Canada**  
**Room 219 - 800 Burrard Street**  
**Vancouver, BC V6Z 0B9**

Solicitation No. : EZ899-133642/A  
 RFSO Closing Date & Time: July 26, 2013 AT 2:00 PM PDST  
 Project Description: Various Locations in BC & Yukon.  
 Structural Engineering Services Standing Offer

**Cost Component**  
**KN**

**AVIS AUX SOUMISSIONNAIRES : Veuillez utiliser l'étiquette d'adresse ci-dessous et bien l'affixer à l'extérieur de l'enveloppe ou du paquet renfermant votre offre. Dans le cas de modifications à des offres soumises par télécopieur (fax : (604) 775-9381), servez-vous de la feuille comme page couverture. Assurez-vous de toujours inscrire lisiblement le nom de votre compagnie, l'adresse de retour, le numéro de l'offre et la date limite sur l'extérieur de votre offre.**

**Marchés immobiliers**  
**Travaux publics et Services gouvernementaux Canada**  
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Offre n°: EZ899-133642/A  
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 Demande de proposition: Divers emplacements en Colombie-Britannique & Yukon  
 Offre à commandes - Services de génie structurale

**composant de coût**  
**KN**



# **APPENDIX C**

## **DOING BUSINESS WITH A&ES**

### Table of Contents

SECTION 1 DOING BUSINESS WITH PWGSC -PACIFIC REGION..... 33 PAGES

SECTION 2 PACIFIC REGION SPECIFICATION REFERENCE MANUAL...9 PAGES

SECTION 3 PWGSC NATIONAL CADD STANDARD.....54 PAGES

## **SECTION 1**

### **DOING BUSINESS WITH PWGSC - PACIFIC REGION**

# **DOING BUSINESS WITH PWGSC – PACIFIC REGION**

**Guide for Architectural and Engineering Consultants**

**November 2012**

**PUBLIC WORKS AND GOVERNMENT SERVICES CANADA  
PACIFIC REGION  
REAL PROPERTY BRANCH  
PROFESSIONAL AND TECHNICAL SERVICES**

## TABLE OF CONTENTS

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<b>II. DESIGN MANAGEMENT / QUALITY MANAGEMENT .....</b>	<b>4</b>
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**APPENDIX 1** – Quality Management System (QMS)

**APPENDIX 2** – National Project Management System

**APPENDIX 3** - Template for PWGSC's Architectural and Engineering Reviews

**APPENDIX 4** - Sample Invoice

**APPENDIX 5** – PWGSC-Pacific Style Guide for Construction Contract Documents

**APPENDIX 6** – Selected References and Forms

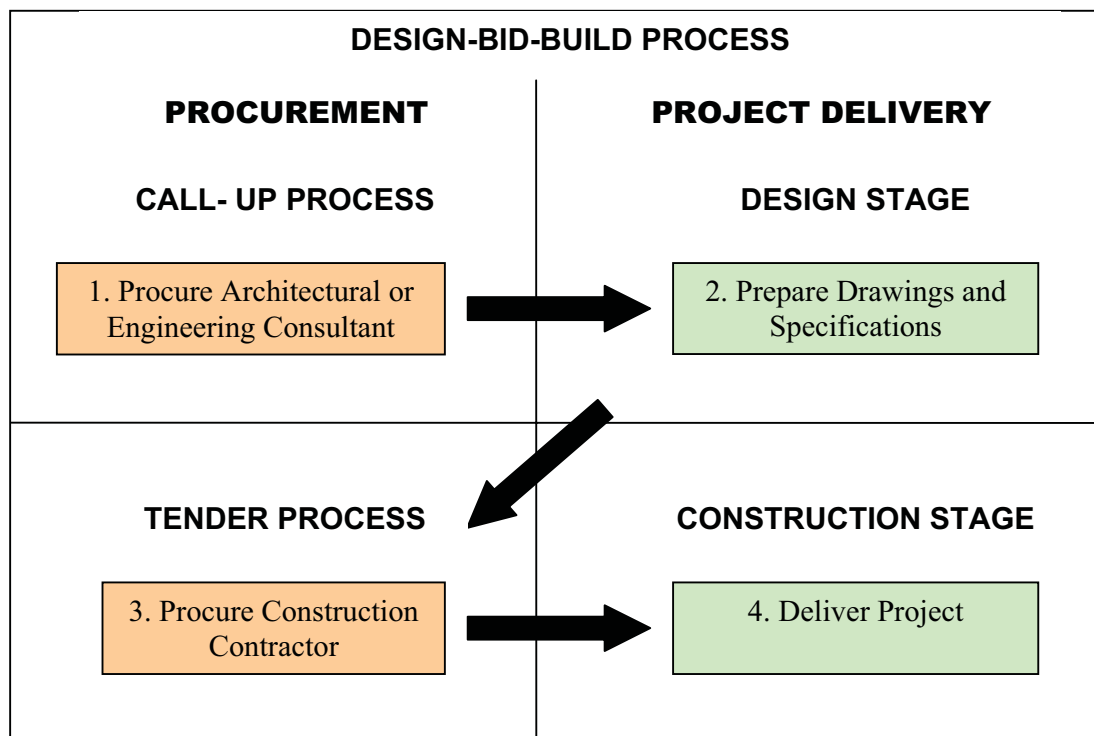
## I. PURPOSE OF GUIDE

The purpose of this Guide is twofold:

1. To provide guidance to architectural and engineering consultants (“consultants”) on **how to work with PWGSC’s** project managers, architects, engineers and other technical staff during a project.
2. To assist consultants and PWGSC staff to **prepare construction contract documents** (i.e. specifications and drawings). These documents are typically used in PWGSC’s tendering process for acquiring design or construction services.

This document provides guidance, including by identifying some of the mandatory requirements of PWGSC. By taking the time to understand and follow this Guide, you will know better what is expected of you. You will also have fewer deficiencies identified during PWGSC reviews resulting in faster turnarounds and greater efficiencies. Your cooperation will also help ensure consistency, accuracy, safety, security, effectiveness, and value for money.

This Guide has been designed primarily for a design–bid–build scenario which is a common procurement approach used by PWGSC. A simplified graphical illustration of the process is shown below.



## II. DESIGN MANAGEMENT / QUALITY MANAGEMENT

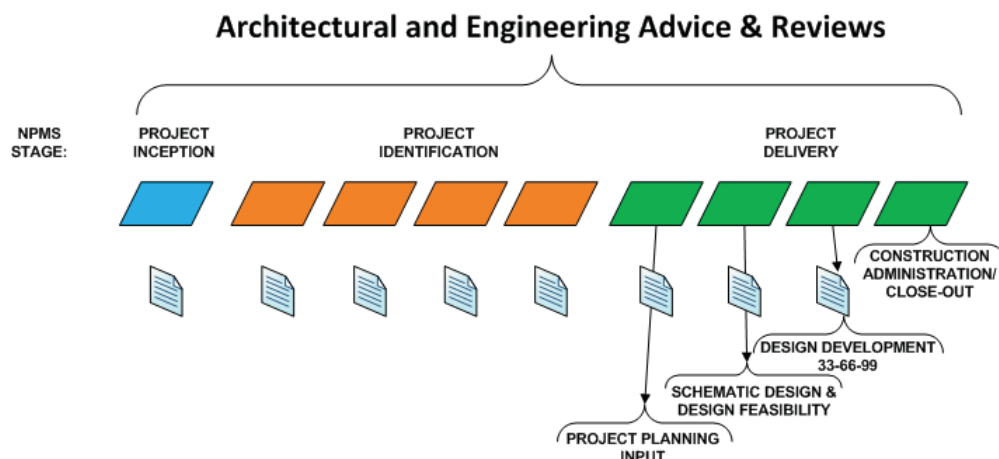
### A. PWGSC's Design Management Process

The Design Management process is an efficient and seamless flow of integrated activities performed by PWGSC's Architectural and Engineering Services (AES) staff and external consultants. It is important to understand that the design is the responsibility of the consultant. The process is aimed at assuring *that the design, procurement, and delivery of a project meet client requirements.*

The process is embedded in the prescribed protocols of the department's Quality Management System (QMS) (see Appendix 1) and works in parallel to the consultant's quality assurance program. Design Management activities and deliverables are guided by Standing Offers, the Royal Architectural Institute of Canada's Canadian Handbook of Practice (CHOP), and standards of the Architectural Institute of BC and of the Association of Professional Engineers and Geoscientists of BC.

The PWGSC Strategic Design Advisor (SDA)<sup>1</sup>, with assistance from the Design Manager (DM) and Design Team, supports the Project Manager (PM) and external client from the early project inception stage through to construction and commissioning (see Appendix 2 for a diagram of the National Project Management System) with advice, guidance, milestone reviews, and options with regard to design, technical aspects, project risk, best practices, financial matters, scheduling and project delivery.

Among PWGSC staff, A&E Reviews are usually referred to as "functional reviews" whereas reviews done by consultants on their own work are referred to as "technical reviews."



<sup>1</sup> The SDA role is currently being carried out by Design Managers until the SDA role is approved by Executive and incorporated into PWGSC processes.

The desired outcomes of Architectural and Engineering Advice & Reviews include the following, among other design parameters affecting the project:

- A clear design vision and objectives are formulated up-front
- The design meets the client's current and evolving needs
- The design is complete, taking into account all relevant factors as reflected in the Design Brief and Project Brief
- The design aligns with the schedule, budget and risk management plans
- The design packaging is consistent with plans for how to deliver the construction (e.g. Public-Private Partnership, design-bid-build, Construction Management, design-build, etc.)
- The design intent is accurately reflected in Requests For Proposals and statement of Required Services for consultants
- The design will enable a logical work program for construction delivery
- The design takes into account best practices and appropriate technologies
- The design meets federal government requirements, policies, and regulations
- The design meets the requirements and regulations of all levels of government having jurisdiction
- The design will result in a built environment that functions as intended
- Quality assurance has been applied to the design process internally and by the consultants

In the project delivery stage, the SDA oversees functional programming, schematic design and design feasibility, and design development. A&E Reviews are performed at project milestones/gates as defined and agreed in the project plan by the Project Manager and the SDA (e.g. at the conclusion of functional design, schematic design and design feasibility, and design development (33%/66%/99% phases).

In the construction documentation phase, an A&E Review includes the following:

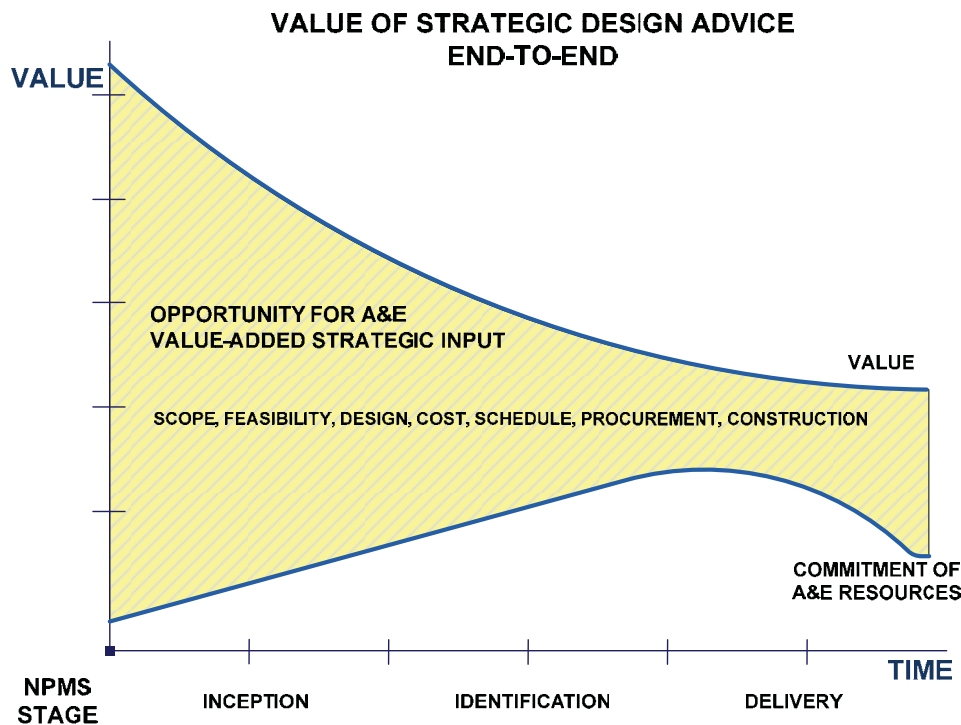
- The scope of work is clear and well-defined in the documentation
- The design is constructible
- Construction contract documents are consistent with the statement of Required Services and are correct and complete
- 33%/66%/99% drawings are defined and delivered as per the description of Required Services, the Standing Offer (if applicable), and professional industry standards (i.e. Architectural Institute of BC, Royal Architectural Institute of Canada's Doc. 6 and Canadian Handbook of Practice, Association of Professional Engineers & Geoscientists of BC)
- Materials are properly specified; building sciences best practices are incorporated; sustainability targets are met

- Quality Assurance is included in a project's specifications and all project contracts
- Specifications use the current edition of the six digit format Canadian National Master Construction Specification (NMS)
- Reference is made to the most current edition of the applicable standards
- Applicable national, provincial and local codes and regulations are specified

The SDA is responsible for obtaining and coordinating review comments from PWGSC and client staff and for communicating them to the consultant. The consultant must provide a written response to all milestone review comments. A template form used for the A&E Review is provided in Appendix 3.

During construction, AES monitors that construction is being executed as per the design intent as set out in construction documents and as per the project timeline/schedule. AES also has a role in construction administration (e.g. site meetings/reviews, change orders, RFI, shop drawings, etc).

The amount of effort that is invested in A&E Advice & Review depends to a great extent on the project. More complex or large projects benefit more from involvement by AES, while simpler projects require less time. As a rule, the greater the design management effort that is invested at the early stages of a project, the greater is the value added in the form of innovative solutions and fewer problems down the line.





## ***B. The Consultant's Responsibility for Quality***

As well as having to deliver in accordance with the contract for their work, consultants are expected to comply with the requirements of the Department and with the regulations of their professional association. Every consultant is subject to a regulatory body or association which outlines the quality assurance requirements; for example, the Royal Architectural Institute of Canada's Canadian Handbook of Practice, AIBC Practice Bulletins, and the Association of Professional Engineers and Geoscientists of BC bylaws. Consultants are to use their seal/stamp in accordance with the rules of their professional association.

Prime consultants are required to have their own parallel quality assurance program. You are expected to comply with the requirements of ISO 9001:2008 – Quality management systems – Requirements, published by the International Organization for Standardization (ISO) specifically on the following clauses:

- 4.1 General requirements
- 4.2.3 Control of documents
- 4.2.4 Control of records
- 5.2 Customer focus
- 7.2 Customer-related processes
- 7.3 Design and development
- 7.4 Purchasing
- 8.2 Monitoring and measurement
- 8.3 Control of nonconforming product
- 8.5.1 Continual Improvement
- 8.5.2 Corrective Action
- 8.5.3 Preventive Action

We do not require that the consultant be registered to ISO 9001; however, your quality management system must address the above requirements appropriate to the scope of work.

PWGSC will not serve as the consultant's quality assurance program for any discipline including, architectural, civil, structural, electrical, mechanical, etc. For example, PWGSC is not responsible for checking a structural engineering consultant's design details or calculations as this important aspect of quality and safety is addressed by a separate protocol under the respective regulatory body's bylaws, such as those of the Association of Professional Engineers and Geoscientists of BC (see <http://www.apeg.bc.ca/resource/publications/governancepolicies/documents/bylaws.pdf>). Obtaining an independent structural review, as per APEGBC, is the external consultant's own responsibility.

PWGSC's review processes are not intended to serve as an independent review process for consultants. Do not expect PWGSC to check your work.

PWGSC will at random request audits of the consultants' quality management processes over the length of a project:

### ***C. Application Notes – Three Scenarios:***

#### **SCENARIO #1 – Consultant Does the Design**

In this scenario, AES engages an external consultant to do the design and to prepare contract drawings and specifications for tender for construction. An SDA is responsible for leading the Architectural and Engineering Review process. Consultants involved are responsible for the design and for quality control of their own work in accordance with the requirements of their governing professional body. Professional consultants sign and seal the drawings and specifications.

#### **SCENARIO #2 – AES Does the Design**

In this scenario, AES is responsible for the design and staff prepare the contract drawings and specifications. This scenario is relatively rare. An SDA (a licensed in BC architect or engineer), through the A&E Advice & Review, is responsible for overseeing and guiding the design process. An internal team, under the guidance and supervision of the SDA, prepares the contract drawings and specifications. Independent third party AES staff are assigned to conduct peer reviews of the work of the internal design team. The SDA signs off on the completeness of the documentation.

#### **SCENARIO #3 – AES and Consultant Jointly do the Design**

In this scenario, AES collaborates with a consultant to jointly do the design and prepare contract drawings and specifications. Both Scenario #1 and #2 apply to each of the collaborative parties for their respective scope. Scope and responsibilities (architect/engineer of record, responsibility for sealing/signing for assignment) are agreed to by both parties and outlined in the contract.

### III. WORKING WITH PWGSC

#### A. *The Consultant's Role*

As an external architectural or engineering consultant, we may ask you to take on any number of lead or supporting roles on a project. You may be involved in pre-design, design, construction, commissioning or close-out as per the contract for your work which sets out the Required Services. If your contract is a call-up under a Standing Offer Arrangement (SOA), then all the SOA requirements apply by reference.

**Pre-design** – We may engage consultants to undertake specific, pre-design tasks during the project inception or project identification stages. By being involved early in projects, AES working with their architectural or engineering consultants can foster innovative solutions. The consultant's tasks will support AES in providing advice, guidance, and options with regard to design, technical aspects, project risk, best practices, financial matters, scheduling and project delivery. For example, we may ask you to prepare a Functional Program or to write a Design Brief.

**Design Development** – During the project delivery stage, we typically ask a consultant to manage and coordinate a design team of internal and/or external disciplines developing specifications and drawings. The coordinating consultant, someone who is expert in the primary technical discipline of the work, is responsible for the design and for assembling all design and construction contract documents unless instructed otherwise. The coordinating consultant is usually an architect but could be a consultant in another discipline.

**Construction** – You may be engaged as a Project Architect or Project Engineer. Depending on the role definition, we typically expect you to be the lead (not PWGSC) in the day-to-day liaison with the general contractor, in reinforcing the project's technical requirements, in sorting out issues and challenges as they arise, and other tasks as set out in the Terms of Reference (TOR). You will be expected to deal with all contractor Requests for Information (RFI) by preparing On Site Instructions (SI) and/or Contemplated Change Notices (CCN) as may be required; and to prepare Change Orders (CO) when required. These are all to be done using the PWGSC forms (see Appendix 6 for links).

**Commissioning** – We may specify that a consultant manage the commissioning process.

**Close out** - At this point, the consultant will prepare the final as-built drawings for submission to the PM/SDA for review and approval.

The main players in a typical project and their roles are described in the table below. Use the terms for these roles on a consistent basis in any documents you prepare for PWGSC.

PROJECT ROLES	
<b>Technical Authority</b>	A PWGSC staff person who is identified in a Standing Offer for design and technical expertise and is responsible for the management of that Standing Offer.
<b>Contracting Authority</b>	The Contracting Authority is the PWGSC group responsible for administering the tender call and the contract. In the Pacific Region, it is the Acquisitions Unit, Real Property Contracting ("RPC").
<b>Departmental Representative</b>	The Departmental Representative is defined as the PWGSC person that exercises the roles and attributes of Canada with respect to the contract. In the Pacific Region, the Departmental Representative is usually the Project Manager. <b>Do not use the terms "owner," "engineer," or "client" when referring to PWGSC's representative.</b>
<b>Project Leader (PL)</b>	The client's (i.e. the other government department) representative for the project.
<b>Project Manager (PM)</b>	A PWGSC Project Manager is assigned to every project. He/she provides overall leadership and direction for the project team and develops the Project Charter and Project Plan. The Project Manager has overall responsibility for project scope, budget, schedule, quality and documentation. He/she may out-task project management activities to an external consultant but must retain signing authority pursuant to the Financial Administration Act.
<b>Strategic Design Advisor (SDA)</b>	A PWGSC staff person who is responsible to the PWGSC Project Manager and client for overall leadership and direction of a multi-disciplinary design team that provides strategic design input, oversees reviews, and delivers construction contract documents to the Project Manager. The SDA supports the PM and external client during project inception, project identification and project delivery stages. The SDA may also act as the Design Manager depending on the project's size and complexity.
<b>Design Manager (DM)</b>	The Design Manager is a PWGSC staff person responsible to the Strategic Design Advisor for day-to-day design management of the project from feasibility phases to completion.
<b>Design Team</b>	PWGSC professional and technical staff from various disciplines (e.g. mechanical, electrical, structural, civil, specifications, health & safety) assigned to the team to assist the Design Manager in the design management of the project.

PROJECT ROLES	
<b>Consultant</b>	An external architectural or engineering consultant that may take on any number of lead or supporting roles on a project as per the contract for the work which sets out the Required Services.
<b>Contractor</b>	Construction contractors use the drawings and specifications prepared by consultants to prepare a bid for construction and construct the works if they are the successful bidder.

## ***B. Required Services***

When executing a specific project, you must refer to the content in this Guide in conjunction with the description of Required Services (RS) in your contract. The Required Services describe the project-specific requirements while this Guide sets out PWGSC's requirements that are common to all projects. In the case of a conflict, the contract terms and statement of Required Services in your contract override this Guide.

Any proposed changes to your scope of work are to be discussed with the Departmental Representative but any resulting changes can only be authorized by a contract amendment.

## ***C. Proposed Scope of Work***

In your fee proposal, specify your deliverables (refer to descriptions of the Required Services, Terms, and Structure) together with cost breakdowns and promised delivery dates. Outline the team members, their hourly rates, and number of hours by person for every phase of the project.

You are required to submit a schedule for your work that we can use as a benchmark for assessing your progress and for billing. Include a project schedule in MS Project or Excel format outlining the major design and construction phases and subtasks/phases. Progress against your schedule is to be confirmed and reported monthly. Any adjustments/deviations to/from the schedule require submission of changes and written approval from the Strategic Design Advisor/Design Manager and Project Manager.

Before proceeding from one phase to the next (i.e. schematic design, 33%, 66%, 99% design, tender etc.), the consultant must seek approval from the SDA. The SDA, in turn, obtains written authorization from the PM indicating that a particular phase is complete.

Any changes to your project team must be done in accordance with General Conditions 23: Changes to the Consultant Team.

PWGSC requires effective time management to ensure that projects are planned, scheduled, monitored and controlled in a systematic manner towards timely completion of the planning, design and construction activities. Construction

documentation submitted at the 33%/66%/99% stages is a tangible indicator of project progress. Documentation that does not meet requirements will be returned to the consultant for revision. The consultant will be responsible for any schedule delays of their own making.

The SDA/Design Manager, in communication with the Project Manager, is responsible for monitoring the prime consultant's progress and performance.

#### ***D. PWGSC Roadmaps***

PWGSC has a well-defined National Project Management System (NPMS) <http://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/index-eng.html> and a Quality Management System (QMS) as described in the Appendices. Note that this QMS applies to the Pacific Region of PWGSC. We encourage you to become familiar with these systems so that you have context for your work.

#### ***E. Project Monitoring and Control (Design, Schedule and Cost)***

(Reserved)

#### ***F. Preparing Construction Cost Estimates***

PWGSC uses four classes of cost estimates: Classes A, B, C, and D <http://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/bi-rp/conn-know/couts-cost/definition-eng.html>. We require a Class A estimate prior to issuing tender-ready documents. The Class A estimate is generally expected to be within 5% to 10% of the actual contract award price for new construction. Tendering risks (e.g. cost overruns, delays, etc.) should be considered with financial implications calculated accordingly. The services of a professional estimator or quantity surveyor are often required and, if appropriate, you should include them in your project team. The cost estimate needs to clearly identify the cost for each technical discipline, e.g. civil, structural, mechanical, electrical, etc. Consultants are responsible for aligning the project construction cost with the cost estimate and design at each of the project phases, as per terms of the Required Services.

#### ***G. Construction Administration***

(Reserved)

#### ***H. Site Visits during Construction***

We require the prime consultant to sign off on progress claims from the construction contractor. We expect the prime consultant to know the construction's progress which means the prime and the sub-consultants on the

team must make regular site visits. For large or complex projects, the Terms of Reference may require the prime consultant to have an office on-site.

### ***I. Project Commissioning and Close-Out***

(Reserved)

### ***J. Invoicing***

The format and content of your invoices must be consistent with your contract, the requirements of the relevant Standing Offer (if applicable), and your fee proposal. Quote the project number and name, as well as the call-up number (if applicable) and contract number. See sample invoice in Appendix 4.

The invoice amount should be calculated as per your contract (i.e. hourly or percent complete for fixed fee contracts). Hourly tracking of team members is required and is to be provided if requested to support progress claims or project audits.

Make your invoices to the attention of the PWGSC Project Manager with a copy of the invoice to the project's SDA/Design Manager. The SDA/Design Manager will verify that the work was done as contracted. PWGSC will not pay an invoice until staff verify that the work was done as contracted; for example, in the case of design documentation, staff will verify that the work is indeed 33%/66%/99% complete before recommending an invoice for payment.

### ***K. Consultant Evaluation***

PWGSC evaluates the performance of consultants using the Consultant Performance Evaluation Performance Report Form (CPERF). We assess quality of design, quality of results, project management, time planning and schedule control, and cost planning and control. <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/2913-1-eng.html>



## IV. PREPARING CONSTRUCTION CONTRACT DOCUMENTS

This section sets out requirements for preparing construction contract documents, which include specifications, drawings, addenda, contemplated change notices, and other documentation. You can find web links to related information and PWGSC forms in Appendix 6. Review the documents that you prepare against the requirements set out below.

### A. *General*

#### 1. **Defining the Contractor's Scope of Work**

You are responsible for ensuring that the scope of work described in the construction contract documents is clear and well-defined and reflects the government's vision for the project. Your documents must be accurate, complete, and enable the contractor to properly price the work. Poorly defined scope of work can result in extra meetings, change orders, increased costs, delays, and an overall adverse impact on the project. Your construction contract documents must be free of loop holes or inconsistencies that could be exploited by contractors. Note that any change in the scope of work must be approved by PWGSC's Project Manager.

#### 2. **Knowledge of Site Conditions**

Because PWGSC does not specify mandatory site visits by the contractor as part of the tendering process, you cannot assume that contractors will visit the site to fill information gaps. The onus is on you to completely describe the scope of work in the documents. It is important that you visit the site to note on-site conditions and constraints. **Do not use notations such as "verify on site," "as instructed," or "to be determined on site by the departmental representative" as this promotes inaccurate bids and inflated prices.** You must not rely on as-built documentation to deal with information gaps. Such conditions are to be resolved and agreed to by the SDA, Project Manager, and consultant.

#### 3. **PWGSC Contracting Principles**

As a Federal Government department, PWGSC is bound to uphold certain principles for the public interest; e.g. a transparent contracting practices to ensure accountability. The requirement to uphold these principles means that PWGSC must ensure compliance with many government rules pertaining to the procurement of design and construction services. Hence, the Department uses contracting procedures that are different from those used in the private sector.

Here is a list of some of the ways in which PWGSC's requirements differ:



- PWGSC has a unique set of contractual terms and conditions drawn from the department's Standard Acquisition Clauses and Conditions (SACC) Manual: <http://ccua-sacc.tpsgc-pwgsc.gc.ca/pub/acho-eng.jsp>
- PWGSC does not use the Canadian Construction Document Committee (CCDC) or the Canadian Construction Association or British Columbia Construction Association standards or guides
- PWGSC does not specify mandatory site visits by the contractor as part of the tendering process so you must completely describe the scope of work
- Use of National Master Specification and PWGSC Pacific Region abridged specifications, as well as PWGSC documentation and forms (see Appendix 6)
- The construction contract documents that you prepare for tender are considered "final for construction" versus the private sector where documents prepared for tender may require a subsequent "issued for construction" edition

#### **4. Contractual Items**

A PWGSC tender package for construction contractors includes documents that cover contract items such as payments, warranties, pricing, taxes, and bid security. You are not to repeat in the specifications and drawings any contractual items that are already addressed in the other documents in the tender package.

#### **5. Administrative Simplicity**

Ensure that construction contract documents are written in a manner that simplifies PWGSC's administration of the contract as much as possible, while still being effective; e.g. number of meetings to attend, communication protocols, reporting requirements, etc.

#### **6. Bidding Format**

For the majority of construction projects, PWGSC requires bidders to submit a single price. Unless requested by the Project Manager, do not use options, alternative prices, conditional clauses, or anything that modifies the offer as it will make the contractor's bid non-compliant.

**Single Lump Sum** - For a single lump sum contract, you do not need to provide a bid form (it is provided by the Contracting Authority), nor do you need measurement for payment clauses in the specifications.

**Unit Price** - Unit price contracts are used when the quantity can only be estimated, e.g. earth work. When using this method, give an estimated quantity for bid purposes.

**Combined Price** – Combined price contracts have a mix of both lump sum and unit price items.

Use the following wording:

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

Ensure there is a clear statement of how the measurement will be made.

A Unit Price Table designates the work to which a unit price arrangement applies.

- (a) The price per unit and the estimated total price must be entered for each item listed
- (b) Work included in each item is as described in the referenced specification section

UNIT PRICE TABLE					
Item	Class of Labour, Plant or Material	Unit of Measurement	Estimated Quantity	Price per Unit, HST extra	Extended Amount Price, HST extra
<b>TOTAL ESTIMATED QUANTITY</b> <b>Transfer amount to subparagraph (1)(b) of BA03</b>					

## 7. Cash Allowances

Use cash allowances only under exceptional circumstances, where no other method of specifying is appropriate. You must assist the Project Manager to obtain the Contracting Authority's approval to use cash allowances in the specifications, in which case you could use *Section 01 21 00 – Allowances* of the NMS to specify the criteria. Use of cash allowances is almost never approved.

## 8. Professional's Signature and Seal

Drawings and specifications are to be signed and sealed by the Professional Architect and Professional Engineer at the tender issue stage. Additional sets of signed/sealed drawings and specifications and BC Building Code schedules may be requested as needed for building permit submissions to the local authority having jurisdiction.

## 9. Permits

PWGSC asks for permits as if the work is being done in the private sector. Also, be aware of PWGSC's Good Neighbour Policy:

<http://www.tpsgc-pwgsc.gc.ca/biens-property/cndns-eng.html>. The consultant will prepare the required documentation for obtaining approvals and permits from the applicable local authority on behalf of PWGSC. Confer with the PM to determine whether the consultant or contractor will submit the documentation to the local authority on behalf of PWGSC or whether PWGSC will take the further action. If the former, the consultant or the contractor will submit a documentation set(s) to the local authority and provide a documentation set(s) to PWGSC for the department's records. PWGSC, through the contractor, will pay for the permit application costs. PM/SDA/DM and consultant to confer to clarify any project specific adjustments to the above process.

## B. SPECIFICATIONS

### 1. National Master Specifications

For the 33% milestone submission, include project specifications. **Confer with PWGSC's Strategic Design Advisor on the appropriate Specification Index and Outline Specification for the project.**

Specifications are to be based on the current edition of the six digit format Canadian National Master Construction Specification (NMS) in accordance with the *NMS User's Guide* (<http://www.tpsgc-pwgsc.gc.ca/biens-property/ddn-nms/index-eng.html>). The NMS is jointly produced by Construction Specifications Canada (CSC) and the Construction Specifications Institute (CSI) in the USA.

PWGSC's Pacific Region, like other regional units across the country, has its own abridged specification sections, which reflect the unique requirements of the federal, provincial and regional authorities having jurisdiction. However, the regional specification index may not always be appropriate for large or complex projects in which case the National Master Specification is better.

You are responsible for tailoring fully developed Division 01 specifications, in consultation with the Project Manager. You shall edit, amend and supplement specifications derived from the NMS as deemed necessary and produce a project specification that is free from conflict and ambiguity.

You must fully develop the three Division 01 specification sections that are common to all projects (see below), as well as identify and develop other sections that apply to the project in question in consultation with the Project Manager:

- **General Instructions** (Section 01 11 55) – This section covers a wide range of activities such as security, environmental protection, fencing, quality

assurance, etc., that must be considered and included in the specifications as appropriate.

- **Health and Safety Requirements** (Section 01 35 33). - The Government of Canada as a whole takes all matters of Construction and Occupational Health and Safety (OH&S) very seriously. Compliance with Federal and Provincial OH&S legislation and regulations is mandatory. Use of the Pacific Region Master Template NMS Section 013533 Health and Safety Requirements, as revised from time to time, is mandatory. Discuss the health and safety requirements with the Project Manager at the beginning of the work and request a copy of the Pacific Region Master Template.
- **Commissioning** (Section 01 91 00) – Commissioning is required for all projects, although its extent is determined by the size and complexity of the project. Discuss the commissioning requirement with the Project Manager at the beginning of the work and request a copy of the most current PWGSC Commissioning Manual (CP.1).

PWGSC-prepared specifications are to use the Construction Specifications Canada full page format, whereas consultants may use either the full page or the two column format.

Narrow scope sections of the NMS describing single units of work are preferred for more complex work, whereas, broad scope sections may be more suitable for simpler work. For example, for complex concrete work, separate sections for formwork, reinforcing steel, and concrete is preferred (i.e. “narrow” scope). Whereas for simpler work, a single section for concrete which includes formwork, reinforcing steel and concrete is preferred (i.e. “broad” scope).

## 2. Specifying Materials

Except for special circumstances, specifying brand names and model numbers is against departmental policy in order to avoid partiality. The method of specifying shall be by one or more of the prescriptive method, reference to recognized standards, and specification by a non-restrictive, non-trade name performance specification.

Where no standards exist and where a suitable non-restrictive, non-trade name prescriptive or performance specification cannot be developed because of complexity, you may specify by Acceptable Product or Minimum Standards. Discuss this situation in advance with the PWGSC Project Manager.

In this case, either list all trade names and model numbers of materials acceptable for the purpose as follows:

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

Or, after describing the products, specify the name of a product as minimum acceptable product when the description alone or performance specifications would not be adequate. A statement must be added that the product specified as minimum standard does not exclude any other products. The specifications for the specified product will be used as the base for minimum acceptable standards during the shop drawings review. All products must meet or exceed the minimum standards.

You must use the phrase “acceptable products.” Do not use “standard of acceptance,” “approved products” or other similar phrases. Also, do not use “or equal” or “equivalent to.”

Sole sourcing for materials and work can be used for proprietary systems (i.e. fire alarm systems, EMCS systems). You must substantiate and/or justify sole sourcing and obtain approval from the Project Manager.

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

“Designated Contractor

*.1 Hire the services of [ ] to do the work of this section.”*

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

“Designated Contractor

*.1 Hire the services of [ ] or its authorized representative to complete the work of all EMCS sections.”*

*and in Part 2 as “Materials*

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

“Acceptable materials

*.1 The only acceptable materials are [ ].”*

If an acceptable product must be used, according to PWGSC General Conditions, the contractor must provide the specified product.

Do not use the term “Acceptable Manufacturers” as this has been deemed to restrict competition and does not ensure the actual material or product will be acceptable. A list of words and phrases to avoid is included in the NMS User’s Guide.

### **3. Prescriptive vs. Performance Specification**

(Reserved)

#### **4. Standards**

As directed by the Division 01 specification index, make reference to the most current edition of the applicable standards, noting the exact title. Examples of recognized standards are those of the Canadian Gas Association (CGA), Canadian General Standards Board (CGSB), Canadian Standards Association (CSA), or Underwriters Laboratories of Canada (ULC). Recognized standards are also published by trade associations such as the Canadian Roofing Contractors' Association (CRCA) or the Terrazzo, Tile & Marble Association of Canada (TTMAC). Canadian standards should be used wherever possible. *NMS Section 01 42 00 – References* provides web site addresses for standards organizations.

#### **5. National, Provincial and Local Codes and Regulations**

Always use or specify the applicable national, provincial, and local codes and regulations with a clause that states *“the most stringent will apply.”* It's PWGSC policy to follow and apply the most stringent of the national, provincial and local codes.

For building projects that house Federal Government employees or people in institutions under Federal Government Administration including prisoners, patients, students, etc. the Authority having jurisdiction over the design of these projects is the Fire Protection Engineering Services Branch of Labour Canada.

This department is similar to a municipal government building department and reviews all projects within its jurisdiction for building code compliance to all Federal Government standards. It is the prime consultant's responsibility, with the help of the Design Manager, to engage this department for project reviews at the 33%/66%/99% stages. The Labour Canada contact is:

Manager, Fire Protection Engineering Services, Northwest Pacific Region

Tel: (604) 666-0403

Fax: (604) 666-6206

Email: [dan.jacob@hrsdc-rhdsc.gc.ca](mailto:dan.jacob@hrsdc-rhdsc.gc.ca)

[http://www.hrsdc.gc.ca/en/labour/fire\\_protection/index.shtml](http://www.hrsdc.gc.ca/en/labour/fire_protection/index.shtml)

#### **6. Specialty Engineer**

When particular inspections or approvals are required (e.g. gluelam, seismic restraints, structural steel), identify that they must be done by a Professional Engineer/Architect registered in British Columbia or in the relevant jurisdiction. This Professional is responsible for the components designed or installed by the contractor and who signs and seals shop drawings and other documents.

#### **7. As-Built Documentation**

In the specifications, ensure you've defined the approach for preparing and reviewing as-built drawings. They are to be prepared by the contractor and reviewed and translated to the electronic drawings by the consultant. Identify for

the Project Manager any differences between the contractor's as-built drawings and the consultant's as-built drawings.

Assemble, finalize, and submit to the PWGSC Project Manager and SDA the as-built drawings and specifications electronically periodically when change orders, Requests for Information, and other changes occur, rather than wait until the end of the project. Submit the final as-built drawings and specifications in dwg format and pdf format on CD as per the statement of Required Services.

## **C. DRAWINGS**

- √ Follow generally accepted drawing conventions understandable by the construction trades.
- √ Drawings should show the quantities and configuration of the project, the project dimensions, and graphic details of how the project is to be constructed. Drawings should not describe the quality of the work.
- √ Follow PWGSC National CADD Standard as adapted to Pacific Region. Important standards are the ones pertaining to layering, title blocks, drawing size and achieving consistency across the documentation set. See the PWGSC National CADD Standard: <http://www.tpsqc-pwgsc.gc.ca/biens-property/cdao-cadd/index-eng.html>
- √ Consult with the Strategic Design Advisor/Design Manager to confirm the selection and use of CADD platform/tools that may be required for a particular project type or procurement method (i.e. version, platform, BIM, energy modeling, 3D rendering etc.).
- √ Make all drawings a uniform standard size in accordance with the PWGSC National CADD Standard. Ask the PWGSC Strategic Design Advisor/Design Manager for a paper space template and pick a size.

Appendix 5 contains a PWGSC Style Guide for Construction Contract Documents.

## **D. Documentation Submission**

For construction contract documents:

### **What to Submit**

- ☐ Index to Specifications and Drawings
- ☐ Specifications -
  - Include a description of all units and estimated quantities for unit price table
  - Include a list of significant trades including costs
- ☐ Drawings
- ☐ Addenda (if required)

- ☐ BC Building Code Schedules A, B1, B2 and C (for construction phase)

### **Submission Format**

- ☐ Confirm the intended recipients of your documents and obtain their name, email address and courier address.
- ☐ Unless otherwise indicated in the statement of Required Services for a specific project, at the required review and tender stages, submit your work in paper format (PWGSC is considering requiring submissions in electronic format in the future).
- ☐ Use your seal/stamp in accordance with the rules of your professional association. You do not need to stamp or seal at the 33% and 66% stages.
- ☐ If at any time you create electronic pdf documents, always use software conversions (rather than scanning) to improve functionality.
- ☐ In the design phase, you may be required to send paper copies to multiple offices, with a transmittal record to the PWGSC Strategic Design Advisor. In this case, print the specification pages one-sided on 216 mm x 280 mm white bond paper. Staple or otherwise bind drawings and specifications into sets. Where presentations exceed twenty sheets of drawings, you may bind the drawings for each discipline separately for convenience and ease of handling.
- ☐ At review stages and at the completion of the construction project, submit the final specifications in pdf format and original and as-built drawings in electronic pdf and dwg formats for record keeping purposes. Include any change orders and change of work documents. Submit a separate pdf and dwg file for each drawing.

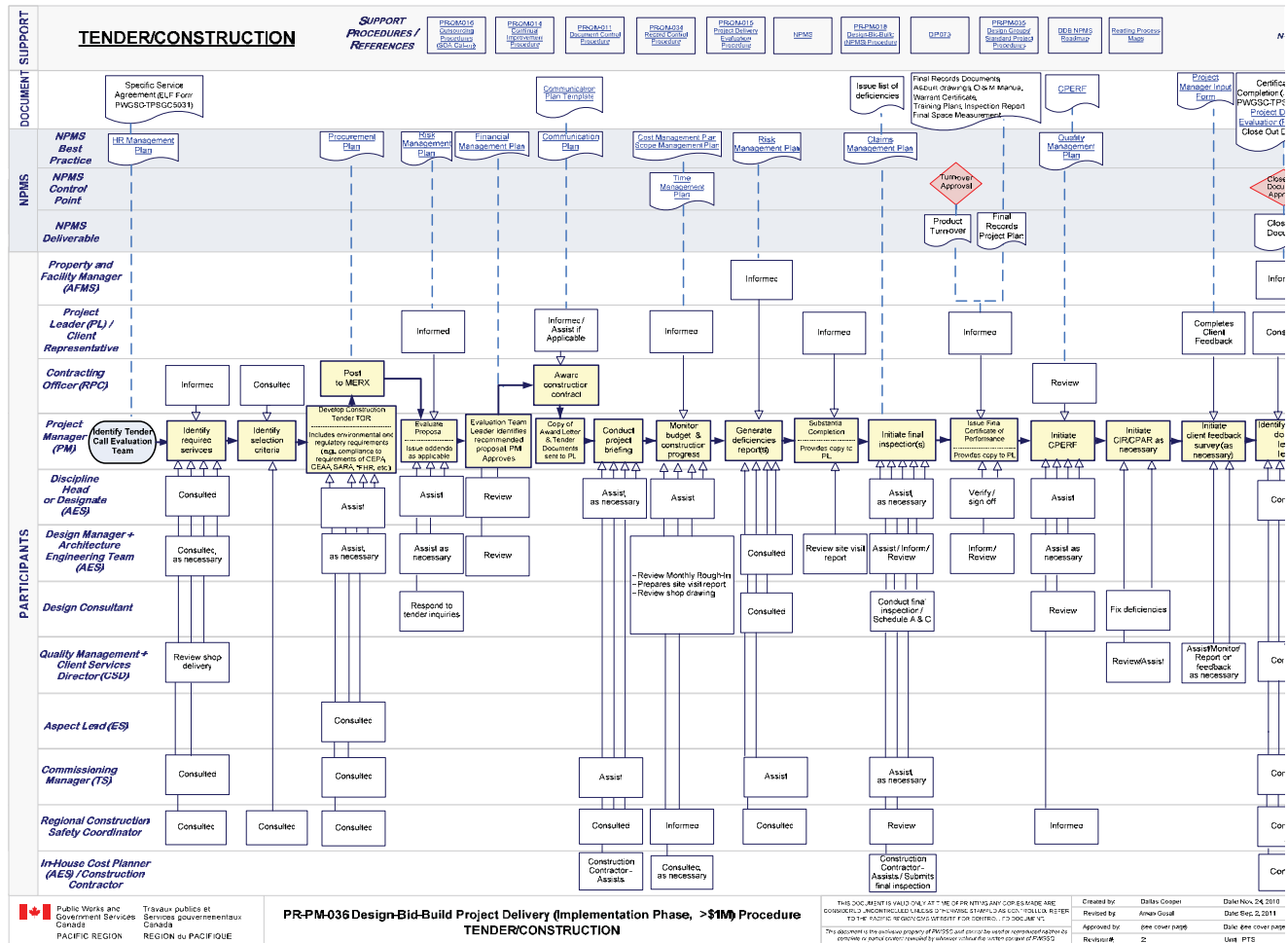
### **PWGSC shall provide**

- √ Front and back cover
- √ Special addenda
- √ Instructions to tenderers
- √ Tender form
- √ Standard construction contract documents



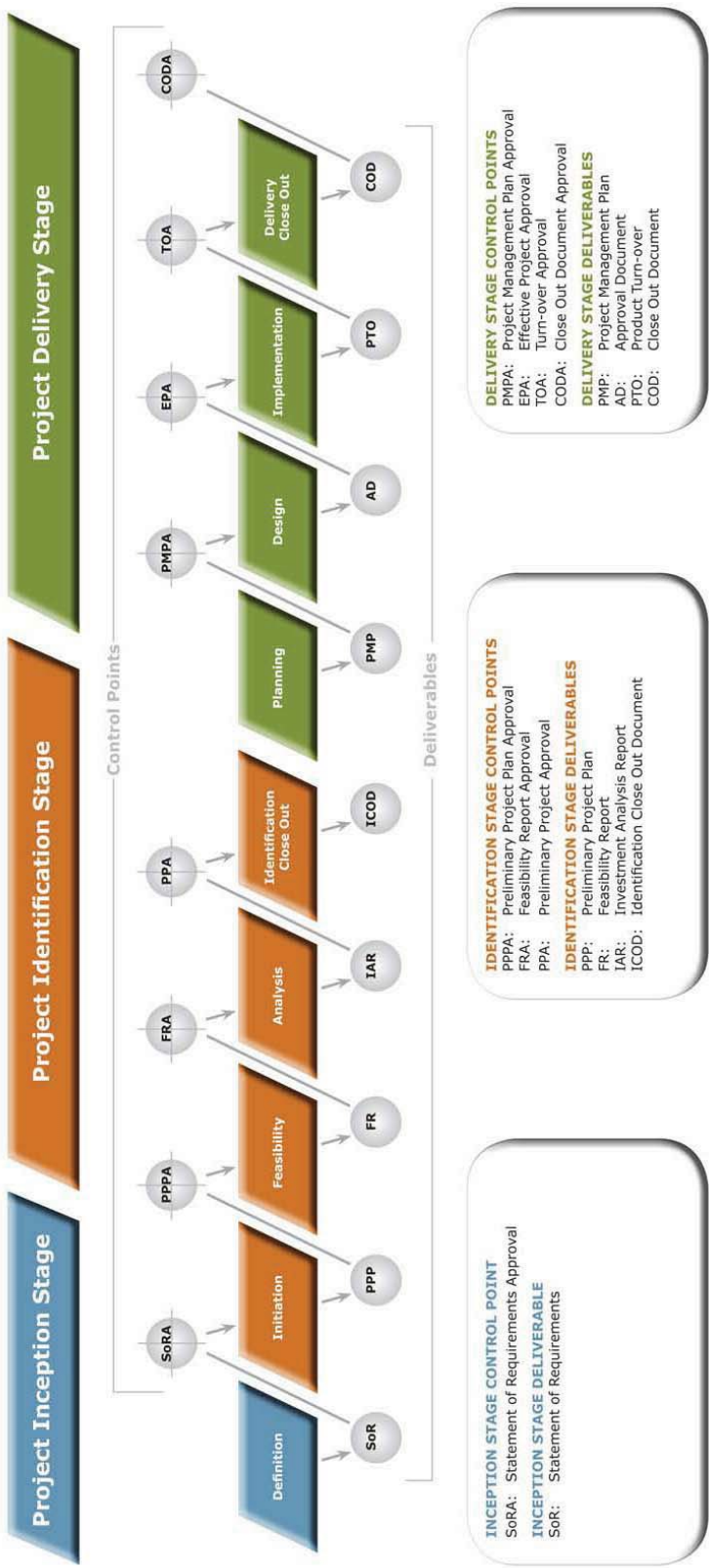


# APPENDIX 1 – QUALITY MANAGEMENT SYSTEM (QMS) (Continuation)



APPENDIX 2: NATIONAL PROJECT MANAGEMENT SYSTEM (NPMS)

PWGSC National Project Management System (NPMS)





## **APPENDIX 4 – SAMPLE INVOICE**

(Reserved)

## APPENDIX 5 – PWGSC-PACIFIC STYLE GUIDE FOR CONSTRUCTION CONTRACT DOCUMENTS

This style guide is intended for construction contract documentation at the 33%/66%/99% and tender stages. This guide is updated regularly. Refer to the Required Services in your contract and to the Project Manager and Strategic Design Advisor for any additional or updated requirements.

### ☒ **Language**

- ☐ Use the imperative voice instead of the passive voice wherever possible:
  - Examples of imperative voice: Install new panel on east wall; Remove all existing wiring.
  - Examples of passive voice: New panel will be installed on east wall; Existing wiring to be removed.

All instructions in the tender package are aimed at the contractor so avoid use of the word “contractor” wherever possible. Use of the imperative voice eliminates the need for any reference to a contractor.

### ☒ **Technical Package**

- ☐ Include the PWGSC Project Number (which is the same as the Work Breakdown Structure Element in PWGSC’s SIGMA financial system) on all specifications, drawings, and reports. Here is an example of the format for a project number: R.012345.001
- ☐ Use the required format for the index page and obtain the template from the Strategic Design Advisor
- ☐ List all sections and pages of the specifications and all drawings in the index
- ☐ Ensure titles of all appendices are listed on the index page, with each appendix having a unique title
- ☐ Ensure the names used in the index match the specification section, drawing names, and appendix names
- ☐ Ensure the page count for each listed item in the index matches the actual number of pages
- ☐ Use ISO date formatting: YYYY-MM-DD, e.g. 2010-10-02 meaning the 2<sup>nd</sup> day of October, 2010
- ☐ Use only metric dimensions on all specifications and drawings (no imperial dimensions). Always use industry-standard metric dimensions, for example, 53mm electrical conduit instead of 50mm (2” conduit)
- ☐ Use the same font style throughout the package, including documents from different disciplines

- ☐ Use black font on white paper for drawings and specifications unless colour would assist clarity in which case obtain the Strategic Design Advisor's approval
- ☐ Where schedules occupy entire sheets, locate them next to the drawing sheets or at the back of each set of drawings for convenient reference. See *CGSB 33-GP-7 Architectural Drawing Practices* for guidelines on schedule arrangements.

#### ☒ **Company References**

- ☐ Without specific authority from the PWGSC Project Manager, do not include references to any phone numbers, personal names, web sites, email addresses, street addresses or similar coordinates of suppliers, manufacturers, contractors or consultants
- ☐ Include your consulting firm's logo/name on all drawings below PWGSC's name at the upper right hand corner of the drawing
- ☐ You can place your consulting firm's project number near the lower right corner of drawings or on the cover page of your document

#### ☒ **Specifications**

- ☐ Follow the specification notes in the NMS
- ☐ You are responsible for including all pertinent sections of the NMS (see the section on Specifications)
- ☐ Write a brief description of the work and number of weeks allocated for its completion on the first page of the Division 01 sections
- ☐ Ensure a specification section exists for all elements of work included in the drawings
- ☐ Ensure the specification headers comply with PWGSC's format (confer with PWGSC's Strategic Design Advisor)
- ☐ Include the Project Name in the specification header for each specification section.
- ☐ Start with Division 01 Sections and start each Section on a new page
- ☐ Check the specification index to ensure that the correct specification section numbers are listed
- ☐ When making cross references, for example a specification section refers to another section, ensure the references exist and the correct numbers are used
- ☐ Erase all brackets of NMS specification choices not used for the project
- ☐ Include the Section Title, six digit Section Number, and specification date, along with the Project Number, on each page of the specifications

- ☐ Put a page number on all pages in the specifications (including appendices, photo pages, etc), except for drawings

## ☒ **Drawings**

- ☐ **Do not put specifications on drawings** unless permission has been granted by the Strategic Design Advisor in advance. Such permission is not usually granted.
- ☐ Insert a unique drawing number and sheet number on every drawing
- ☐ Number drawings in sets according to the type of drawing and the discipline involved in accordance with the PWGSC National CADD Standard
- ☐ Comply with National Building Code requirements for design notes on all drawings (these are not the same as specification notes)
- ☐ Explanatory notes on drawings are expected
- ☐ Include a North Arrow on all floor and site drawings, as well as a set of benchmark locations to help the contractor to properly lay out the works
- ☐ Wherever possible, lay out drawings so that the north point is at the top of the sheet
- ☐ Orient all drawings in the same direction for easy cross-referencing
- ☐ If you are assuming a certain floor elevation (e.g. 100.00 m), then provide a cross reference to tie it back to existing site elevations
- ☐ Include a scale bar on all drawings except sketches
- ☐ Include the names of PWGSC's Project Manager, Regional Manager of Architectural and Engineering Services, and other relevant staff in the title block. Ask PWGSC's Strategic Design Advisor for the names of the staff to include.
- ☐ Each submission to PWGSC is to be identified as a specific revision
- ☐ If extensive use of symbols, abbreviations, references, etc., provide a legend on the front sheet of each set of drawings or, in large sets of drawings, immediately after the title sheet and index sheets

## ☒ **Addenda**

- ☐ See the PWGSC Project Manager for the most current addendum template
- ☐ Ensure addenda items refer to an existing specification paragraph or drawing note
- ☐ Number consecutively every page of the addenda, including attachments
- ☐ Put the PWGSC Project Number and appropriate addendum number on every page



- ☐ Use the PWGSC National CADD Standard for any sketches
- ☐ Stamp and sign sketches

## APPENDIX 6 – SELECTED REFERENCES AND FORMS

This appendix has PWGSC web site links to relevant information and forms.  
Contact the PWGSC Project Manager for other forms not listed below.

Acquisitions:

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>

Change Order:

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/610-eng.html>

Construction Contract Administration Forms:

See your PWGSC Project Manager

Contemplated Change Notice:

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/611-eng.html>

Legal Nature of Consultant's Role for Architectural and Engineering Contracts:

<http://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/bi-rp/conn-know/approv-procure/manuelga-pmmanual-6-eng.html>

Managing Construction Contract Changes:

See your PWGSC Project Manager

NMS Specification Standards

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

NPMS

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

On Site Instruction:

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/599-eng.html>

PWGSC National CADD Standard:

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

Pre-Construction Start-up Meeting:

See your PWGSC Project Manager

Shop Drawings Review Process:

<http://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/bi-rp/conn-know/qualite-quality/atelier-shop-eng.html>

Specification Brief:

<http://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/bi-rp/conn-know/qualite-quality/aperçu-overview-eng.html>

Standard Acquisition Clauses and Conditions (SACC)

<http://ccua-sacc.tpsgc-pwgsc.gc.ca/pub/acho-eng.jsp>

Tenant Fit-Up Standards

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

## **SECTION 2**

# **PACIFIC REGION SPECIFICATION REFERENCE MANUAL**



Public Works and  
Government Services  
Canada

Travaux publics et  
Services gouvernementaux  
Canada

Canada



# PACIFIC REGION SPECIFICATION REFERENCE MANUAL



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



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Specification Checklist

### **APPENDIX “B”**

Departmental Input

### **APPENDIX “C”**

Templates and Samples

- .1 Cover Sheet Template
- .2 Sample Index
- .3 Sample Addendum Format



## INTRODUCTION

The PWGSC Specification Reference Manual is meant to expand on, or further define, the guidelines set out in the Specification Brief in the “Doing Business With A&ES” document that is part of the Standing Offer and Consultant contracts.

The manual has been prepared to assist consultants and specification writers in the production of construction specifications that are being prepared for the department. The intent is to provide consultants with a framework, format, and direction for their specifications. The department recognises that the Prime consultant is ultimately responsible for the production of the specification. The Reference Manual is an attempt to identify all departmental and Government of Canada policies that make PWGSC specifications unique from those that might be prepared for Provincial and Municipal governments, or for private sector projects. Public Works and Government Services (PWGSC) specifications are based on the procurement policies set forth by the Treasury Board of Canada to ensure maximum competition from as many bidders as possible. The Reference Manual attempts to establish guidelines so that the procurement policies can be incorporated into all specifications in a common format.

The instructions found throughout the specification guidelines have been developed over time in an attempt to ensure a common approach and appearance for all Pacific Region specifications. To some degree, use of the Reference Manual will avoid encountering some of the most commonly found issues that the department has routinely encountered during the tendering process and contract administration phase.

The most basic difference in the departmental specifications is that the Public Works and Government Services does not use CCDC contract documents. The department prepares and issues its own contracts which include; instructions to tenderers, tender forms, articles of agreement, terms of payment, general conditions, labour and insurance conditions. PWGSC also tenders its own projects primarily through MERX rather than through the construction associations.

Consultants should prepare their specifications in accordance with the “NMS User’s Guide” and will retain overriding responsibility for the product. They will edit, amend and supplement the National Master Specification (NMS) as deemed necessary to produce an appropriate project specification free from conflict and ambiguity.

Consultants are required to undertake their own quality control process and must review, correct and coordinate their specifications with those provided by their sub-consultants before issuing the documents to PWGSC for reviews. As part of its ISO 9000 certification, PWGSC Pacific Region has developed a Quality Management System (QMS) that requires the department to review all specifications, make comments on the content and provide feedback on each of the mandatory 33%, 66% and 99% submissions. Consultants will be required to provide responses to any of the PWGSC review comments and incorporate any of the feedback deemed to be non-contentious into their documents.

A checklist for specifications has been included in Appendix “A” to assist the consultant with quality control.



Consultants are responsible for coordinating and requesting from the department information necessary to ensure that the final product will meet the requirements of the client. Before beginning work on the specification, consultants should ask the Project Manager (PM) or Design Manager (DM) to provide the information that is included in the Departmental Input package, bound in appendix “B” of the guidelines.

## I. ORGANIZATION

*(Refer to the Templates and Samples in appendix “C”)*

- 1.1 The project title in the header must be coordinated with the project title found on the drawings. The two titles do not have to be identical but should be similar.
- 1.2 The department’s project number must appear in the header. The consultant’s project number should not appear in the document.
- 1.3 The header should be identical on all sections with the only exception being the section number and title.
- 1.4 No company references should appear in the document.

### EXAMPLE

#### PROJECT TITLE

Building/Facility – Location  
Project No. R.000000.001

#### GENERAL INSTRUCTION

Page |

## 2. FORMAT

- 2.1 Use of the most current version of the National Master Specification (NMS), with 3 part Masterformat, is mandatory.
- 2.2 Specifications are to be MS Word documents.
- 2.3 Employ the Construction Specifications Canada full page format.
- 2.4 Narrow scope sections describing individual units of work are preferred for more complexed work. Broad scope sections may be more suitable for less complexed work.
- 2.5 For specification sections not included in the NMS, but required for the project, follow the number and title recommendations of Masterformat 2004.
- 2.6 Currently there is no regional standard for font. To ensure that the document can be read easily you should not use font sizes below 10 pt.
- 2.7 Number each page and begin each section on a new page.

## 3. TERMINOLOGY

- 3.1 Use the term “Departmental Representative” in place of owner, engineer, consultant or architect. The Departmental Representative is defined as the person designated in the Contract, or by written notice to the contractor, to act as the administrator of the Contract on behalf of the crown.
- 3.2 Use of the term “Departmental Representative” will not mean that the consultant will be bypassed on critical stages of the contract administration. It simply means that the Contractor will be making submittals and requests for approvals through the Departmental Representative as opposed to the consultant directly. The Departmental Representative will then forward the information to the consultant.
- 3.3 When a specialty engineer is required to review shop drawings, grant approvals or make inspections, the term “professional engineer” should be used and not the “Departmental Representative”. The professional engineer must be registered in the Province of BC, or





the Yukon, whichever is applicable.

#### 4. REGIONAL MASTER SECTIONS

*(PWGSC Pacific Region has its own Regional Masters for 01 11 55 General Requirements, 01 35 33 Health and Safety and 01 74 21 where it is used for crown owned facilities. Electronic versions of these sections are presently not available to the consultant on the web site. Consultant should request that the Project Manager or Design Manager provide them with electronic versions of these masters.)*

- 4.1 01 11 55 - General Instructions is an abridged version of the NMS Division I that is intended to be used for small and medium sized projects. Use of this master should negate the need to include sections 01 11 00 Summary of Work, 01 29 83 Payment Procedures for Testing Laboratory Services, 01 342 17 & 01 32 18 Schedules, 01 41 00 Regulatory Requirements, 01 45 00 Quality Control and 01 74 11 Cleaning. The regional specification index may not always be appropriate for large or complex projects in which case the various Division I NMS sections should be used. Section 01 11 55 also includes several paragraphs critical for the management of the project including; Time of Completion, Hours of Work, Description of Work, Work Schedule, Cost Breakdown, Green Initiatives and Contractor's Use of Site. In consultation with the Project Manager and Design Manager you are responsible for editing 01 11 55, as well as any other additional NMS Division 01 specifications required, to complete the general requirements. You should do so in consultation with the Project Manager and Design Manager. The Project Manager and Design Manager should be providing the information outlined in the Departmental Input form found in appendix "B"
- 4.2 Under "Time of Completion", in 01 11 55, the contract period has to be entered in number of weeks. No calendar dates can appear in the specification as a completion date. You can indicate that a project is to be phased, however there must only be one completion date:

#### EXAMPLE

- .1 Complete the work within 30 weeks after Contract Award.
- .2 Perform work as per the following Phasing Plan:
  - Phase I - complete the following work in 10 weeks after contract award.
  - Phase II - complete the following work in 20 weeks after contract award.
  - Phase III - complete the following work in 30 weeks after contract award.
- .3 The regional master 01 35 33, Health & Safety must be used in place of the NMS section 01 35 30. Compliance with Federal and Provincial OH&S legislation and regulations is mandatory. Under Submittals 5.4 you should be inserting (5) days for reviews conducted by the Departmental Representative. Under Responsibility 6.0 you should select that the contractor is to assume responsibility as the Prime Contractor and under Project Site Conditions 9.1 you should list any site-specific hazards that you feel that the

#### 5. COMMISSIONING

- 5.1 Commissioning is an integral part of the National Project Management System (NPMS) used by PWGSC to deliver its projects.
- 5.2 Commissioning is an ongoing process that starts in the planning phase and ends at the



termination of the warranty period when the delivered, fully occupied facility has been proven to operate satisfactorily under all weather and occupancy conditions. The traditional commissioning phase of the project takes the built works from a static state, construction, through to a fully operational dynamic state. Activities associated with the commissioning process are recognized as crucial too the interim and the final acceptance of the project.

5.3 Commissioning Roles and Responsibilities:

- 5.3.1 **PWGSC QA Commissioning Manager:** Undertakes a quality assurance role on behalf of the PWGSC project team and is responsible for fulfilling the PWGSC Commissioning Quality Management System requirements. Provides technical advice on O&M matters. Reviews commissioning documentation from the Commissioning Authority at all stages of project delivery and provides support to the Project Manager in matters relating to commissioning.
- 5.3.2 **Design Consultants Commissioning Authority:** The Design Consultant shall engage and pay for a 3rd party Commissioning Authority. The Commissioning Authority develops the commissioning plan, design intent and proposed design solutions, prepares commissioning specifications, forms, training plan and other commissioning documentation. Witnesses and certifies performance of all commissioning activities, organizes and monitors all activities as per the contract agreement, and is responsible for its contractual design, construction and warranty related commitments. The Commissioning Authority represents the Owner's and User's interests, and is responsible for overseeing all commissioning activities during the development, implementation and post construction stages of the project.
- 5.3.3 **Construction Contractors Commissioning Agent:** The Construction Contractor shall engage and pay for a Commissioning Agent. The Commissioning Agent carries out many start-up and performance verification activities and carries out demonstrations and acceptance tests and related procedures. They coordinate matters relating to commissioning, refine the Commissioning Plan, develop the Commissioning Schedule, coordinate all commissioning activities in accordance with contract documents, including all tests for equipment, systems, integrated systems, and provides required documentation.
- 5.3.4 **Specification sections:**
  - Section 01 91 13 General Commissioning (Cx) Requirements
  - Section 01 91 31 Commissioning (Cx) Plan
  - Section 01 91 33 Commissioning (Cx) Forms
  - Section 01 91 41 Commissioning (Cx) Training
  - Section 01 91 51 Building Management Manual

## 6. RELATED SECTIONS

- 6.1 When you are referencing other sections in the specification as “related sections”, you must ensure that those related sections are included as part of your specification.

## 7. MEASUREMENT

- 7.1 SI units of measurement are to be used exclusively. It is acceptable to include both metric and imperial dimensions, measurements and data as long as the metric appears before the imperial and the imperial is placed in parenthesis.



## 8. CODES AND STANDARDS

- 8.1 All projects within the Federal Jurisdiction must conform to the current National Building Code. The General Conditions however, also require that they conform to all Provincial, Territorial and Municipal codes and/or bylaws as part of PWGSC's "Good Neighbour" initiative. Where there are conflicts the most stringent code would apply.
- 8.2 In that references in the NMS may not always be up to date, it is the responsibility of the consultant to ensure that the specification includes the latest version of all references quoted.
- 8.3 Canadian standards should be used where ever possible.

## 9. PERMITS

- 9.1 The General Conditions require that the contractor make application for, and pay for all Permits. This would include Building Permit. Consultant shall confirm If Building Permit is required and indicate this in the General Instructions Section.

## 10. SPECIFYING PRODUCTS

- 10.1 The practice of specifying brand names and model numbers for products is against departmental and treasury board policy except under exceptional circumstances. All product specifications are to be generic, prescriptive or performance based.
- 10.2 A brand name and model number can be used when you are "matching existing" materials, finishes or equipment. If this is applicable to your project, you should include the phrase "matching existing" after the brand name to identify to the tendering authority why you are calling for a sole source. (example: provide Corbin locksets to match existing.)
- 10.3 Brand names and model number can be used when you are selecting a product or equipment for which there is only one manufacture or supplier. You must be prepared to defend the position to the tendering authority that only a sole source product can meet your needs.
- 10.4 You can specify brand names and model numbers when a warranty will be affected or nullified by the use of non-compatible products or equipment. You should justify the selection of such a product to the tendering authority by providing an explanation in the specifications. (example: use product X to maintain the existing warranty.
- 10.5 You can specify brand names and model numbers when the performance of existing equipment will be affected or by the use of non-compatible products or equipment. You must justify the selection of such a product to the tendering authority by providing an explanation in the specifications. (example: equipment X is to be to supplied by firm"Y" to ensure compatibility with existing equipment.
- 10.6 A brand name can be included in the specification if a generic specification has been provided and you want to identify products that you are aware meet the descriptive or performance specification. Naming such products you must use the term "acceptable products". The policy is for you to name all products that meet the specification provided. Given that this is difficult, you must at least name a minimum of three (3) products meeting the specification.

## EXAMPLE

- .1 Provide non-layered and non-backed homogenous sheet vinyl flooring, 1.83 m wide, having a nominal thickness of 2.0mm consisting of through-grain vinyl granules with pattern and colour uniformly distributed throughout entire thickness. The pattern shall merge subtle



colour accents with a detailed terrazzo like visual providing monolithic appearance. Vinyl sheet flooring to meet wear-layer gauge and composition, flexibility, indentation and solvent resistance of Federal Specification L-F-475a(3) Type II, Grade A. Flooring to consist of PVC resins, plasticisers, stabilisers and fillers formulated to resist wear, chemical attack and scuffing: informing to the following additional minimal requirements:

- I.1 Full load limit: 151 kg
  - I.2 Static load limit to ASTM F970: 363 kg/cm<sup>2</sup>
  - I.3 Gloss: 60 ° specular, 16
  - I.4 Wear resistance: 58,000 cycles by Taber Abrader with H18 and 1000 gram weight.
  - I.5 Fire test data: to ASTM E648-0.45 wattscm or more.
  - I.6 Slip resistance : to ASTM D2047 - Coefficient of slip resistance minimum 0.5.
  - I.7 Acceptable products:
    - Tarket Granite Elite
    - Polyflor Finesse
    - Mipolam 400
    - Armstrong Multitech
    - Marley Eclipse
- .2 It is understood that a generic specification cannot guarantee that the designer/consultant will be assured of being able to get the exact colour or pattern of a particular material that you prefer or appears on an already prepared colour board. You can produce a descriptive or performance specification and note that “the colour or pattern is to match brand name. (example: pattern to match Marley Eclipse - granite.)

## 11. NAMING CONTRACTORS

- 11.1 Generally the practice of naming contractors or sub-contractors is against departmental and treasury board policy except under exceptional circumstances.
- 11.2 You can name a sole source contractor or sub-contractor to perform work on existing equipment to maintain warranties. You should justify the selection of a sole source contractor to the tendering authority by providing an explanation in the specifications.
- 11.3 You can name a sole source contractor or sub-contractor to supply and install equipment related to existing electronic safety and security systems and voice and data systems. You must justify the selection of a sole source contractor to the tendering authority by providing an explanation.

## 12. CASH ALLOWANCES

- 12.1 Cash allowances show only to be used for unknown costs at the time of tender for installation of public utilities and services. Exceptions can be made depending upon the circumstances. You should check with the Project Manager or the Design Manager.

## 13. CONTRACTING ISSUE

- 13.1 Public Works and Government Services do not use the CCDC contract documents. PWGSC prepares and issues its own contracts which include; instructions to tenderers, tender forms, articles of agreement, terms of payment, general conditions, labour conditions and insurance conditions. PWGSC also tenders its own projects publicly through MERX.
- 13.2 Bidders participating in the Tender are allowed access to project site on the date indicated in the tender. Such site visit cannot be made mandatory under Treasury Board



requirement.

- 13.3 Do not include Separate or Alternate pricing unless authorized to do so by the Project Manager or Design Manager.
- 13.4 The department uses three types of contracts; Lump Sum, Unit Price and Mixed. The Mixed Contract is basically a Lump Sum Contract that includes Unit Prices based on estimated quantities. The Mixed Contract is used where only some of the items of work can not be estimated (i.e. earthwork) and the approval from the Project Manager or Design Manager is sought in advance.
- 13.5 Specifications must permit bidders to determine all quantities accurately and bid accordingly. If it is not possible to determine an exact quantity of the work, such as would be the case when repairing cracks in a concrete floor, give an estimate of the repair for bidding purposes. (example; repair 30 lin. m of cracks in concrete.) Adjustments can be made after award.

#### 14. WARRANTIES

- 14.1 It is the practice of PWGSC to call for a 12-month warranty and to avoid calling for extended warranties for more than 24 months. The 12 month warranty for all work is set out in the General Conditions.
- 14.2 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 or Design Manager. Typically this would apply to roofing work.
- 14.3 Any extended warranty must include a start date. Typically this is noted as --X—months from the date of substantial completion.

#### 15. REPORTS AND ATTACHMENTS

- 15.1 The departmental policy is to include in the specification, any project related reports that have either been commissioned by the department or the consultant. Common examples of such reports are geotechnical investigations, environmental assessments and pre-renovation/demolition hazardous material survey reports.
- 15.2 All reports and attachments should be bound in the specification in appendices and should include cover sheets prepared by the consultant and not the author of the report.
- 15.3 The specification index must include the cover sheet and the report .
- 15.4 The Project Manager or Design Manager may require that the consultant include numerous attachments that are required by the department, it's alternate service provider and or various clients departments. Common examples of such reports are the "Waste Reduction Work Plan Worksheet for PWGSC Construction, Renovation and Demolition Projects, (required for work in crown owned facilities) Appendix A and Job Hazard Analysis Checklist (required for work at the Esquimalt Graving Dock) and the following forms required by SNC Lavalin; Equipment Information Form CMMS, Operation and Maintenance Manual Checklist and Dismantling, Decommissioning or Deconstruction Notice. (required for work in crown owned facilities managed by SNC Lavalin)

#### 16. DRAWINGS (BOUND IN SPECS)

- 16.1 You can bind drawings with your specification providing that the result is legible. The maximum size of drawing that would be acceptable would be an A3 drawing, 280mm x 432mm sheet.
- 16.2 If you are including shop drawings or detail drawings from a manufacturer in your specification for reference purposes, the name of the company, product name and model



number must be blanked out.

## **17. SUBMISSIONS**

- 17.1 Specifications are required to be submitted for all of the three required submissions. (33%, 66% and 99%)
- 17.2 Recognising the fact that the design and drawings are prepared in advance of the specifications, a specification outline, ideally submitted using the specification index, and one or two sections would be sufficient for the reviewer to determine if the 33% product will meet with the requirements set out in the guidelines.
- 17.3 The 66% and 99% submissions should be submitted “double sided” on 216mm x 280mm white bond and bound. A pdf. version of the submissions should be submitted as well.
- 17.4 The final submission should be submitted “single sided” on 216mm x 280mm white bond and should not be bound. A pdf version of the submissions should be submitted as well.
- 17.5 The final submission must bear a stamp or seal from the “Prime” consultant. Refer to .18 Requirements for a Professional Stamp for details.
- 17.6 Submissions by email, or placed on FTP sites, will not be acceptable.

## **18. REQUIREMENTS FOR A PROFESSIONAL STAMP**

- 18.1 Final submission of the specifications as “tender ready documents” are to be sealed and signed at the Index Section.
- 18.2 Only a rubber seal will be acceptable.
- 18.3 Some Design Managers and Project Managers will request an original specification, for their records, that has been both sealed and signed.

## **19. ADDENDUMS**

- 19.1 Bidders can approach the Contracting Officer for requests for information up until the tender closing date. Addendums must be issued seven (7) days before the tender closes. Consequently issuing the addendum as quickly as possible is essential.
- 19.2 The consultant is required to prepare the addendum and submit it to the Project Manager. The department will issue the addendum on MERX.
- 19.3 A sample of the addendum format can be found in Appendix “C”



## APPENDIX A SPECIFICATION CHECKLIST

### .1 ORGANIZATION

- regional cover sheet template used.
- regional template for index followed.
- list of drawings in index matches titles and numbering found on drawings.
- specification includes all of the pages listed in the specification index.
- the index include a cover sheet c/w number of pages and any reports c/w number of pages.
- project title in header matches closely the project title on the drawings.
- correct departmental project number used.
- every page of all sections are numbered.
- common header used for all specification sections except for section number and title.
- no company names appear in either header or footer.

### .2 FORMAT

- uses 6 digit NMS in full page format.
- all sections begin on a new page.

### .3 TERMINOLOGY

- Department Representative to be used in place of Engineer,(exception specialty engineer)  
Owner, Consultant or Architect.

### .4 REGIONAL MASTERS

- 01 11 55 & 01 35 33 have been used.

### .5 COMMISSIONING

- 01 91 00 has been used.

### .6 RELATED SECTIONS

- sections referenced to as “related sections” are sections that actually exist in the specification.

### .7 MEASUREMENT

- Metric units have been used.

### .8 CODES AND STANDARDS

- Current and relevant codes or bylaws have been referenced.
- Canadian standards have been used where possible.

### .9 PERMITS

- Ensure that Building Permit whether or not required should be indicated in the General Instructions Section.

### .10 SPECIFYING PRODUCTS

- brand names or product names have not been used. (except in acceptable products clauses)
- when acceptable products have been named, at least 3 products have been listed.
- if a brand name or product name has been used, an explanation or justification has been included as to why the use of a sole source is necessary.

### .11 NAMING CONTRACTORS



if a contractor or sub-contractor has been named to perform specific items of work, an explanation or justification has been included to why the use of a sole source is necessary.

#### **.12 CASH ALLOWANCE**

cash allowances cover to be used for utility installation costs only.

#### **.13 CONTRACTING ISSUES**

- no reference to CCDC.
- no reference to bonding requirements.
- no reference of insurance conditions.
- no reference to terms of payment or holdbacks.
- no reference to alternate or separate pricing.

#### **.14 WARRANTIES**

any extended warranties (those beyond 12 months) include a start date. (i.e. 24 months from date of substantial completion.)

#### **.15 REPORTS AND ATTACHMENTS**

- each report is in a separate appendix.
- each report has a cover sheet prepared by the consultant.

#### **.16 DRAWINGS (BOUND IN SPECS)**

each report is in a separate appendix.

#### **.17 SUBMISSIONS**

- 33%, 66% & 99% Submission for Review
- hard copies, double sided and bound.

#### **.18 FINAL SUBMISSION FOR TENDER**

- Hard copies, single sided and not bound. Signed and sealed at the Index Pages.
- 3 CD copies of PDF and MS Word files of the specification.

#### **.19 CONSULTANT VERIFICATION**

- specification has been produced using MS Word.
- current version of the NMS has been used to prepare the specification.
- Canadian standards have been used where possible,





## APPENDIX B DEPARTMENTAL INPUT

- .1 Project number
- .2 Project Description, Building/Facility and Location
- .3 Completion date in number of weeks.
- .4 Use of Site Issues:
  - .1 Number of parking stalls available for construction purposes.
  - .2 Locations for storage of materials and site office.
  - .3 Access to water on site.
  - .4 Access to power on site.
  - .5 Access to existing sanitary facilities.
  - .6 Hours of Work.
- .5 Security requirements.
- .6 Closeout requirements:
  - .1 Number of maintenance manuals required.
  - .2 Format for as-built drawings.
  - .3 Maintenance materials and tools.
- .7 Reports commissioned by the department:
  - .1 Geotechnical.
  - .2 Environmental assessment.
  - .3 Hazardous material surveys.
- .8 Alternate Service Provider requirements:
  - .1 Equipment Information Form CMMS.
  - .2 Operation and Maintenance Manual Checklist.
  - .3 Dismantling, Decommissioning or Deconstruction Notice.
- .9 Client Requirements.



## **APPENDIX C    TEMPLATES & SAMPLES**

1.     Sample Spec Cover Sheet
2.     Sample Spec Index
3.     Sample Addendum Format



# Public Works and Government Services Canada

Requisition No. \_\_\_\_\_

MERX I.D. No. \_\_\_\_\_

## SPECIFICATIONS

For Port Hardy Airport Maintenance Garage  
Vehicle Exhaust Refit  
Port Hardy, BC

PWGSC Project No : R.048877.001

## APPROVED BY:

\_\_\_\_\_  
Regional Manager, AES

\_\_\_\_\_  
Date

\_\_\_\_\_  
Regional Construction Safety  
Coordinator

\_\_\_\_\_  
Date

## TENDER:

\_\_\_\_\_  
Project Manager

\_\_\_\_\_  
Date

***This document is the document referred to as "Plans and Specifications"  
and marked "A" in the Articles of Agreement.***

## **SPECIFICATIONS**

00 00 01	Index .....	2
<b>Division 1</b>	<b>General Requirements</b>	
01 11 55	General Instructions .....	8
01 33 00	Shop Drawings, Product Data and Samples .....	4
01 35 33	Health and Safety .....	8
01 51 00	Temporary Utilities .....	2
01 52 00	Construction Facilities.....	2
01 56 00	Temporary Barriers and Enclosures .....	2
01 61 00	Common Product Requirements .....	4
01 74 19	Waste Management and Disposal .....	2
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05 51 33	Fixed Metal Ladders.....	2
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06 10 11	Rough Carpentry. ....	4
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07 55 52	Protected Membrane Roofing.....	7
07 62 00	Sheet Metal Flashing and Trim .....	3
07 92 10	Joint Sealing .....	4
<b>Division 8</b>	<b>Openings</b>	<b>N/A</b>
<b>Division 9</b>	<b>Finishes</b>	<b>N/A</b>

## **Drawings Index** (bound separately)

A100	Cover Sheet
A101	Chemistry Building Roof Plan & Elevation

---

A102	Physics Building Roof Plan & Elevation
A103	Site Photos

**END OF INDEX**

SAMPLE

***The following changes in the Tender Documents are effective IMMEDIATELY.  
This addendum will form part of the Contract Documents***

**Amend/revise the Standard Contract Documents as follows:**

**SAMPLE**

**End of Addendum**

## **SECTION 3**

### **PWGSC NATIONAL CADD STANDARD**



Public Works and  
Government Services  
Canada

Travaux publics et  
Services gouvernementaux  
Canada

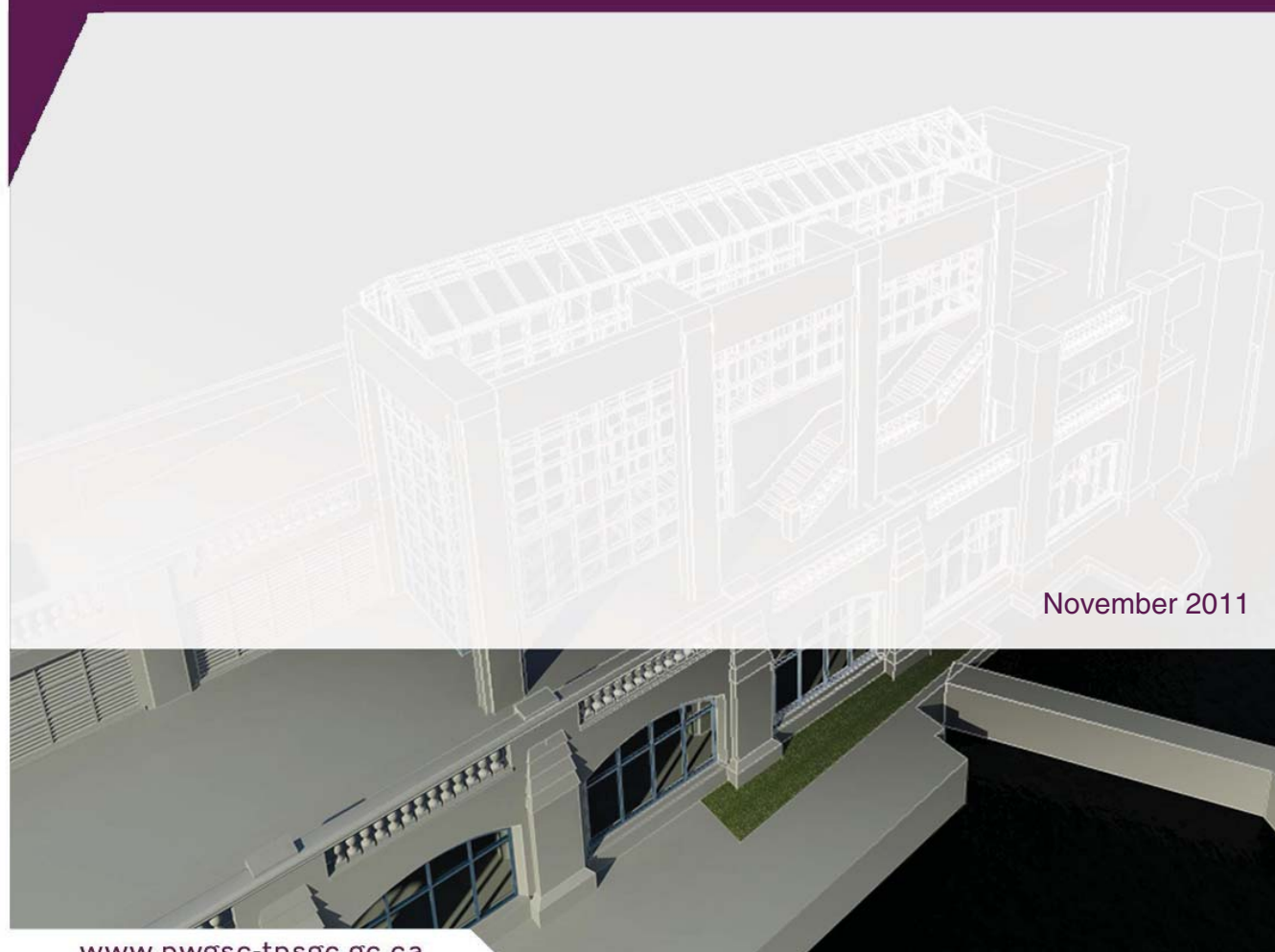
Canada



# PWGSC

## National CADD Standard

Computer-Aided Design and Drafting



November 2011

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





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## 1.0 Introduction

Computer-Aided Design and Drafting (CADD) is an integral component of information management for Public Works and Government Services Canada (PWGSC). The production of digital files by CADD is an important corporate asset. The greatest payback for CADD and related technology is in the reuse of the digital data for facilities management and as a foundation for future projects. If CADD files are to be an effective source of information, they must adhere to a standardized set of criteria that all CADD users will understand.

As an ongoing effort to keep up with changing technology, we are pleased to introduce the third edition of the PWGSC National CADD Standard. A concerted effort has been made not only to simplify the standard, but also to reinforce the requirements in areas we feel are critical to our goals.

PWGSC is aware of the emerging technology and processes related to building information modelling (BIM). As BIM represents a significant change, a new BIM standard, by necessity, will be created, facilitating the transition in the architecture, engineering, and construction (AEC) industry.

In addition, some of the regions have developed a regional CADD standard, which is to be used as a complement to this national standard.

For questions or further information regarding this document, please contact the National CADD Coordinator at the following e-mail address:

[CADD-CDAO@pwgsc-tpsgc.gc.ca](mailto:CADD-CDAO@pwgsc-tpsgc.gc.ca)

For a list of regional contacts, please visit the PWGSC National CADD Standard Web site and regional pages at:

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

### 1.1 Scope

This standard applies to all services that generate CADD data files for PWGSC, including both internal PWGSC CADD service(s), and external consultant(s).

All CADD data files submitted to PWGSC must meet this standard.

## 2.0 Project Delivery

### 2.1 Drawing File Format

PWGSC requires all files to be compatible with Microsoft® Operating Systems. The CADD drawing format required for drawings is the AutoCAD® native format DWG file, i.e., they may not be submitted in Adobe® PDF, Autodesk® DWF, or any other simplified format unless specified in the contract. PWGSC will not supply or accept formats that are no longer supported by Autodesk®.

### 2.2 Project Start-up

All project drawings must be created using the PWGSC National CADD Standard. To ensure this requirement is met, PWGSC will undertake drawing coordination and quality assurance.

Where CADD services will be provided externally, the PWGSC project manager or technical authority will convey its requirements to the consultant or CADD service. PWGSC will provide the pertinent CADD drawings for the related facility or property, the drawing templates, the regional supplement to this standard and the symbol library if applicable. . All new work must meet this standard irrespective of the condition of any existing files provided at the outset of work.

The PWGSC National CADD Standard is available on the PWGSC Web site at <http://www.tpsgc-pwgsc.gc.ca/biens-property/cdao-cadd/index-eng.html>.

#### 2.2.1 Regional supplement and symbol library

Some of the regions have developed regional supplement and/or a symbol library, which is to be used as a complement to this national standard. The regional supplements are available on the PWGSC Web site at: <http://www.tpsgc-pwgsc.gc.ca/cdao-cadd/index-eng.html>

#### 2.2.2 CADD Base Plans

The CADD base plans maintained by PWGSC have been drawn from building and property surveys. The intent is to use the files for project drawings, and then the PWGSC regional CADD RA will be in charge of updating the base plans once the project is completed and measurements of the affected area(s) are verified.

Existing digital information, when available, is used to form the foundation for new project drawings. Any areas critical to the project should be verified by field checking.

New digital drawing files created must be modified to include the most up-to-date information contained in the National CADD Standard. Older legacy CADD data that is used in new drawing files must be updated to the current standard.

The project start-up meeting with the project manager or technical authority and CADD Coordinator should address the extent to which the existing digital files require verification and updating. All new work must meet this standard irrespective of the condition of any existing files provided at the outset of the work.

#### 2.2.3 Template Drawing

Drawing templates set the default metric units, text styles, and dimension styles. Recognizing the differences between engineering drawings and architectural drawings, the templates are provided with dimension styles and lettering for multiple disciplines. PWGSC templates must be used to start a new project. Please visit the PWGSC National CADD Standard Web site or contact the PWGSC project manager regarding the use of drawing templates.

## 2.3 Quality Assurance of CADD Data

PWGSC will carry out quality assurance of delivered CADD data files to ensure adherence with the PWGSC National CADD Standard and regional supplements.

### 2.3.1 Digital File Review

- **Colour Assignment**

PWGSC colour/line weight assignment must be used. ([See 3.2.5 Colour Assignment Standard](#))

- **Layer Management**

The PWGSC Layering Standard must be used. ([See 3.2 Layering Standard](#))

Standard layer names must be used.

Entities must be in the correct layers.

- **Text Style Management**

Only standard AutoCAD® SHX fonts or TTF fonts can be used. ([See 3.4 Text Style Standard](#))

- **Dimension Style Management**

The PWGSC naming convention must be used. ([See 3.5 Dimension Style Standard](#))

Associative dimensions must be used.

- **Linetype and Hatch Pattern Management**

Only standard AutoCAD® and/or PWGSC linetypes and hatch patterns can be used. ([See 3.6 Linetype and Hatch Standard](#))

Linetype display variables must be used correctly.

- **External Referencing**

The use of external references is authorized only if certain conditions are met. ([See 1.2.1 External References \(XREF\)](#))

- **PWGSC Title Blocks and Graphic Scales**

PWGSC title blocks must be used. Please visit the PWGSC National CADD Standard Web site or contact the PWGSC project manager.

Title blocks must contain the minimum information ([See 3.7 Title Blocks and Graphic Scales](#)).

Graphic scales or written scales must accompany all plans, sections, details, and elevations, etc.

- **1:1 Metric Model**

Drawings must be modelled at full size using the International System of Units (S.I.)

- **Real-World Coordinate System**

Maintain coordinate systems integrity for 2D drawings.

### 2.3.2 Drawing file approval

PWGSC has jurisdiction over all drafting-related aspects of the final drawing, including but not limited to drawing content, title block layout, symbols, and font usage continuity throughout a drawing set. All drawings must be completed to the satisfaction of PWGSC.

In the absence of a drawing submission schedule, PWGSC reserves the right to request CADD data files at the midpoint (50%) of the scheduled work to conduct a CADD drafting review.

Note that the content of the digital CADD data file is just as important as the printed content, and no drawing will be accepted as final until all issues are resolved.

Delivered work that fails to meet any requirement in any of these areas will result in the work being deemed unacceptable. The consultant/CADD service will be required to correct the problem(s) at their cost. Furthermore, PWGSC will exercise its option to withhold payment of the contracted work as set out in the contract terms until the work is made right.

Alternatively, PWGSC may, if the consultant/CADD service refuses to correct the problem, make the corrections to the CADD data files and printed drawing plans and deduct the cost thereof from the consultant's/CADD service's fee. The consultant/CADD service grants to PWGSC an irrevocable licence to make such corrections and use the corrected CADD data files and printed drawing plans as it sees fit. Furthermore, PWGSC reserves the right to use the printed drawing plans resulting from the CADD data files with no payment obligation until the CADD data files are corrected.

### 2.3.3 External References (XREF)

The use of external references will be conditionally authorized if the regional supplement of the CADD standard where the work is being performed permits the use of xrefs.

When this condition is met, xrefs may only be used in conjunction with the "Sheet Set Manager" to support the transmission of drawing files in a compressed format.

In all the other cases, external references must be converted into blocks. (Do not BIND XREFs, instead use BIND INSERT.) **Under no circumstances should a drawing contain referenced symbols; they must be inserted as blocks.**

### 2.3.4 Raster Images

When separate raster images are included in a drawing, all related files containing images and information on coordinates, rotation angles, scaling, etc. are to be provided. As these files are essential for their geo-referencing, they must be delivered intact. Raster images should be used as a reference only and cannot replace the vector data normally required in drawing files.

### 2.3.5 Digital Signature

Drawing files containing digital signatures are not accepted and can not legally replace printed copies signed and stamped as original.


## 2.4 Work Completed

When work is complete and the drawing files are delivered to PWGSC, they must be reviewed for compliance with the National CADD Standard. The CADD service shall maintain the drawings in a suitable manner until all drawings for the project are verified and accepted by PWGSC. Once completed, a PWGSC will archive the file(s) in an electronic document and record management system.

### 2.4.1 File Delivery


File transfer will be stipulated by PWGSC on a per project basis by one of the methods listed below:

- Submission and upload of drawing files to a project collaboration tool (PCT) designated by the contact person.
- Submission and upload of drawing files to an information management tool designated by the contact person.
- Submission and transfer of drawing files through e-mail.
- Should a file transfer exceed the e-mail file transfer limit, the file can be uploaded to an FTP site if permitted under regional rules.
- In the case of inability to access a FTP site, lack of Internet access, no permission, or security considerations of the drawing content (unencrypted Protected B, Protected C, Confidential, Secret, Top Secret), a portable electronic storage media (CD, DVD, USB key, etc.) will be delivered to the designated contact person.

 Note: The FTP sites are not secure. Therefore, files containing sensitive information (requiring security clearance greater than Protected A) cannot be uploaded to this site and must be transferred via a portable electronic storage media.

After uploading the file, e-mail the following information to the designated contact person:

- Project location
- Project name
- Project number
- Fully qualified URL path/file name(s) link

 Notes:

- Uploaded files must be named using only alphanumeric characters with no spaces.
- All files are deleted from the site every second day. Timely notification is required to ensure file retrieval.
- No files are to be presented as an executable (.exe extension).
- Files should not be password-protected
- Files should not contain any electronic signature.
- Drawings should not contain hyperlinks.

## 2.5 Production of Contract Drawings


The following formats should be applied.


### 2.5.1 Sheet Size for Page Setup

This table shows the sheet designations and sizes for the drawing page setup. Drawing sheet size will conform to the following specifications:



<b>Sheet Designation</b>	<b>Overall Size (mm)</b>
B1	707 x 1000
A0	841 x 1189
A1	594 x 841
A2	420 x 594
11 x 17 (Tabloid / Ledger)	279 x 432
14 x 8.5 (Legal Landscape)	356 x 216
8.5 x 14 (Legal Portrait)	216 x 356
11 x 8.5 (Letter Landscape)	279 x 216
8.5 x 11 (Letter Portrait)	216 x 279

 Note: The paper size naming may vary depending on the printer drivers.

 Note: When drawings larger than A0 are required, it is recommended that they use a width of 841 mm and a length in increments of 150 mm. Digital files of standard PWGSC or client title block formats will be provided in the required standard sizes and **must not be altered or modified without authorization**.

## 2.6 Disclaimers and Limitation of Liabilities

Maps, drawings, and data produced for PWGSC purposes should be considered for illustrative or reference purposes only by users outside of PWGSC.

PWGSC and its agents, consultants, contractors, or employees provide these materials and information “as is” without warranty of any kind, implied or express, as to the information being accurate or complete, and without any warranty of merchantability and fitness for a particular purpose.

PWGSC does not assume any legal liability or responsibility for the accuracy, completeness, or usefulness of the maps, drawings, data, or information incidental thereto. PWGSC recommends that users exercise their own skill and care with respect to their use or seek professional advice.

Under no circumstances will PWGSC be liable to any person or business entity for any direct, indirect, special, incidental, consequential, or other damages as a result of any use of the maps, drawings, data, or any information incidental thereto, including, without limitation, any lost profits or business interruption.

## 2.7 Copyright

The Copyright Act protects all works (including drawings, charts, photos, etc.) from being copied without permission. Copying a work is called ‘copyright infringement’. Copying including ‘cutting and pasting’, reproducing, publishing or transmitting any work without permission *by any means* is considered copyright infringement. All work is copyright protected even if it does not explicitly say so.

Without prejudice to any rights or privileges of the Crown, where any work is, or has been, prepared or published by or under the direction or control of Her Majesty or any government department, the copyright in the work shall, subject to any agreement with the author, belong to Her Majesty. The copyrights ownership can also be transferred to the client by written contract. **Use of any PWGSC content without permission, in whole or in part, is strictly forbidden.**

## 3.0 PWGSC Computer Aided Drafting Standard

This section describes the general PWGSC Computer Aided Drafting Standard. Specific instructions can be added in the context of a request for proposal.

### 3.1 File Presentation

Files presented must conform to the following rules:

- A drawing must be purged of all definitions that are not used, such as layer names, text styles, dimension styles, layer filters, and blocks.
- A drawing must not contain any object definitions without geometry, such as empty text or blocks without objects.
- No objects should reside on layer "0" or "DEFPOINTS" except for objects contained in a block definition and dimensions. Use the "Plot/Non plot" layer property instead of the Defpoints layer.
- A drawing must not contain errors that are detectable using the Audit command.
- Drawings are to be modelled at full scale (real-world units) in model space, with text, symbols, hatch patterns, and line widths adjusted by the required scale factor.

All presented files must also adhere to the following rules of best practice:

- When appropriate to the type of drawing, lines must be drawn in an orthogonal mode.
- All vector endpoint intersections must be drawn with closed corners.
- The drawing must be saved with properly formatted Page Setup (Paper Size, Plot Style, Plot Area, Plot Scale, etc.). The main layout must be active and all the viewports adjusted and locked to the correct scale.

### 3.2 Layering Standard

All digital CADD files must follow the PWGSC Layering Standard. The standard facilitates data management by using a layering structure and naming convention to organize the drawing data in the CADD files into related data groups.

[See Annex A – CADD Layers](#) for the complete Standard Layer List.

[See Annex B – Layer Field Descriptions](#) for the abbreviations and descriptions lists used to create layer names.

#### 3.2.1 Sorting Graphic Data into Related Data Groups

Layers are used to sort the graphical data types depicted by the line work into related data groups. (They are not intended for use in sorting line weights, line types, colours, or other schemes.)

Layering is the only way to identify what the entities on a graphical screen represent without resorting to annotations. For example, it answers questions such as whether a rectangle represents a building outline, a concrete pad, a storage tank, or whether it is an annotation box. All digital CADD files must follow the PWGSC Layering Standard to create the appropriate layers to accommodate the grouping of related data.

To simplify the layering, drawing data can be broken into two major groupings: principal data and supporting data. The level of complexity and number of layers required for the two groups are significantly different.

### 3.2.2 Principal Data

Principal data is contained mainly in the plan views of the facility, i.e., the base plan, floor plan, site plan, etc.

This type of data requires strict adherence to layer naming and proper grouping of data. The line work used to depict facility components must always be drawn using the most up-to-date and accurate information available. Line work depicting objects must be placed in the proper standard layer according to the data type being represented. For example, in a floor plan, the walls, doors, windows, and bathroom fixtures must be grouped under separate layers.

### 3.2.3 Supporting Data

Supporting data is made up of sections, details, elevations, schedules, legends, and title blocks, etc.

This type of data requires minimal layering breakdown. Line work in a detail representing different components does not need to be placed in separate layers. For example, a building construction detail can be drawn with foundation wall, frame wall, floor, and roof line work in a single layer, although the dimensions, annotation, and hatching should be separated.

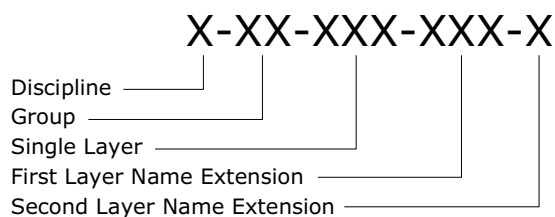
### 3.2.4 Layering Naming Convention

Layering of CADD information must adhere to the layering naming convention described in this section.

The layer is the basic tool for organizing and managing graphic information. Layers are used to sort graphic objects into groupings of related data. PWGSC has developed a modular, alphanumeric layer nomenclature format designed to sort graphic data in a specific manner.

The layer name format consists of five fields separated by hyphens.

- The first three fields—Discipline, Group, and Single Layer—are mandatory.
- The last two fields—First Layer Name Extension and Second Layer Name Extension—are optional fields that allow a more precise data identification where necessary.



[See Annex A – CADD Layers](#) for a list of the most frequently used layer names and their descriptions.

[See Annex B – Layer Field Descriptions](#) for a complete list of the field abbreviations and descriptions for the last four of the five fields of the layer name structure.

Two-field layer names (X-XX) can only be used under special conditions and must have PWGSC approval.

#### **Discipline Field**      **X-XX-XXX**

The Discipline field identifies the discipline responsible for the layer content. Where an object cannot be associated with a specific discipline, or is applicable to all disciplines, the special abbreviation of “G” may be used to indicate “General Information.”

## Discipline Field Abbreviations List:

A	Architecture
B	Bridges and Dams Engineering
C	Civil Engineering, Site Design, and Landscape Architecture
E	Electrical Systems
G	General Information
H	Mechanical
I	Interior Design
L	Legal Surveys
M	Marine
R	Real Property Space Management
S	Building Structure

**Group Field**      X-~~XX~~-XXX

The Group field identifies groupings of common types of drawing information relevant to each discipline. The Group abbreviations defined for each discipline are listed in the Standard Layer List in [Annex A – CADD Layers](#). In addition, there are some common Group abbreviations defined for use with all disciplines for supporting graphic data such as sections, details, and others. [Annex B – Layer Field Descriptions](#) contains a complete list of all Group abbreviations and their descriptions.

Examples of common Group field abbreviations:

DT	Details, Sections, Elevations
GL	Global
GR	Grid
LG	Legend
PL	Plan
SC	Schedules
TL	Title Block

**Single Layer Field**      X-XX-~~XXX~~

The Single Layer field subdivides the classifications to identify each layer more precisely. Single Layer abbreviations allow information pertaining to Physical Properties, Materials, Graphics, Text and discipline related data such as building systems to be included. The Single Layer abbreviations are listed in the Standard Layer List in [Annex A – CADD Layers](#) and [Annex B – Layer Field Descriptions](#).

**First Layer Name Extension (Optional)**      X-XX-XXX-~~XXX~~-X

The First Layer Name Extension, like the Single Layer field, allows information pertaining to Physical Properties, Materials, Graphics, Text and discipline related data to be included. The extensions use the same abbreviations as the Single Layer field. They may be used with any valid layer from the Standard Layer List. They may also be used as a Single Layer field value where appropriate.

Examples of common Single Layer and First Layer Name Extension abbreviations for all disciplines: ([See Annex B - Layer Field Descriptions](#) for a complete list.)

## Physical Properties:

ABV	Above ground, above grade
EME	Emergency
EQP	Equipment
EXT	Exterior
HOR	Horizontal
INT	Interior
NOD	Node, horizontal reference point
OPN	Openings
UND	Underground, below grade
VER	Vertical

## Materials:

ASP	Asphalt
BLK	Block
BRK	Brick
CON	Concrete
CRP	Carpet
FIN	Finishes
INS	Insulation
STL	Steel
STO	Stone
TIM	Timber

## Graphics:

3DM	3D model components of 2D symbols
CLR	Colours
DIG	Digitized or vectorized from scanned image
HAT	Hatching
LIN	Line work
OLN	Outlines
PRO	Profiles
SPC	Special
SYM	Symbols, bubbles, detail notation, bar scales
TAB	Tables
TMP	Temporary

## Texts:

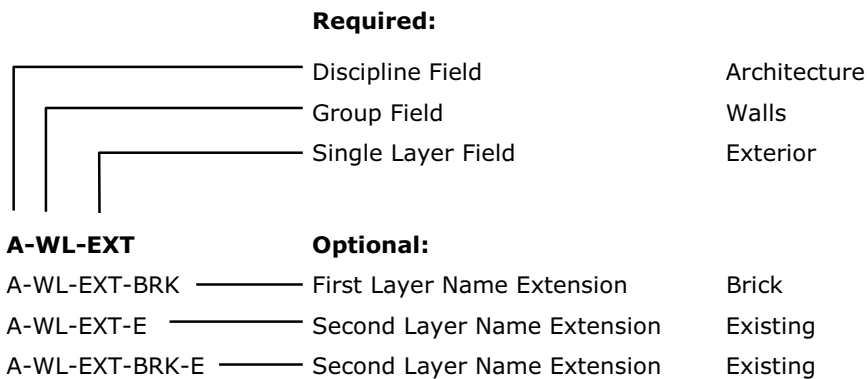
ATT	Attributes
DIM	Dimensions
IDN	Identification numbers or names
SPT	Spot elevations
TXT	Text, notations

**Second Layer Name Extension (Optional)** X-XX-XXX-XXX-**X**

The Second Layer Name Extension allows information pertaining to Geometry, Construction, Status, Second Language, and Numerical Options to be included. The extensions may be used with any valid layer from the Standard Layer List. [Annex B – Layer Field Descriptions](#) contains a complete list of all Second Layer Name Extension abbreviations and their descriptions.

Valid Layer Name Formats:

Four variants of the layer name format will be accepted, as indicated below:

Free Text Examples:

Add an underscore character at the end of a valid layer name to append free text to the layer name.

**M-SN-SPT\_-1.0** Soundings at -1.0 m depth

**M-SN-HWL\_14 January 1990** High Water Line on a specific date

Existing Floor Plan Examples:

Where plans are specifically titled "New" (or "Existing"), the "N" (or "E") Second Layer Name Extension modifier indicating the construction status may be omitted, but all disparate construction status extensions must be included.

**A-WL-INT-N** Architecture - Wall - Interior - New

**A-WL-INT-X** Architecture - Wall - Interior - Remove

**A-WL-OLN** Architecture - Wall Outline - Exterior ("Existing" implied)

**A-DR-INT** Architecture - Door - Interior ("Existing" implied)

**A-DR-INT-N** Architecture - Door - Interior - New

**A-WD-EXT** Architecture - Window - Exterior ("Existing" implied)


Symbols Examples:

When a symbol is placed to represent an object, it must be placed in a symbols layer.

**E-SD-SYM** Electrical - Site Distribution - Symbols (Power poles, luminary, etc.)

**G-GL-SYM** General - Global - Symbols (Key plans, north arrow, bar scale, etc.)

Detail Examples:

 Supporting data such as dimensions, annotation, and hatching should be separated as indicated in the examples below. Colour should be set "Bylayer" for the majority of the entities in a layer and specifically where necessary to obtain varying line weights in that layer.

<b>G-DT-LIN</b>	General - Detail - Line work (Wall, floor and roof line work)
<b>G-DT-TXT</b>	General - Detail - Text (Annotations, title, graphic scale, etc.)
<b>G-DT-DIM</b>	General - Detail - Dimensions
<b>G-DT-HAT</b>	General - Detail - Hatching (Insulation, wood grain, etc.)

Schedule Examples:

<b>A-SC-LIN</b>	Architecture - Schedule - Line work (Schedule grid or Line work)
<b>A-SC-TXT</b>	Architecture - Schedule - Text (Schedule data, annotation)

Plan Views Examples:

Supporting data can also appear on plan views.

<b>H-PL-TXT</b>	Mechanical - Plan - Text (Titles, graphic scale, annotation bubbles)
<b>S-PL-DIM</b>	Structural - Plan - Dimensions

### 3.2.5 Colour Assignment Standard: Layer Colours and Pen Weights

Colour is to be used as a method of defining line weight to the plotter. Layers must be assigned appropriate colours and entities should be created with colour "Bylayer" where possible, except as provided for in the creation of symbols. If a CTB is provided by PWGSC, it must be used.

Suggested Line Weight Settings:**Extra Thin - 0.10 mm**

Centre Lines / Axis, Grid Lines

**Thin - 0.15 to 0.25 mm**

Dimension Lines	Hatching Intermediate	Contour Lines
Leader and Extension	Lines Phantom Lines	Text - Normal

**Medium - 0.30 mm to 0.50 mm**

Hidden Lines	Index Contour Line
Text - Sub Headings	Visible Object Outlines

**Thick - 0.70 mm**

Cutting Lines	Match Lines	Reference Lines
Section Lines	Text - Titles/Major Headings	Viewing Planes

**Extra Thick - 1.00 mm**

Title Sheet Border

### 3.2.6 Provision for Creation of New Layers

Because the Standard Layer List ([Annex A – CADD Layers](#)) does not cover all possibilities, the layering standard provides for the ability to create new layer names for new objects as required.

As in the preceding example of E-SD-SYM, a quick look in the Standard Layer List under the Electrical Systems section would indicate that this layer name is invalid since it is not on the list. However, it is an acceptable layer name created by adding an existing *First Layer Name Extension* to an existing *Discipline-Group* abbreviation.

The rules for creating new layer names are as follows:

- a) A proper standard layer name for the object must not already exist.
- b) Must follow the standard layer name format.
- c) Must use an existing Discipline abbreviation. (**E-SD-SYM**)
- d) Must use an existing Group abbreviation. (**E-SD-SYM**)  
Must use an existing three-character Single Layer field abbreviation or First Layer Name Extension. (**E-SD-SYM**)

## 3.3 Block Standard

AutoCAD® blocks are used to group entities. Graphic blocks shall **not** be exploded. Blocks representing simple objects or simple symbols shall not contain nested blocks (blocks made of blocks). The use of groups is preferable when grouping blocks together, for example, a table with chairs around it. Most symbols should be created with linetype and colour "Byblock." This allows complete control over the appearance of the symbol. By default a symbol will take on the properties of the layer it is placed on, but it can be changed to suit requirements independent of the layer settings.

There are two different ways of creating and inserting AutoCAD® blocks, depending on their complexity. The basic rules are as follows:

**1. Simple** blocks with one data type, e.g., toilet fixtures, furniture:

- a) Create the block on layer "0."
- b) The block must be inserted on the proper layer, e.g., office chair inserted on layer I-FU-SET.

**2. Complex** graphics requiring the use of multiple data types:

- a) Create each data type on its proper layer.
- b) Colour and linetype must be "Bylayer" or "Byblock" so that these two attributes may be assigned to the symbol regardless of the layer properties the symbol is inserted on, e.g., title blocks created with objects on different layers.

Objects that could be represented by AutoCAD® blocks are categorized as being either symbols or graphics.

### 3.3.1 Graphics

Graphics are AutoCAD® blocks that are dimensionally accurate pictorial representations of real objects. A graphic may be a simplified representation of a building component or assembly such as a desk or chair, but it is accurate with respect to the component's principal dimensions.


Drawing scale does not affect the insertion of graphics. Graphics may be fixed or variable, and basic rules for their creation and insertion must be followed:



1. Fixed - Not scaled
  - a) Objects must be created full size.
  - b) Graphics must be inserted with 1-by-1 scale in model space.
2. Variable - Scaled to represent different size objects such as doors, round tables, etc.
  - a) Objects must be created inside a 1-by-1 square
  - b) Blocks must be inserted using the actual dimensions of the objects they represent in model space.

### 3.3.2 Symbol (Annotative)

Symbols are AutoCAD® blocks that are pictorial representations of objects not drawn to scale, such as an electrical outlet symbol. Drawing scale affects symbols in the same manner as annotation and therefore must be inserted into a working drawing at a scale factor corresponding to the drawing or plot scale as required.

 Note: It is now possible to create annotative blocks that can scale themselves automatically to any given scale. To avoid confusion, it is strongly recommended to use only one method throughout each project drawing set: the traditional method that lets the user chooses the insertion scale, or the Annotative option that automatically manages the insertion scale.

Basic rules for the creation of symbols must be followed:

- a) Symbols should be drawn at actual plotted size and not smaller than 2.5 mm. The Annotative option can also be selected when creating the block.
- b) Symbols should be inserted using the plotted scale if they are inserted in model space, and 1 if they are inserted in paper space (layout), i.e., 50x on a 1:50 floor plan in model space, or 1x on a 1:1 drawing sheet in paper space. If the block was created with the annotative option selected, it will scale itself automatically during the insertion.

### 3.3.3 Block Library

Taking into account the specific needs of each project and the huge diversity, there is no national block library.

- a) If a block library is provided with a project, the consultant/CADD service must use it.
- b) All the blocks should be created respecting the rules described in this block standard.
- c) Use of blocks should be uniform throughout each project drawing set.
- d) If no blocks are provided, the consultant/CADD service must have their block library pre-approved by PWGSC.

### 3.3.4 Block Naming

A good structure for block naming is very important to allow for the creation and management of schedules, inventories, legends, etc. If the consultant/CADD service uses their own block library, they need to use a pertinent naming convention that must be pre-approved by the lead technologist.

## 3.4 Text Style Standard

Text styles for use in drawings must be created using Standard AutoCAD® SHX, the following TTF font files: Arial, Arial Narrow, and StylusBT and any font files specifically provided by PWGSC.

Annotative text styles are allowed.


Text style usage should be uniform throughout each project drawing set and limited to a maximum of four different font files per project that will be determined in collaboration with PWGSC.

The height of text styles must be set to 0 (not fixed) so that it can be changed to suit different scaling requirements.

All French characters should be accented whether upper or lower case.

Private company logos must not contain a special font file.

Paragraphs must be created with MTEXT objects.

 **Note:** It is now possible to create annotative text styles that can size themselves automatically to any given scale. To avoid confusion, it is strongly recommended to use only one method throughout each project drawing set: traditional text styles or annotative text styles.

### 3.4.1 Text Style Naming

Text style names should reflect the information below:

- Usage
- Font name
- Any other special effects (if required)

Examples:

<b>NOTES_SIMPLEX</b>	Text style with SIMPLEX used for notes
<b>TITLE_ARIAL_WF-1.2</b>	Text style with ARIAL and width factor 1.2 used for titles
<b>SPECIAL_SIMPLEX_OA-20</b>	Text style with SIMPLEX, oblique angle 20 used for special notes
<b>NOTES_ARIAL_ANNNO</b>	Text style with ARIAL and Annotative property enabled for notes

### 3.4.2 Text height

**Standard text height for:**

Notes, dimensions, annotations, etc.	2.5 mm
Major headings	4.5 mm, 5.0 mm
Subheadings	3.5 mm.

Text smaller than 2.5 mm can only be used under special conditions and must have PWGSC approval.

## 3.5 Dimension Style Standard

All dimensioning must be created on entities in model space with associative dimensions.

Annotative dimension styles are now allowed. However, as for blocks and text styles, it is strongly recommended to use only one method throughout each drawing set: traditional dimension styles set with different overall scales to suit different printing scales, or annotative dimension styles that are set up automatically based on the drawing scale.

Two dimensioning formats are used to cover most applications for PWGSC projects:

- a) Engineering with arrowheads for dimension terminators
- b) Architectural with ticks for dimension terminators

### 3.5.1 Dimension Style Naming

Dimension style usage should be uniform throughout each project drawing set. Using dimension styles reduces the time necessary to create, edit, and maintain dimensions. Dimension styles are created by specifying values for a number of dimension variables and saving the style with a unique name. The dimension style controls the appearance of all the dimensions created while the dimension style is active. Changes to the dimension style will automatically be reflected in the associated dimensions.

Usage of override properties is not allowed and the dimensions must be associative. A new dimension style should be created to work with different properties.

Dimension style names have the following format:

**E\_100mm\_0**

E = Engineering

A = Architecture

Any Letter = User-Defined

Drawing Scale: 100 = 1:100

50 = 1:50

0 = Annotative

Units: mm = Millimetres, m = Metres

Modifiers: None = Normal

0 = Both extension lines suppressed

1 = First extension line suppressed

2 = Second extension line suppressed

#### Examples:

**A\_50mm** Normal Architectural dimension for floor plans

**A\_0mm\_Anno** Architectural dimension with Annotative property enabled

**A\_50mm\_0** Architectural dimension with no extension lines to dimension to grid lines

**E\_1000m** Normal Engineering dimension for site plans with metres as base unit

## 3.6 Linetype and Hatch Standard



The appearance of linetypes in a drawing is determined by the system variables LTSCALE, PSLTSCALE, MSLTSCALE, and MEASUREMENT.

- The MEASUREMENT variable determines which linetype description file to use for linetype loading:

**"1"** sets the default files to the **metric** unit files **acadiso.lin** and **acadiso.pat**. (See Note 1 below.)


**"0"** sets the default files to the **imperial** unit files **acad.lin** and **acad.pat**. These must not be used. (See Note 2 below.)

- The LTSCALE variable sets the global linetype scale factor.
- The PSLTSCALE controls linetype appearance in paper space.
- The MSLTSCALE controls the linetype appearance in model space in conjunction with the annotative scale (CANNOSCALE system variable in AutoCAD 2008+). When using MSLTSCALE, the variable LTSCALE should be set to between 0.5 and 1.

-  Note 1: Drawings must not contain linetypes, complex linetypes or hatch patterns other than those respectively defined in the acadiso.lin and acadiso.pat files supplied with the AutoCAD® based Autodesk products or other linetypes supplied by PWGSC.
-  Note 2: The linetypes and hatch patterns contained respectively in the acad.lin and acadiso.pat files should not be used because they are drawn to be used with imperial drawings. For consistent linetype appearance and plotting results, the required values for the variables are as follows:

**1. Final Drawings:** Title sheet must be in paper space with multiple, variously scaled VIEWPORTS.

- a) MEASUREMENT = 1
- b) LTSCALE between 0.5 and 1.0 (See Note 3 below.)
- c) PSLTSCALE = 1 (On)

-  Note 3: The LTSCALE value should be set between 0.5 and 1.0 while printing in paper space depending on the size of the linetypes used in the drawing.

Do not set the linetype scale at the entity level. The Current Object Scale in the Linetype Properties dialog box (system variable CELTSCALE) must be set to 1.0 to ensure that the creation of new entities do not have entity-level linetype scaling.

For consistent hatch pattern plotting and scanning results, grey scale SOLID hatch patterns are not permitted on contract drawings.

## 3.7 Title Blocks and Graphic Scales

### 3.7.1 Title Block Set-up

Completed drawings must adhere to the following composition standard:

- a) Title block sheets must always be inserted in a layout (paper space) at 0,0,0 with scale factor of 1 and rotation angle of 0.
- b) Model space graphics must appear in the layout in correctly scaled VIEWPORTS.
- c) There must be only one (1) title block per layout.
- d) The title block is not to be exploded. Attributes must be used to enter title block information.
- e) No entities outside the title block perimeter.

### 3.7.2 Information in Title Blocks

All project drawings must be compiled on standard sheets and must be in accordance with the PWGSC corporate identity. The lead technologist for each project will coordinate the size of the sheet to be used and provide a standard title block and the content of the title block fields.

Each title block must contain the information below:

- a) Project name
- b) Address
- c) Drawing name, e.g. floor plan, building
- d) Measured or designed by and date
- e) Drawn by and date
- f) Approved by and date
- g) Project manager
- h) PWGSC project number
- i) Tender
- j) Drawing number

- k) Revision chart
- l) Consultant or CADD service identification
- m) North arrow
- n) Site plan (if pertinent)

### 3.7.3 Headings, Titles, and Graphic Scales

To facilitate scaling from reduced or enlarged reproductions, each plan, section, detail, elevation, profile, etc. on a completed drawing sheet shall be accompanied by a graphic scale. The graphic scale shall be located immediately below the pertinent heading on final plot.

## 3.8 Systems of Measurement and Preferred Scales

The International System of Units (S.I.) must be used to prepare all drawings.

The unit for linear dimensioning is the millimetre, except where the scope of the drawing requires the use of the metre, such as in site plans.

Integers shall indicate millimetres, e.g. 435, 4300. Decimal numbers with three decimal places shall indicate metres, e.g. 5.435, 4.300.

All other dimensions and notations should be followed by the unit symbol.

Preferred Viewport Scale:

1:1	1:25	1:500
1:2	1:50	1:1000
1:5	1:100	1:2000
1:10	1:200	1:5000
1:20	1:250	1:10000

## 4.0 Drawing File Naming Conventions

All CADD information submitted must be arranged in a logical format so that it can be easily accessed and modified by the user. This standard provides a framework for the information and will assist in data entry, manipulation, storage, and retrieval at different stages of the design and operation of the facility over its life cycle.

## Annex A – CADD Layers

The Standard Layer List below lists the most-used layer names defined under the PWGSC Layering Standard. New layer names can always be created using the field abbreviations and extensions listed in [Annex B – Layer Field Descriptions](#). The French abbreviations are listed just as a reference and should only be used with drawings annotated in French.

A layer name may include an additional subdivision for grouping subsets of layers that represent building systems or categories of related data. Each subdivision contains a primary layer (underlined) and supplementary layers (in grey) to subdivide the information with greater precision. The use of supplementary layers is optional and depends on a drawing's requirements.

<b>Architecture</b>		
<b>English Abvn</b>	<b>Description</b>	<b>French Abvn</b>
<b>A-CI</b>	<b>Circulation</b>	<b>A-CI</b>
A-CI-CVY	Horizontal conveyors, moving sidewalks	A-CI-HOR
<u>A-CI-ELE</u>	<u>Elevators</u>	<u>A-CI-ELE</u>
A-CI-ELE-BRF	Lift platforms for barrier-free access	A-CI-ELE-ACF
<u>A-CI-RMP</u>	<u>Ramps</u>	<u>A-CI-RAM</u>
A-CI-RMP-BRF	Barrier-free ramps	A-CI-RAM-ACF
<u>A-CI-STR</u>	<u>Stairs, stairwells, and ladders</u>	<u>A-CI-ESC</u>
A-CI-STR-ESC	Escalators	A-CI-ESC-ROU
<b>A-CL</b>	<b>Ceilings</b>	<b>A-PF</b>
A-CL-BKH	Bulkheads	A-PF-GYP
<u>A-CL-FIN</u>	<u>Ceiling finishes</u>	<u>A-PF-FIN</u>
A-CL-FIN-IDN	Ceiling finishes description	A-PF-FIN-NUI
<u>A-CL-GRD</u>	<u>Physical ceiling grid</u>	<u>A-PF-TRA</u>
A-CL-GRD-SCD	Planning grid lines	A-PF-TRA-SCD
A-CL-OPN	Openings, penetrations, skylights	A-PF-OUV
<b>A-DK</b>	<b>Deck</b>	<b>A-TR</b>
A-DK-BAR	Deck railings	A-TR-BAR
A-DK-OLN	Deck outline	A-TR-CON
<b>A-DR</b>	<b>Doors</b>	<b>A-PO</b>
<u>A-DR-EXT</u>	<u>Exterior doors, jambs, casework, swings</u>	<u>A-PO-EXT</u>
A-DR-EXT-IDN	Exterior doors identification numbers	A-PO-EXT-NUI
<u>A-DR-INT</u>	<u>Interior doors, jambs, casework, swings</u>	<u>A-PO-INT</u>
A-DR-INT-IDN	Interior doors identification numbers	A-PO-INT-NUI
A-DR-INT-PRT	Interior doors in a partition wall	A-PO-INT-CLS
<b>A-EM</b>	<b>Emergency</b>	<b>A-UR</b>
<u>A-EM-HAT</u>	<u>General hatching</u>	<u>A-UR-HAC</u>
A-EM-HAT-COR	Corridor hatching	A-UR-HAC-COR
A-EM-HAT-STR	Staircase hatching	A-UR-HAC-ESC
A-EM-HAT-WAL	Wall hatching	A-UR-HAC-MUR
<u>A-EM-OLN</u>	<u>General outline</u>	<u>A-UR-CON</u>
A-EM-OLN-COR	Corridor outline	A-UR-CON-COR
A-EM-OLN-STR	Staircase outline	A-UR-CON-ESC
A-EM-OLN-WAL	Wall outline	A-UR-CON-MUR

A-EM-SYM	Emergency symbols: exit signs, stairs, first aid kit location, etc.	A-UR-SYM
A-EM-TXT	Emergency text	A-UR-TEX
<b>A-FL</b>	<b>Floors</b>	<b>A-PC</b>
<u>A-FL-CTP</u>	<u>Countertops</u>	<u>A-PC-CMP</u>
A-FL-CTP-PRT	Countertops on partitions	A-PC-CMP-CLS
<u>A-FL-FIN</u>	<u>Floor finishes</u>	<u>A-PC-FIN</u>
A-FL-FIN-IDN	Floor finishes description	A-PC-FIN-NUI
A-FL-LEV	Floor level changes, ramps, truck wells	A-PC-NIV
A-FL-MIL	Architectural specialties, casework and millwork	A-PC-EBE
A-FL-OPN	Openings, floor hatching	A-PC-OUV
A-FL-OVH	Overhead items, skylights, overhangs, soffits	A-PC-SUS
A-FL-RAS	Raised floors	A-PC-SUR
<b>A-GL</b>	<b>General</b>	<b>A-GL</b>
A-GL-ATT	Attributes	A-GL-ATT
A-GL-DIM	General architectural dimensions	A-GL-DIM
A-GL-IDN	Identification, elevation points	A-GL-NUI
A-GL-RME	Read Me general drawing info.	A-GL-LIS
A-GL-TMP	Under construction lines, temporary aids	A-GL-TEM
A-GL-TXT	General text (street names)	A-GL-TEX
<b>A-PL</b>	<b>Plan Information</b>	<b>A-PN</b>
A-PL-OLN	Open-to-Below plan information outline	A-PN-CON
<b>A-RF</b>	<b>Roofs</b>	<b>A-TO</b>
A-RF-OLN	Roofs edge and features	A-TO-CON
A-RF-OPN	Roof openings for fans, stacks and ducts	A-TO-OUV
A-RF-OVH	Overhead items, roof above, canopies, soffits	A-TO-SUR
A-RF-WLK	Roof boardwalks, catwalks	A-TO-PAS
<b>A-WD</b>	<b>Windows</b>	<b>A-FN</b>
A-WD-EXT	Exterior window panes and frames	A-FN-EXT
<u>A-WD-INT</u>	<u>Interior window panes and frames, side windows</u>	<u>A-FN-INT</u>
A-WD-INT-PRT	Interior windows in a partition wall	A-FN-INT-CLS
A-WD-OVH	Overhead windows, skylights	A-FN-SUR
A-WD-SIL	Window sills	A-FN-ALL
<b>A-WL</b>	<b>Non-Structural Walls</b>	<b>A-MU</b>
<u>A-WL-ACC</u>	<u>Architectural or protection elements, guards</u>	<u>A-MU-ACC</u>
A-WL-ACC-BRF	Barrier-free accessories (grab bars, etc.)	A-MU-ACC-ACF
<u>A-WL-EXT</u>	<u>Exterior walls</u>	<u>A-MU-EXT</u>
A-WL-EXT-HAT	Exterior walls hatching	A-MU-EXT-HAC
<u>A-WL-FIN</u>	<u>Wall finishes</u>	<u>A-MU-FIN</u>
A-WL-FIN-IDN	Wall finishes description	A-MU-FIN-NUI
<u>A-WL-HED</u>	<u>Door and window headers</u>	<u>A-MU-LIN</u>
A-WL-HED-PRT	Door and window headers on partition	A-MU-LIN-CLS



<u>A-WL-INT</u>	<u>Interior walls</u>	<u>A-MU-INT</u>
A-WL-INT-LOW	Interior walls - low walls	A-MU-INT-BAS
A-WL-INT-LOW-PRT	Interior partitions - low walls	A-MU-INT-BAS-CLS
A-WL-INT-PRT	Interior partition walls	A-MU-INT-CLS
A-WL-OLN	Wall outlines, building footprints, sheds, etc.	A-MU-CON
A-WL-WSR-PRT	Washroom partitions	A-MU-SAT-CLS

**Bridges and Dams Engineering**

<b>English Abvn</b>	<b>Description</b>	<b>French Abvn</b>
<b>B-AP</b>	<b>Approach Slabs</b>	<b>B-DA</b>
B-AP-PLN	Approach slabs in plan view	B-DA-PLN
<b>B-DK</b>	<b>Deck and Components</b>	<b>B-TA</b>
B-DK-BAR	Barriers, railings	B-TA-BAR
B-DK-CRB	Curbs, sidewalks	B-TA-BOR
B-DK-DRN	Deck drains	B-TA-DRA
B-DK-JNT	Expansion joints	B-TA-JOC
B-DK-PLN	Deck plan	B-TA-PLN
B-DK-REB	Deck reinforcing	B-TA-ACR
B-DK-STG	Steel grating	B-TA-GRI
<b>B-GL</b>	<b>General</b>	<b>B-GL</b>
B-GL-DIM	Dimensions	B-GL-DIM
B-GL-HAT	Hatching	B-GL-HAC
B-GL-LAY	Layout line work	B-GL-TRI
B-GL-TXT	Text	B-GL-TEX
<b>B-SB</b>	<b>Substructure</b>	<b>B-SO</b>
B-SB-ABU	Abutments	B-SO-CUL
B-SB-APR	Approach slabs	B-SO-APR
B-SB-BRG	Bearing	B-SO-POR
B-SB-FTG	Footing	B-SO-SEM
B-SB-LIN	Bearing plan line work	B-SO-TRI
B-SB-PIR	Piers	B-SO-PIL
B-SB-REB	Substructure reinforcing	B-SO-ACR
<b>B-SR</b>	<b>Scour Protection</b>	<b>B-PA</b>
B-SR-GAB	Gabions	B-PA-GAB
B-SR-RRP	Riprap	B-PA-PIR
<b>B-SS</b>	<b>Superstructure</b>	<b>B-SP</b>
B-SS-BEM	Beams	B-SP-POU
B-SS-BRC	Bracing	B-SP-ENT
B-SS-CTW	Catwalks	B-SP-PAS
B-SS-REB	Superstructure reinforcing	B-SP-ACR
B-SS-SNL	Stringers	B-SP-LON

<b>Civil Engineering, Site Design and Landscape Architecture</b>		
English Abvn	Description	French Abvn
<b>C-BH</b>	<b>Borehole Data (Geotechnical)</b>	<b>C-FO</b>
C-BH-IDN	Borehole identification numbers	C-FO-NUI
C-BH-LOG	Borehole logs and data	C-FO-SCH
C-BH-SMP	Soil sample locations	C-FO-SON
C-BH-SPR	Stratigraphic profiles	C-FO-STR
C-BH-SYM	Symbols	C-FO-SYM
C-BH-WEL	Geotechnical or environmental monitoring wells	C-FO-PUA
<b>C-DI</b>	<b>Diesel Fuel Distribution</b>	<b>C-DI</b>
C-DI-MAN	Diesel fuel manholes	C-DI-PUA
C-DI-MET	Diesel fuel meters	C-DI-CPT
C-DI-PIP	Diesel fuel pipelines	C-DI-PIP
C-DI-VAL	Diesel fuel valves	C-DI-VAN
<b>C-EN</b>	<b>Environment</b>	<b>C-EN</b>
C-EN-CTM	Contamination zone	C-EN-CTM
C-EN-TNK	Holding tank	C-EN-RSV
<b>C-GL</b>	<b>General</b>	<b>C-GL</b>
C-GL-PIC	Inserted pictures	C-GL-IMA
<b>C-HY</b>	<b>Hydrology</b>	<b>C-HY</b>
C-HY-CAT	Catchments area	C-HY-BAV
C-HY-FLO	Flow, discharge	C-HY-ECO
C-HY-ICE	Ice thickness	C-HY-GLA
<b>C-LD</b>	<b>Landscaping</b>	<b>C-AX</b>
C-LD-ANT	Antenna	C-AX-ANT
C-LD-ART	Artwork, special features	C-AX-OBA
C-LD-BRD	Foot bridges	C-AX-PAS
C-LD-CON	Concrete features, slabs	C-AX-GRA
C-LD-FEN	Fencing	C-AX-CLO
C-LD-FIL	Filling zone	C-AX-REM
C-LD-FLG	Flagpoles	C-AX-MAT
C-LD-FTN	Fountains, pools	C-AX-BSN
C-LD-FUR	Site furnishings, benches, garbage cans, etc.	C-AX-MOB
C-LD-GRA	Grading	C-AX-NVL
<u>C-LD-IRR</u>	<u>Irrigation system</u>	<u>C-AX-IRR</u>
C-LD-IRR-PIP	Irrigation system piping	C-AX-IRR-TUY
C-LD-IRR-SYM	Irrigation heads, controls, valves	C-AX-IRR-SYM
C-LD-RWL	Retaining walls	C-AX-SOU
C-LD-SPO	Equipment, sports facilities, goal nets, shooting targets, etc.	C-AX-EQU
C-LD-STR	Stairs (not attached to buildings)	C-AX-ESC
C-LD-SWK	Sidewalks	C-AX-TRO
C-LD-TER	Terraces, courtyards, patios (not attached to buildings)	C-AX-TER

C-LD-TOE	Toe of erosion control, armourstone, riprap, berms	C-AX-BRV
C-LD-TOP	Crest of erosion control, armourstone, riprap, berms	C-AX-HRV
C-LD-TRL	Trails, footpaths	C-AX-SEN
C-LD-TUN	Tunnels	C-AX-TUN
C-LD-TXT	Descriptive information text	C-AX-TEX
<b>C-NZ</b>	<b>Natural Gas Distribution</b>	<b>C-GN</b>
C-NZ-MAN	Natural gas manholes	C-GN-PUA
C-NZ-MET	Natural gas meters	C-GN-CPT
C-NZ-PIP	Natural gas pipelines	C-GN-PIP
C-NZ-VAL	Natural gas valves	C-GN-VAN
<b>C-OI</b>	<b>Oil Distribution</b>	<b>C-PE</b>
C-OI-MAN	Oil manholes	C-PE-PUA
C-OI-MET	Oil meters	C-PE-CPT
C-OI-PIP	Oil pipelines	C-PE-PIP
C-OI-VAL	Oil valves	C-PE-VAN
<b>C-PG</b>	<b>Propane Gas Distribution</b>	<b>C-GP</b>
C-PG-MAN	Propane gas manholes	C-GP-PUA
C-PG-MET	Propane gas meters	C-GP-CPT
C-PG-PIP	Propane gas pipelines	C-GP-PIP
C-PG-VAL	Propane gas valves	C-GP-VAN
<b>C-PR</b>	<b>Profile Data</b>	<b>C-PR</b>
C-PR-HOR	Horizontal profiles	C-PR-HOR
C-PR-VER	Vertical profiles	C-PR-VER
<b>C-RO</b>	<b>Roads</b>	<b>C-RO</b>
C-RO-ACR	Fire department access routes	C-RO-URG
C-RO-ALI	Alignment	C-RO-TRC
C-RO-ASP	Asphalt road	C-RO-ASP
C-RO-BAR	Barrier	C-RO-BAR
C-RO-BRD	Bridges, overpasses, etc.	C-RO-PON
C-RO-CLI	Road centreline	C-RO-MED
C-RO-CNT	Highway construction staging	C-RO-OCC
C-RO-CRB	Curbs	C-RO-BOR
C-RO-GRL	Guides, guard rails, median dividers, bollards	C-RO-PRT
C-RO-GRV	Gravel road	C-RO-GRV
C-RO-GUT	Gutter lines	C-RO-CAN
C-RO-HWY	Highway plan	C-RO-TRR
C-RO-JER	Jersey barrier	C-RO-JER
C-RO-MRK	Markings and road striping	C-RO-MAC
C-RO-MSH	Mass hauling diagrams	C-RO-SCH
C-RO-RMP	Ramps, on-ramps, loading docks, etc.	C-RO-RAM
C-RO-ROD	Drivable road limits (asphalt) road, lots	C-RO-LIM
C-RO-ROD-APX	Drivable road limits' approximate location	C-RO-LIM-APX
C-RO-SHO	Shoulders	C-RO-ACT
C-RO-STG	Staging layout plan	C-RO-PHA

C-RO-STR	Bridge abutments, piers, and supports	C-RO-PIL
C-RO-SWK	Sidewalks	C-RO-TRO
C-RO-TRL	Trails, footpaths	C-RO-SEN
C-RO-TUN	Road tunnels, underpasses, etc.	C-RO-TUN
C-RO-TXT	Road description, information text	C-RO-TEX
<b>C-RW</b>	<b>Railways</b>	<b>C-CF</b>
C-RW-ALI	Alignment	C-CF-TRC
C-RW-BRD	Bridges	C-CF-PON
C-RW-CLI	Rail centrelines	C-CF-MED
C-RW-RAI	Railway lines, switches	C-CF-DIA
C-RW-RMP	Ramps	C-CF-RAM
C-RW-STR	Bridge abutments, piers, trestles, and supports	C-CF-PIL
C-RW-TUN	Tunnels	C-CF-TUN
<b>C-SA</b>	<b>Sanitary Sewer</b>	<b>C-ES</b>
C-SA-CAT	Drainage catch areas	C-ES-BAV
C-SA-CLE	Cleanout	C-ES-RNT
C-SA-IND	Industrial sewer	C-ES-IND
C-SA-IOT	Sanitary inlet outlet structure	C-ES-SES
<u>C-SA-MAN</u>	<u>Sewer manholes, catch basins</u>	<u>C-ES-PUA</u>
C-SA-MAN-IDN	Text regarding t/g elevation, inverts elevation, etc.	C-ES-PUA-TEX
C-SA-PMP	Pumping stations	C-ES-PMP
<u>C-SA-SEP</u>	<u>Septic system</u>	<u>C-ES-SEP</u>
C-SA-SEP-FIL	Septic field filling zone	C-ES-SEP-REM
C-SA-SEP-PIP	Septic field piping	C-ES-SEP-TUY
C-SA-SEP-TNK	Septic tank	C-ES-SEP-RSV
<u>C-SA-SEW</u>	<u>Sewer lines system</u>	<u>C-ES-EGO</u>
C-SA-SEW-ABN	Abandoned sanitary sewer lines	C-ES-EGO-ABN
C-SA-SEW-CMB-MLI	Combined main sewer lines	C-ES-EGO-CMB-PRI
C-SA-SEW-CMB-SLI	Combined service sewer lines	C-ES-EGO-CMB-SEV
C-SA-SEW-MLI	Main sanitary sewer lines	C-ES-EGO-PRI
C-SA-SEW-SLI	Sanitary service sewer lines	C-ES-EGO-SEV
<u>C-SA-SYM</u>	<u>Junction symbols</u>	<u>C-ES-SYM</u>
C-SA-SYM-IDN	Text description - type of junction	C-ES-SYM-TEX
C-SA-TMT	Sewage treatment areas	C-ES-TEU
C-SA-TXT	General text: length of sewer, slope, material, etc.	C-ES-TEX
<b>C-SF</b>	<b>Natural Site Features</b>	<b>C-CS</b>
C-SF-DBR	Debris, rubble, loose rock and soil	C-CS-DEB
C-SF-MAR	Marshes, wetlands	C-CS-TEH
C-SF-PIT	Borrow pit	C-CS-BEM
<u>C-SF-RMN</u>	<u>Archaeological remnants</u>	<u>C-CS-VST</u>
C-SF-RMN-ABV	Archaeological remnants above ground	C-CS-VST-AUD
C-SF-RMN-UND	Archaeological remnants underground	C-CS-VST-SOU
C-SF-TRE	Trees, tree lines	C-CS-ARB
C-SF-TRE-TXT	Text describing trees	C-CS-ARB-TEX
C-SF-TXT	Site feature description text	C-CS-TEX
C-SF-WTR	Natural boundaries watercourses, shorelines	C-CS-LBM

<b>C-SI</b>	<b>Signs and Guideposts</b>	<b>C-SI</b>
C-SI-GDP	Guideposts	<i>C-SI-POT</i>
C-SI-SGL	Sign layouts and details	<i>C-SI-DET</i>
C-SI-SGN	Signs	<i>C-SI-ECR</i>
C-SI-TXT	Signage text	<i>C-SI-TEX</i>
<b>C-SV</b>	<b>Survey Control, Non-Legal</b>	<b>C-LV</b>
C-SV-BEN	Local bench marks	<i>C-LV-RNL</i>
C-SV-BND	Non-legal boundaries	<i>C-LV-LIP</i>
C-SV-CHN	Chainage	<i>C-LV-CHI</i>
C-SV-CLN	Radial ties, traverse lines, control lines	<i>C-LV-LCH</i>
<u>C-SV-CPT</u>	<u>Control points</u>	<u><i>C-LV-POA</i></u>
C-SV-CPT-HOR	Horizontal control points	<i>C-LV-POA-HOR</i>
C-SV-CPT-VER	Vertical control points	<i>C-LV-POA-VER</i>
C-SV-GRD	Survey grid	<i>C-LV-QUA</i>
C-SV-HOR	Horizontal alignment	<i>C-LV-HOR</i>
C-SV-LIM	Limits of contract, non-legal	<i>C-LV-LIM</i>
C-SV-LIN	Survey feature connectivity line work	<i>C-LV-TRI</i>
C-SV-MON	Found legal monuments	<i>C-LV-RAR</i>
<u>C-SV-PAR</u>	<u>Parcel line work</u>	<u><i>C-LV-PAC</i></u>
C-SV-PAR-TXT	Parcel text	<i>C-LV-PAC-TEX</i>
C-SV-PNT	Survey points	<i>C-LV-POL</i>
C-SV-SEL	Super elevation	<i>C-LV-SUE</i>
<u>C-SV-STA</u>	<u>Station equation labels</u>	<u><i>C-LV-STA</i></u>
C-SV-STA-IDN	Station labels	<i>C-LV-STA-NUI</i>
C-SV-STA-PTS	Station points	<i>C-LV-STA-PTS</i>
C-SV-STB	Setbacks	<i>C-LV-MAR</i>
C-SV-VER	Vertical alignment	<i>C-LV-VER</i>
<b>C-SW</b>	<b>Storm Water Drainage and Systems</b>	<b>C-EP</b>
C-SW-CAT	Drainage catchments areas	<i>C-EP-BAV</i>
C-SW-CUL	Culverts	<i>C-EP-PON</i>
C-SW-DCL	Ditch centre lines	<i>C-EP-MED</i>
C-SW-IOT	Storm inlet outlet structure	<i>C-EP-SES</i>
<u>C-SW-MAN</u>	<u>Catch basins, manholes</u>	<u><i>C-EP-PUA</i></u>
C-SW-MAN-IDN	Manhole description text: elevation, direction	<i>C-EP-PUA-TEX</i>
C-SW-MNG	Storm water management pond	<i>C-EP-BSN</i>
C-SW-PMP	Pumping stations	<i>C-EP-PMP</i>
<u>C-SW-SEW</u>	<u>Sewer lines system</u>	<u><i>C-EP-EGO</i></u>
C-SW-SEW-ABN	Abandoned storm sewer lines	<i>C-EP-EGO-ABN</i>
C-SW-SEW-MLI	Storm main sewer lines	<i>C-EP-EGO-PRI</i>
C-SW-SEW-SLI	Storm service sewer lines	<i>C-EP-EGO-SEV</i>
C-SW-SUB	Subdrains	<i>C-EP-DRA</i>
<u>C-SW-SYM</u>	<u>Junction symbols</u>	<u><i>C-EP-SYM</i></u>
C-SW-SYM-IDN	Junction description text	<i>C-EP-SYM-TEX</i>
C-SW-TXT	Text describing length of sewer, slopes, material	<i>C-EP-TEX</i>

<b>C-TP</b>	<b>Topographical Information</b>	<b>C-TG</b>
C-TP-MAJ	Major contours	C-TG-COP
C-TP-MIN	Minor contours	C-TG-COS
C-TP-SPT	Spot elevation	C-TG-POC
<u>C-TP-SRF</u>	<u>Surface model line work</u>	<u>C-TG-MNT</u>
C-TP-SRF-BRL	Surface model break lines	C-TG-MNT-LCO
C-TP-SRF-TXT	Surface calculation text	C-TG-MNT-TEX
C-TP-TOE	Bank (toe)	C-TG-BRV
C-TP-TOP	Top of bank	C-TG-HRV
<b>C-VG</b>	<b>Vegetation</b>	<b>C-VG</b>
<u>C-VG-FLW</u>	<u>Flowers</u>	<u>C-VG-FLR</u>
C-VG-FLW-ANN	Annual flowers	C-VG-FLR-ANN
C-VG-FLW-PER	Perennial flowers	C-VG-FLR-VIV
<u>C-VG-GCV</u>	<u>Ground cover</u>	<u>C-VG-CVS</u>
C-VG-GCV-DEC	Deciduous ground cover	C-VG-CVS-CDC
C-VG-GCV-EVR	Evergreen ground cover	C-VG-CVS-PST
C-VG-GCV-ORN	Ornamental ground cover	C-VG-CVS-ORN
<u>C-VG-GRS</u>	<u>Grass area</u>	<u>C-VG-PEL</u>
C-VG-GRS-SED	Seeded grass area	C-VG-PEL-ESM
C-VG-GRS-SOD	Sodded grass area	C-VG-PEL-EGZ
<u>C-VG-SRB</u>	<u>Shrubs</u>	<u>C-VG-ABT</u>
C-VG-SRB-DEC	Deciduous shrubs	C-VG-ABT-CDC
C-VG-SRB-EVR	Evergreen shrubs	C-VG-ABT-PST
C-VG-SRB-ORN	Ornamental shrubs	C-VG-ABT-ORN
<u>C-VG-TRE</u>	<u>Trees</u>	<u>C-VG-ARB</u>
C-VG-TRE-DEC	Deciduous trees	C-VG-ARB-CDC
C-VG-TRE-ORN	Flowering trees, fruit trees	C-VG-ARB-ORN
C-VG-VIN	Vines	C-VG-VIG
<b>C-WM</b>	<b>Water and Fire</b>	<b>C-CE</b>
C-WM-FHY	Fire hydrants	C-CE-BOI
C-WM-FRL	Fire lines	C-CE-CAX
<u>C-WM-MAN</u>	<u>Manholes, storage, valves</u>	<u>C-CE-PUA</u>
C-WM-MAN-IDN	Text describing; t/g elevation, t/pipe elevation	C-CE-PUA-TEX
C-WM-PMP	Pumping stations	C-CE-PMP
C-WM-RAW	Raw water lines	C-CE-CEN
<u>C-WM-SYM</u>	<u>Junction symbols</u>	<u>C-CE-SYM</u>
C-WM-SYM-IDN	Text describing type of junction	C-CE-SYM-TEX
C-WM-TXT	Water main descriptive text	C-CE-TEX
C-WM-WEL	Water wells	C-CE-PUE
<u>C-WM-WLI</u>	<u>Water line</u>	<u>C-CE-CED</u>
C-WM-WLI-MLI	Water main	C-CE-CED-PRI
C-WM-WLI-SLI	Water service line	C-CE-CED-SEV

**Electrical Systems**

English Abvn	Description	French Abvn
<b>E-CK</b>	<b>Clock Systems</b>	<b>E-HO</b>
E-CK-EQP	Clock equipment	E-HO-EQU
E-CK-REC	Clock locations	E-HO-PRS
E-CK-WRG	Wiring	E-HO-CAB
<b>E-DA</b>	<b>Data Systems</b>	<b>E-DN</b>
E-DA-EQP	Data equipment	E-DN-EQU
E-DA-OUT	Data outlets, jacks	E-DN-PRS
E-DA-WRG	Wiring	E-DN-CAB
<b>E-EG</b>	<b>Emergency Generation</b>	<b>E-AS</b>
E-EG-COD	Conduits	E-AS-COD
E-EG-EQP	Emergency power generation equipment	E-AS-EQU
E-EG-GEN	Generators, control switchboards	E-AS-GEN
<b>E-EL</b>	<b>Emergency Lighting</b>	<b>E-EU</b>
E-EL-CLG	Emergency luminaries ceiling-mounted	E-EU-PFD
E-EL-ESG	Exit signs	E-EU-SOS
E-EL-EXT	Emergency outside luminaries attached to buildings, poles	E-EU-EXT
E-EL-WAL	Emergency luminaries wall-mounted	E-EU-MUR
<b>E-EP</b>	<b>Emergency Power Equipment</b>	<b>E-RU</b>
E-EP-CTL	Motors and controls	E-RU-MOC
E-EP-DCB	DC battery systems	E-RU-ACU
E-EP-REC	Receptacles	E-RU-PRS
E-EP-TEN	Special tenant systems	E-RU-LOC
E-EP-UPS	UPS and conditioned power	E-RU-ASC
<b>E-EW</b>	<b>Emergency Power Wiring and Cabling</b>	<b>E-CU</b>
E-EW-CBT	Cable trays, ducts, and raceways	E-CU-CCC
E-EW-CLG	Ceiling-mounted wiring	E-CU-PFD
E-EW-CLT	Control wiring for emergency lighting	E-CU-CCE
E-EW-EXP	Exposed inside/outside wiring	E-CU-EXT
<u>E-EW-HVD</u>	<u>High voltage wiring</u>	<u>E-CU-HTE</u>
E-EW-HVD-CLG	High voltage in ceiling space	E-CU-HTE-PFD
<u>E-EW-LVD</u>	<u>Low voltage wiring</u>	<u>E-CU-BTE</u>
E-EW-LVD-CLG	Low voltage in ceiling space	E-CU-BTE-PFD
E-EW-LVD-FLR	Low voltage under floor	E-CU-BTE-PCH
E-EW-PAN	Electrical panel for emergency power	E-CU-PAN
E-EW-UPS	Uninterruptible power system (UPS)	E-CU-ASC
<b>E-FR</b>	<b>Electrical Fire Protection</b>	<b>E-AI</b>
E-FR-ELD	Electromagnetic locking devices	E-AI-DVE
E-FR-EQP	Equipment: master fire warning panel, alarm, annunciator panels	E-AI-EQU
E-FR-SIG	Signalling devices	E-AI-SIG
E-FR-SYM	Electrical FP symbols: pull stations, heat, smoke detectors	E-AI-DDA
<u>E-FR-VCE</u>	<u>Emergency voice communication</u>	<u>E-AI-CVU</u>
E-FR-VCE-WRG	Emergency voice communication wiring	E-AI-CVU-CAB



<b>E-FW</b>	<b>Flat Wiring</b>	<b>E-CP</b>
E-FW-CBL	Flat wiring cable location	E-CP-CAB
E-FW-CNB	Flat wiring connection boxes	E-CP-BOJ
<b>E-GD</b>	<b>Grounding</b>	<b>E-MT</b>
E-GD-WRG	Wiring, rods, bus plates	E-MT-EQU
<b>E-LP</b>	<b>Lightning Protection</b>	<b>E-PT</b>
E-LP-EQP	Equipment and devices	E-PT-EQU
E-LP-WRG	Wiring	E-PT-CAB
<b>E-NG</b>	<b>Normal Power Generation</b>	<b>E-AN</b>
E-NG-COD	Conduits	E-AN-COD
E-NG-EQP	Normal power generation equipment	E-AN-EQU
E-NG-GEN	Generators, control switchboard	E-AN-GEN
<b>E-NL</b>	<b>Normal Lighting</b>	<b>E-EN</b>
E-NL-CLG	Luminaries ceiling-mounted	E-EN-PFD
E-NL-CTL	Lighting controls	E-EN-COM
E-NL-EXT	Outside luminaries attached to buildings, poles	E-EN-EXT
E-NL-WAL	Luminaries in workspace and wall-mounted	E-EN-MUR
<b>E-NP</b>	<b>Normal Power Equipment</b>	<b>E-RN</b>
E-NP-CTL	Motors and controls	E-RN-MOC
E-NP-EQP	Normal power equipment: ceiling fans, etc.	E-RN-EQU
E-NP-HVD	High voltage distribution	E-RN-HTE
E-NP-LVD	Low voltage distribution	E-RN-BTE
E-NP-MEC	Electrical connections to mechanical equipment	E-RN-MEC
E-NP-OUT	Outlets, receptacles	E-RN-PRS
E-NP-PAN	Electrical panels	E-RN-PAN
E-NP-RAD	Radiant heating panels	E-RN-RAD
E-NP-TEN	Special tenant systems	E-RN-LOC
<b>E-NW</b>	<b>Normal Power Wiring and Cabling</b>	<b>E-CN</b>
E-NW-CBT	Cable trays, ducts, and raceways	E-CN-CCC
E-NW-CTL	Control wiring lighting	E-CN-CCE
E-NW-EXP	Exposed inside/outside wiring	E-CN-EXT
<u>E-NW-HVD</u>	<u>High voltage wiring</u>	<u>E-CN-HTE</u>
E-NW-HVD-CLG	High voltage wiring in ceiling space	E-CN-HTE-PFD
<u>E-NW-LVD</u>	<u>Low voltage wiring</u>	<u>E-CN-BTE</u>
E-NW-LVD-CLG	Low voltage wiring in ceiling space	E-CN-BTE-PFD
E-NW-LVD-FLR	Low voltage under floor	E-CN-BTE-PCH
E-NW-LVD-WOR	Low voltage in workspace	E-CN-BTE-PTV
E-NW-PST	Power poles with receptacles	E-CN-COL
E-NW-TEN	Tenant systems in workspace	E-CN-RPT
E-NW-UPS	Ups and conditioned power	E-CN-ASC
<b>E-PA</b>	<b>Sound and PA Systems</b>	<b>E-SV</b>
E-PA-EME	Emergency	E-SV-URG
E-PA-EQP	Sound equipment, speakers	E-SV-EQU
E-PA-OUT	Outlets	E-SV-PRS

E-PA-SYM	Symbols	<i>E-SV-SYM</i>
E-PA-WRG	Wiring	<i>E-SV-CAB</i>
<b>E-PH</b>	<b>Telephone Systems</b>	<b><i>E-TE</i></b>
E-PH-EQP	Equipment	<i>E-TE-EQU</i>
E-PH-OUT	Outlets	<i>E-TE-PRS</i>
E-PH-PAN	Telephone panel	<i>E-TE-PAN</i>
E-PH-WRG	Wiring	<i>E-TE-CAB</i>
<b>E-SD</b>	<b>Site Distribution and Electrical Equipment</b>	<b><i>E-DS</i></b>
E-SD-COD	Conduits	<i>E-DS-COD</i>
E-SD-DUC	Concrete ducts	<i>E-DS-CBE</i>
E-SD-EQP	Site distribution equipment: transformers, pedestals	<i>E-DS-EQU</i>
<u>E-SD-HVD</u>	<u>High voltage distribution</u>	<u><i>E-DS-HTE</i></u>
E-SD-HVD-ABV	High voltage distribution - above grade	<i>E-DS-HTE-AER</i>
E-SD-HVD-UND	High voltage distribution - below grade	<i>E-DS-HTE-SOU</i>
<u>E-SD-LTG</u>	<u>Lighting and wiring</u>	<u><i>E-DS-ECL</i></u>
E-SD-LTG-ABV	Lighting and wiring - above grade	<i>E-DS-ECL-AER</i>
E-SD-LTG-UND	Lighting and wiring - below grade	<i>E-DS-ECL-SOU</i>
<u>E-SD-LVD</u>	<u>Low voltage distribution</u>	<u><i>E-DS-BTE</i></u>
E-SD-LVD-ABV	Low voltage distribution - above grade	<i>E-DS-BTE-AER</i>
E-SD-LVD-UND	Low voltage distribution - below grade	<i>E-DS-BTE-SOU</i>
<u>E-SD-MAN</u>	<u>Manhole, handwells, junction box, pull pit ground inspection box</u>	<u><i>E-DS-PUA</i></u>
E-SD-MAN-IDN	Text describing; t/g elevation, line elevation	<i>E-DS-PUA-IDN</i>
E-SD-MUN	Municipal and utility services	<i>E-DS-MUN</i>
E-SD-POL	Poles and towers (electrical, communication)	<i>E-DS-POT</i>
E-SD-SUB	Substations	<i>E-DS-SST</i>
<u>E-SD-TEL</u>	<u>Telephone lines</u>	<u><i>E-DS-TEL</i></u>
E-SD-TEL-ABV	Telephone lines - above grade	<i>E-DS-TEL-AER</i>
E-SD-TEL-UND	Telephone lines - below grade	<i>E-DS-TEL-SOU</i>
E-SD-TXT	Text describing type of distribution system	<i>E-DS-TEX</i>
<u>E-SD-VID</u>	<u>Video lines</u>	<u><i>E-DS-VID</i></u>
E-SD-VID-ABV	Video lines – above grade	<i>E-DS-VID-AER</i>
E-SD-VID-UND	Video lines – below grade	<i>E-DS-VID-SOU</i>
<b>E-SE</b>	<b>Security Systems</b>	<b><i>E-SS</i></b>
E-SE-ALM	Intrusion alarms	<i>E-SS-SAA</i>
E-SE-CTL	Intrusion controls and controllers	<i>E-SS-COT</i>
E-SE-ELK	Electrical security locks	<i>E-SS-VEE</i>
E-SE-LAN	Intrusion system LAN	<i>E-SS-REL</i>
E-SE-SEN	Motion sensors	<i>E-SS-DEI</i>
E-SE-VCL	Video controllers (digital)	<i>E-SS-COM</i>
E-SE-VCM	Video cameras and monitors	<i>E-SS-EQU</i>
E-SE-WRG	Intrusion controller wiring	<i>E-SS-CAB</i>
<b>E-SG</b>	<b>Signal Systems</b>	<b><i>E-SI</i></b>
E-SG-EQP	Equipment	<i>E-SI-EQU</i>
E-SG-OUT	Outlets	<i>E-SI-SOR</i>
E-SG-WRG	Wiring	<i>E-SI-CAB</i>

<b>E-SM</b>	<b>Electrical Schematics</b>	<b>E-SM</b>
E-SM-CLK	Clock system schematics	<i>E-SM-HOL</i>
E-SM-DAS	Data systems schematics	<i>E-SM-DAT</i>
E-SM-EFP	Electrical fire protection schematics	<i>E-SM-ALI</i>
<u>E-SM-EPR</u>	<u>Emergency distribution schematics</u>	<u><i>E-SM-ALU</i></u>
E-SM-EPR-GEN	Emergency generation schematics, generators	<i>E-SM-ALU-GEN</i>
E-SM-EPR-LTG	Emergency lighting schematics	<i>E-SM-ALU-ECL</i>
E-SM-EPR-EQP	Emergency power equipment	<i>E-SM-ALU-EQU</i>
E-SM-EPR-TXT	Text for emergency distribution	<i>E-SM-ALU-TEX</i>
E-SM-EPR-WRG	Emergency wiring schematics	<i>E-SM-ALU-CAB</i>
E-SM-GND	Grounding schematics	<i>E-SM-MIT</i>
E-SM-HVD	High voltage (>750v) emergency distribution	<i>E-SM-HTE</i>
E-SM-KRK	Kirk key interlocks	<i>E-SM-KRK</i>
E-SM-LAN	Local area network schematics	<i>E-SM-REL</i>
E-SM-LTP	Lightning protection schematics	<i>E-SM-PRF</i>
E-SM-LVD	Low voltage emergency distribution	<i>E-SM-BTE</i>
<u>E-SM-MMS</u>	<u>Maintenance management system (MMS) tag numbers</u>	<u><i>E-SM-SGE</i></u>
E-SM-EPR-MMS	MMS tag numbers for emergency distribution	<i>E-SM-ALU-SGE</i>
E-SM-HVD-MMS	MMS tag numbers for high voltage distribution	<i>E-SM-HTE-SGE</i>
E-SM-NPR-MMS	MMS tag numbers for normal power distribution	<i>E-SM-ANV-SGE</i>
<u>E-SM-MTR</u>	<u>Metering</u>	<u><i>E-SM-CPT</i></u>
E-SM-MTR-EQP	Metering equipment, switch board	<i>E-SM-CPT-EQU</i>
E-SM-MTR-TXT	Metering text	<i>E-SM-CPT-TEX</i>
E-SM-MTR-WRG	Metering wiring	<i>E-SM-CPT-CAB</i>
<u>E-SM-NPR</u>	<u>Normal power distribution schematics</u>	<u><i>E-SM-ANV</i></u>
E-SM-NPR-EQP	Normal power distribution equipment	<i>E-SM-ANV-EQU</i>
E-SM-NPR-LTG	Normal lighting schematics	<i>E-SM-ANV-ECL</i>
E-SM-NPR-TXT	Text for normal power distribution	<i>E-SM-ANV-TEX</i>
E-SM-NPR-WRG	Normal power wiring	<i>E-SM-ANV-CAB</i>
E-SM-PAS	Public address system schematics	<i>E-SM-COV</i>
E-SM-SGN	Signal schematic	<i>E-SM-SGN</i>
E-SM-TEL	Telephone schematics	<i>E-SM-TEL</i>
E-SM-UPS	Uninterruptible power system (UPS)	<i>E-SM-ASC</i>
E-SM-VID	Video system schematics	<i>E-SM-VID</i>
<b>E-SY</b>	<b>Electricity on System Furniture</b>	<b>E-EA</b>
E-SY-LAN	LAN network jack	<i>E-EA-REL</i>
E-SY-LTG	Normal powered lighting	<i>E-EA-ECL</i>
E-SY-OUT	Electrical outlet	<i>E-EA-PRS</i>
E-SY-PST	Electrical posts on system furniture	<i>E-EA-COL</i>
E-SY-TEL	Telephone outlet	<i>E-EA-TEL</i>
<b>E-VD</b>	<b>Video Conferencing Systems</b>	<b>E-VD</b>
E-VD-EQP	Equipment	<i>E-VD-EQU</i>
E-VD-OUT	Outlets	<i>E-VD-PRS</i>
E-VD-WRG	Wiring	<i>E-VD-CAB</i>

**General Information**

English Abvn	Description	French Abvn
<b>G-DT</b>	<b>Details</b>	<b>G-DT</b>
G-DT-DIM	Detail, section, elevation dimensions	<i>G-DT-DIM</i>
G-DT-HAT	Detail, section, elevation hatching	<i>G-DT-HAC</i>
G-DT-LIN	Detail, section, elevation linework	<i>G-DT-TRI</i>
G-DT-TXT	Detail, section, elevation annotation, text	<i>G-DT-TEX</i>
<b>G-GL</b>	<b>General</b>	<b>G-GL</b>
G-GL-CAL	Callout blocks	<i>G-GL-BUF</i>
G-GL-SYM	Symbols, key plan, north arrow, bar scale	<i>G-GL-SYM</i>
<u>G-GL-TXT</u>	<u>Text</u>	<u><i>G-GL-TEX</i></u>
G-GL-TXT-E	English text	<i>G-GL-TEX-A</i>
G-GL-TXT-F	French text	<i>G-GL-TEX-F</i>
G-GL-XRE	External reference	<i>G-GL-XRE</i>
<b>G-LG</b>	<b>Legend</b>	<b>G-LE</b>
G-LG-LIN	Symbol legend line work	<i>G-LE-TRI</i>
G-LG-TXT	Symbol legend text	<i>G-LE-TEX</i>
<b>G-TL</b>	<b>Title Block</b>	<b>G-CT</b>
G-TL-ATT	Attributes for title block	<i>G-CT-ATT</i>
G-TL-LGO	Logos	<i>G-CT-LOG</i>
G-TL-LIN	Line work for title block	<i>G-CT-TRI</i>
G-TL-RME	Title block read me layer	<i>G-CT-LIS</i>
G-TL-SYM	Title block insertion Layer	<i>G-CT-SYM</i>
G-TL-TXT	Text for title block	<i>G-CT-TEX</i>
G-TL-VPT	Viewport boundaries	<i>G-CT-MET</i>

<b>Mechanical</b>		
English Abvn	Description	French Abvn
<b>H-CS</b>	<b>Control Systems</b>	<b>H-SR</b>
H-CS-AIR	Control air piping	H-SR-AIR
H-CS-EQP	Control systems equipment	H-SR-EQU
H-CS-SYM	Control system symbols: thermostats, humidistat, sensors, etc.	H-SR-SYM
H-CS-TXT	Control system text	H-SR-TEX
H-CS-WRG	Control wiring	H-SR-CAB
<b>H-DW</b>	<b>Domestic Water</b>	<b>H-ED</b>
H-DW-CLD	Domestic cold water	H-ED-EFR
H-DW-EQP	Domestic water equipment: pumps, water softeners, filters, etc.	H-ED-EQU
<u>H-DW-FIX</u>	<u>Plumbing fixtures</u>	<u>H-ED-APP</u>
H-DW-FIX-PRT	Plumbing fixtures on partitions	H-ED-APP-CLS
<u>H-DW-HOT</u>	<u>Domestic hot water</u>	<u>H-ED-ECD</u>
H-DW-HOT-RCL	Domestic hot water recirculation	H-ED-ECD-REC
H-DW-HOT-TNK	Domestic hot water tanks	H-ED-ECD-RSV
H-DW-ROW	Reverse osmosis water (medical)	H-ED-EOI
<b>H-FP</b>	<b>Fire Protection</b>	<b>H-PI</b>
<u>H-FP-CEX</u>	<u>Chemical extinguishing system</u>	<u>H-PI-EXC</u>
H-FP-CEX-PIP	Chemical extinguishing piping	H-PI-EXC-TUY
H-FP-CEX-EQP	Chemical extinguishing equipment	H-PI-EXC-EQU
H-FP-EPE	Explosion-proof equipment	H-PI-EQA
H-FP-EQP	Fire protection equipment: fire hose cabinet, fire dampers, etc.	H-PI-EQU
<u>H-FP-FEX</u>	<u>Foamed extinguishing system</u>	<u>H-PI-EXM</u>
H-FP-FEX-PIP	Foamed extinguishing piping	H-PI-EXM-TUY
H-FP-FEX-EQP	Foamed extinguishing equipment	H-PI-EXM-EQU
<u>H-FP-SPK</u>	<u>Sprinkler system</u>	<u>H-PI-GIC</u>
H-FP-SPK-PIP	Sprinkler piping	H-PI-GIC-TUY
H-FP-SPK-EQP	Sprinkler equipment	H-PI-GIC-EQU
H-FP-SPK-SYM	Sprinkler system symbols: sprinkler heads, backflow preventer, etc.	H-PI-GIC-SYM
H-FP-SPK-TXT	Sprinkler system text	H-PI-GIC-TEX
H-FP-SPK-ZNS	Sprinkler system zones	H-PI-GIC-ZON
<u>H-FP-STP</u>	<u>Standpipe system</u>	<u>H-PI-CMG</u>
H-FP-STP-PIP	Standpipe piping	H-PI-CMG-TUY
H-FP-STP-EQP	Standpipe equipment	H-PI-CMG-EQU
H-FP-SYM	Fire protection symbols: fire extinguisher, hydrants	H-PI-SYM
H-FP-TXT	Fire protection text	H-PI-TEX
<b>H-HC</b>	<b>Heating and Cooling</b>	<b>H-CH</b>
<u>H-HC-CHL</u>	<u>Chilled water</u>	<u>H-CH-ERF</u>
H-HC-CHL-RET	Chilled water return	H-CH-ERF-RET
H-HC-CHL-SUP	Chilled water supply	H-CH-ERF-ALM
H-HC-CNV	Convectors	H-CH-CNV
<u>H-HC-COT</u>	<u>Cooling tower water</u>	<u>H-CH-TRF</u>
H-HC-COT-RET	Cooling tower water return	H-CH-TRF-RET
H-HC-COT-SUP	Cooling tower water supply	H-CH-TRF-ALM

<b>H-HC-GLY</b>	<b><u>Glycol</u></b>	<b><u>H-CH-GLY</u></b>
H-HC-GLY-RET	Glycol return	H-CH-GLY-RET
H-HC-GLY-SUP	Glycol supply	H-CH-GLY-ALM
<b>H-HC-HWA</b>	<b><u>Heating water</u></b>	<b><u>H-CH-ECF</u></b>
H-HC-HWA-RET	Heating water return	H-CH-ECF-RET
H-HC-HWA-SUP	Heating water supply	H-CH-ECF-ALM
<b>H-HC-HYD</b>	<b>Hydronic equipment</b>	<b>H-CH-HYD</b>
<b>H-HC-RAD</b>	<b>Radiant heat tubing</b>	<b>H-CH-TCR</b>
<b>H-HC-REF-EQP</b>	<b>Refrigerant equipment</b>	<b>H-CH-FRI-EQU</b>
<b>H-HC-RFG</b>	<b>Refrigerant gas</b>	<b>H-CH-GAF</b>
<b>H-HC-RFL</b>	<b>Refrigerant liquid</b>	<b>H-CH-FLF</b>
<b>H-HC-STM</b>	<b><u>Steam</u></b>	<b><u>H-CH-VAP</u></b>
H-HC-STM-RET	Steam condensate (return)	H-CH-VAP-RET
H-HC-STM-SUP	Steam supply	H-CH-VAP-ALM
H-HC-STM-EQP	Steam equipment	H-CH-VAP-EQU

<b>H-PB</b>	<b>Plumbing</b>	<b>H-PB</b>
<b>H-PB-CMA</b>	<b><u>Compressed air</u></b>	<b><u>H-PB-AIC</u></b>
H-PB-CMA-EQP	Compressed air equipment	H-PB-AIC-EQU
<b>H-PB-CO2</b>	<b>Carbon dioxide gas</b>	<b>H-PB-CO2</b>
<b>H-PB-DWV</b>	<b><u>Drainage waste and vent system</u></b>	<b><u>H-PB-REV</u></b>
H-PB-DWV-SYM	Symbols: roof drains, floor drains, etc.	H-PB-REV-SYM
H-PB-DWV-VEN	Ventilating circuit, vents	H-PB-REV-EVE
H-PB-DWV-WST	Drainage circuit	H-PB-REV-EEU
<b>H-PB-EQP</b>	<b>Plumbing equipment: pumps, coils motors, grease interceptor, etc.</b>	<b>H-PB-EQU</b>
<b>H-PB-FOI</b>	<b><u>Fuel oil</u></b>	<b><u>H-PB-MAZ</u></b>
H-PB-FOI-EQP	Fuel equipment	H-PB-MAZ-EQU
H-PB-FOI-RET	Fuel oil return	H-PB-MAZ-RET
H-PB-FOI-SUP	Fuel oil supply	H-PB-MAZ-ALM
H-PB-FOI-VEN	Fuel oil vent	H-PB-MAZ-EVE
<b>H-PB-HEG</b>	<b>Helium gas</b>	<b>H-PB-HEL</b>
<b>H-PB-HYG</b>	<b>Hydrogen gas</b>	<b>H-PB-HYG</b>
<b>H-PB-MAN</b>	<b>Access holes</b>	<b>H-PB-PUA</b>
<b>H-PB-MEG</b>	<b>Methane gas</b>	<b>H-PB-MTH</b>
<b>H-PB-NGA</b>	<b>Natural gas</b>	<b>H-PB-GAN</b>
<b>H-PB-NIT</b>	<b>Nitrogen gas</b>	<b>H-PB-AZO</b>
<b>H-PB-OXY</b>	<b>Oxygen gas</b>	<b>H-PB-OXY</b>
<b>H-PB-PGA</b>	<b>Propane gas</b>	<b>H-PB-GAP</b>
<b>H-PB-SYM</b>	<b>Plumbing symbols: gauges, fittings, valves elbows, unions, reducer</b>	<b>H-PB-SYM</b>
<b>H-PB-VAC</b>	<b>Cleaning system, vacuum</b>	<b>H-PB-NET</b>

<b>H-PP</b>	<b>Fuel and Process Piping</b>	<b>H-TC</b>
<b>H-PP-MAN</b>	<b>Manholes fuelling stations</b>	<b>H-TC-PUA</b>
<b>H-PP-MET</b>	<b>Meters</b>	<b>H-TC-CPT</b>
<b>H-PP-PIP</b>	<b>Fuel and process piping</b>	<b>H-TC-TUY</b>
<b>H-PP-PMP</b>	<b>Pumping stations</b>	<b>H-TC-PMP</b>

H-PP-TNK	Fuel tanks	<i>H-TC-RSV</i>
H-PP-VAL	Valves	<i>H-TC-VAN</i>
<b>H-SM</b>	<b>Mechanical Schematics and Riser Diagrams</b>	<b><i>H-SM</i></b>
H-SM-CSY	Control system schematics	<i>H-SM-COM</i>
H-SM-DRS	Duct riser diagrams	<i>H-SM-CMC</i>
H-SM-DUC	Duct schematic diagrams	<i>H-SM-COD</i>
H-SM-PIP	Piping schematic diagrams	<i>H-SM-TUY</i>
H-SM-PRS	Piping riser diagrams	<i>H-SM-CMT</i>
H-SM-SYM	Symbols	<i>H-SM-SYM</i>
H-SM-WST	Waste schematics	<i>H-SM-EEU</i>
<b>H-VA</b>	<b>Ventilation and Air Conditioning</b>	<b><i>H-VC</i></b>
H-VA-COA	Combustion air ductwork	<i>H-VC-ACO</i>
H-VA-EQP	Equipment: fans, dampers, coils, filters, etc.	<i>H-VC-EQU</i>
<u>H-VA-EXH</u>	<u>Exhaust air system</u>	<u><i>H-VC-AEV</i></u>
H-VA-EXH-DUC	Exhaust air ductwork	<i>H-VC-AEV-COD</i>
H-VA-EXH-GRI	Exhaust grilles	<i>H-VC-AEV-GRI</i>
H-VA-INS	Duct insulation, acoustical lining	<i>H-VC-ISO</i>
<u>H-VA-OTA</u>	<u>Outside air system</u>	<u><i>H-VC-AEX</i></u>
H-VA-OTA-DUC	Outside air ductwork	<i>H-VC-AEX-COD</i>
H-VA-OTA-GRI	Outside air grilles	<i>H-VC-AEX-GRI</i>
<u>H-VA-RET</u>	<u>Return system</u>	<u><i>H-VC-REP</i></u>
H-VA-RET-DUC	Return ductwork	<i>H-VC-REP-COD</i>
H-VA-RET-GRI	Return grills	<i>H-VC-REP-GRI</i>
<u>H-VA-SUP</u>	<u>Supply system</u>	<u><i>H-VC-AMA</i></u>
H-VA-SUP-DUC	Supply ductwork	<i>H-VC-AMA-COD</i>
H-VA-SUP-DIF	Supply diffusers	<i>H-VC-AMA-DIF</i>
H-VA-VAV	Variable air volume boxes	<i>H-VC-DAV</i>
H-VA-VEN	Flue, vent, breaching	<i>H-VC-EVE</i>

**Interior Design**

English Abvn	Description	French Abvn
<b>I-BP</b>	<b>Blocking Plan</b>	<b>I-BE</b>
I-BP-DIM	Dimensions	I-BE-DIM
I-BP-OLN	Sector outlines	I-BE-CON
I-BP-TXT	Text, notes	I-BE-TEX
<b>I-EI</b>	<b>Employee Information</b>	<b>I-EM</b>
I-EI-IDN	Employee identification	I-EM-NUI
<b>I-EQ</b>	<b>Equipment</b>	<b>I-EQ</b>
I-EQ-CMP	Computers	I-EQ-ORD
I-EQ-OEQ	Office equipment	I-EQ-EXI
I-EQ-SPC	Special equipment	I-EQ-SPE
<b>I-FU</b>	<b>Furniture</b>	<b>I-MO</b>
I-FU-ACC	Accessories, coat trees, racks	I-MO-ACC
I-FU-ART	Artwork	I-MO-ART
I-FU-CAB	Storage cabinets, files	I-MO-RAG
I-FU-CLR	Furniture colour	I-MO-COU
I-FU-DSK	Desks, freestanding work surfaces	I-MO-SUT
I-FU-NOF	Non-office furniture, first aid room beds, etc.	I-MO-APE
I-FU-PLT	Plants	I-MO-PLT
I-FU-SET	Seating	I-MO-SIE
I-FU-SHL	Shelving	I-MO-ETA
I-FU-TAB	Tables	I-MO-TAB
I-FU-TXT	Annotations, text furniture	I-MO-TEX
I-FU-SIZ	Furniture size	I-MO-DIM
<b>I-SI</b>	<b>Signage</b>	<b>I-SI</b>
I-SI-EQP	Barrier-free signs	I-SI-ACF
I-SI-OFF	Office signage	I-SI-BUR
I-SI-SPC	Special signage	I-SI-SPE
<b>I-SY</b>	<b>System Furniture</b>	<b>I-EA</b>
I-SY-CLR	Panel colour	I-EA-COU
I-SY-OVH	Panel overhead storage, etc.	I-EA-SUR
I-SY-SCR	Panels, screens	I-EA-ECA
I-SY-SIZ	Panel sizes	I-EA-DIM
I-SY-SUR	Work surfaces for system furniture	I-EA-SUT



**Legal Surveys**

English Abvn	Description	French Abvn
<b>L-AZ</b>	<b>Airport Zoning</b>	<b>L-ZA</b>
L-AZ-ZNS	Zoning surfaces, runway strips, centrelines	L-ZA-ZON
<b>L-GL</b>	<b>General</b>	<b>L-GL</b>
L-GL-TXT	General text	L-GL-TEX
<b>L-CF</b>	<b>Cadastral Fabric</b>	<b>L-CD</b>
L-CF-BDY	Legal surveyed boundary	L-CD-LIF
L-CF-DIM	Parcel segment labelling, bearings, and distance	L-CD-DIM
L-CF-EAS	Limited interest estate, easement, right of way	L-CD-DRO
L-CF-OTH	Other parcels/boundaries	L-CD-AUT
L-CF-STB	Setbacks	L-CD-MAR
L-CF-SYM	Symbols: coordinate monument, control point	L-CD-SYM
L-CF-TXT	Parcel labelling, description, property ID, book number, etc.	L-CD-TEX
<b>L-SP</b>	<b>Legal Site Plan</b>	<b>L-PS</b>
L-SP-CAN	Canadian boundaries	L-PS-FCN
L-SP-CLS	CLSR boundaries, reserves, parks	L-PS-RTC
L-SP-PRO	Provincial boundaries	L-PS-PRV
L-SP-REG	Regional and municipality boundaries	L-PS-MUN
<b>L-SV</b>	<b>Legal Survey</b>	<b>L-LT</b>
L-SV-CLN	Radial ties, traverse lines, control lines	L-LT-LCH
L-SV-GRD	Survey grid	L-LT-QUA
<u>L-SV-PNT</u>	<u>Survey points</u>	<u>L-LT-POL</u>
L-SV-PNT-ELV	Survey point elevation	L-LT-POL-ELV
L-SV-PNT-IDN	Survey point number text	L-LT-POL-NUI
L-SV-PNT-TXT	Survey point description	L-LT-POL-TEX
L-SV-SYM	Symbols: survey pins, iron bars, etc.	L-LT-SYM
L-SV-TXT	Identification text	L-LT-TEX

<b>Marine</b>		
English Abvn	Description	French Abvn
<b>M-BW</b>	<b>Breakwater Features</b>	<b>M-BL</b>
M-BW-OLN	Breakwater outline	M-BL-CON
M-BW-TOE	Toe of breakwater	M-BL-BRV
M-BW-TOP	Crest of breakwater, berms	M-BL-HRV
<b>M-GL</b>	<b>General</b>	<b>M-GL</b>
M-GL-DIM	Dimensions	M-GL-DIM
M-GL-HAT	Hatching	M-GL-HAC
M-GL-LAY	Layout line work	M-GL-TRI
M-GL-TXT	Text	M-GL-TEX
<b>M-NV</b>	<b>Navigation</b>	<b>M-NA</b>
M-NV-BUO	Buoys	M-NA-BOU
M-NV-CAR	Cards	M-NA-SYM
M-NV-COR	Navigation corridors, channels	M-NA-TVN
M-NV-EQP	Floating aids, marker buoys, fog horns	M-NA-EQU
M-NV-SPA	Spars	M-NA-MAT
<b>M-SK</b>	<b>Skid-way, Haul-outs, Slipways</b>	<b>M-CA</b>
M-SK-BED	Vessel beds	M-CA-PLF
M-SK-BLK	Anchor blocks, haul out blocks	M-CA-BLA
M-SK-FTG	Footings	M-CA-SOA
M-SK-GUA	Guards	M-CA-GUA
M-SK-OLN	Skid-way outline	M-CA-CON
M-SK-RAI	Railway	M-CA-TRC
M-SK-SKD	Skid timbers, skid poles	M-CA-POU
M-SK-SLB	Concrete slabs, precast panels	M-CA-DPP
M-SK-SSP	Steel sheet piling	M-CA-PAL
<b>M-SN</b>	<b>Hydrographic Survey Information, Non Legal</b>	<b>M-RH</b>
M-SN-DAT	Chart datum contour, 0.00 m	M-RH-ZDC
M-SN-DRG	Dredged area or limits	M-RH-LID
M-SN-HNT	High normal tide	M-RH-MHN
M-SN-HWL	High water lines	M-RH-LHM
M-SN-LNT	Low normal tide	M-RH-MBN
M-SN-LWL	Low water lines	M-RH-LBM
M-SN-MAJ	Major sea bottom contours	M-RH-PFM
M-SN-MIN	Minor sea bottom contours	M-RH-SFM
M-SN-SPT	Soundings, spot elevations	M-RH-SON
M-SN-TID	Tide gauges, tidal equipment, tide datum	M-RH-EQU
<b>M-WF</b>	<b>Wharf Features</b>	<b>M-CQ</b>
M-WF-BEM	Pile caps, beams	M-CQ-POU
M-WF-BRC	Bracing, wales	M-CQ-ENT
M-WF-CAI	Caissons	M-CQ-FLO
M-WF-CRW	Crown slopes, crowns	M-CQ-SOM
M-WF-CTW	Catwalks	M-CQ-PAS
M-WF-CWK	Cribwork, ballast floor	M-CQ-CCV

M-WF-CWL	Cope walls, cope beams	<i>M-CQ-MPC</i>
M-WF-DRK	Derricks, cranes, gallows	<i>M-CQ-GRU</i>
M-WF-DRN	Drains, scuppers	<i>M-CQ-DRA</i>
M-WF-FND	Fenders	<i>M-CQ-DEF</i>
M-WF-FST	Floating wharves	<i>M-CQ-QUF</i>
M-WF-FTG	Footings, mattresses, deck substructures	<i>M-CQ-SEM</i>
M-WF-FWL	Firewalls	<i>M-CQ-MCF</i>
M-WF-GUA	Guards	<i>M-CQ-BAR</i>
M-WF-GWY	Gangways	<i>M-CQ-PAE</i>
M-WF-JNT	Construction, control joints	<i>M-CQ-JOC</i>
M-WF-LAD	Ladders	<i>M-CQ-ECH</i>
M-WF-MOR	Mooring cleats, mooring rings, bollards	<i>M-CQ-TAA</i>
M-WF-OLN	Wharf and dolphin outlines	<i>M-CQ-CON</i>
M-WF-PIL	Piles and bents	<i>M-CQ-PIL</i>
M-WF-SSP	Steel sheet piling	<i>M-CQ-PAL</i>
M-WF-TIE	Tie rods, anchor blocks, tie back walls	<i>M-CQ-TBA</i>

**Real Property Space Management**

English Abvn	Description	French Abvn
<b>R-BC</b>	<b>Building Common Areas "Accessory B"</b>	<b>R-CB</b>
R-BC-COR	Shared public corridors	R-CB-COR
R-BC-OLN	General shared building outline	R-CB-CON
R-BC-RMS	Shared rooms	R-CB-SAL
<b>R-BS</b>	<b>Building Service Areas</b>	<b>R-SB</b>
R-BS-OLN	General building service outline	R-SB-CON
R-BS-RMS	Building service rooms	R-SB-SAL
R-BS-SFT	Vertical shafts, elevators, stairs (takes walls over RMS)	R-SB-PUV
<b>R-EX</b>	<b>Exterior Site Areas</b>	<b>R-EX</b>
R-EX-OLN	Exterior site areas	R-EX-CON
<b>R-FC</b>	<b>Floor Common Areas</b>	<b>R-AE</b>
R-FC-CNV	Convectors (baseboard, radiators)	R-AE-CNV
R-FC-COL	Building structure, columns (interior and perimeter)	R-AE-COL
R-FC-COR	Primary circulation	R-AE-COR
R-FC-ENC	Encroachments (unusable space)	R-AE-EMP
R-FC-FIR	Fire egress cross over areas, fire refuge areas	R-AE-SOS
R-FC-LOB	Floor elevator lobbies	R-AE-HAL
R-FC-OLN	General outline of floor common areas	R-AE-CON
R-FC-RMS	Electrical, telecom, janitor's closets	R-AE-SAL
<u>R-FC-WSR</u>	<u>Washrooms</u>	<u>R-AE-SAT</u>
R-FC-WSR-BRF	Accessible washrooms	R-AE-SAT-ACF
<b>R-GA</b>	<b>Gross Area</b>	<b>R-AB</b>
R-GA-EXT	Exterior gross area	R-AB-EXT
R-GA-INT	Interior gross area	R-AB-INT
<b>R-GL</b>	<b>General</b>	<b>R-GL</b>
R-GL-TXT	Street names for space audit	R-GL-TEX
<b>R-PK</b>	<b>Parking</b>	<b>R-ST</b>
R-PK-0000-BRF	Barrier-free parking	R-ST-0000-ACF
R-PK-0000-DEP	Parking number - department name (Special use only)	R-ST-0000-MIN
R-PK-DIV	Parking divisions	R-ST-DIV
R-PK-EXT	Exterior parking (Special use only)	R-ST-EXT
R-PK-IDN	Parking identification numbers	R-ST-NUI
R-PK-INT	Interior parking (Special use only)	R-ST-INT
R-PK-OLN	Outlines	R-ST-CON
R-PK-SPC	Special parking	R-ST-SPE
<b>R-SU</b>	<b>Surface Maintenance Building</b>	<b>R-SU</b>
R-SU-CLG	Ceiling finishes	R-SU-PFD
R-SU-COR	Primary corridors	R-SU-COR
R-SU-DEP	Space allocation by department	R-SU-MIN
R-SU-DIV	Division of area	R-SU-DIV
R-SU-EXT	Exterior finishes	R-SU-EXT

<b>R-SU-FLR</b>	<b>Floor finishes</b>	<i>R-SU-PCH</i>
R-SU-FLR-HIG	High-traffic area	<i>R-SU-PCH-ELV</i>
R-SU-FLR-LOW	Low-traffic area	<i>R-SU-PCH-BAS</i>
R-SU-GRP	Space allocation by group / branch	<i>R-SU-GRP</i>
R-SU-IDN	Surface identification number	<i>R-SU-NUI</i>
R-SU-OLN	Outlines	<i>R-SU-CON</i>
R-SU-RMS	Rooms	<i>R-SU-SAL</i>
R-SU-SFT	Shafts	<i>R-SU-PUV</i>
R-SU-SPC	Special surfaces	<i>R-SU-SPE</i>
R-SU-WAL	Walls	<i>R-SU-MUR</i>
R-SU-WIN	Windows	<i>R-SU-FEN</i>
<b>R-UC</b>	<b>User Common</b>	<b>R-AC</b>
R-UC-COR	Shared public corridors	<i>R-AC-COR</i>
R-UC-OLN	General shared user outline	<i>R-AC-CON</i>
R-UC-RMS	Shared rooms	<i>R-AC-SAL</i>
<b>R-US</b>	<b>Usable</b>	<b>R-AU</b>
R-US-001, 002...	Usable area polygons by location	<i>R-AU-001, 002</i>
R-US-COR	Primary circulation areas	(Special use only) <i>R-AU-COR</i>
R-US-DEP	Space allocation by department	(Special use only) <i>R-AU-MIN</i>
R-US-DIV	Division of areas	<i>R-AU-DIV</i>
R-US-GRP	Space allocation by group / branch	(Special use only) <i>R-AU-GRP</i>
R-US-IDN	Location identification numbers	<i>R-AU-NUI</i>
R-US-OLN	General usable outlines	(Special use only) <i>R-AU-CON</i>
R-US-RMS	Room identification numbers	(Special use only) <i>R-AU-SAL-NUI</i>
R-US-UNT	Space allocation by units	(Special use only) <i>R-AU-UNI</i>
<b>R-ZN</b>	<b>Zoning</b>	<b>R-ZO</b>
R-ZN-CLE	Cleaning zoning	<i>R-ZO-NET</i>
R-ZN-FIR	Fire egress zoning	<i>R-ZO-SOS</i>
R-ZN-SEC	Security zoning	<i>R-ZO-SEU</i>

<b>Structure</b>		
English Abvn	Description	French Abvn
<b>S-CL</b>	<b>Ceilings</b>	<b>S-PF</b>
S-CL-BEM	Ceiling beams	S-PF-POU
<b>S-FL</b>	<b>Floors</b>	<b>S-PC</b>
S-FL-BEM	Floor beams	S-PC-POU
S-FL-BRC	Bracing	S-PC-ENT
S-FL-DEK	Decking, waffle	S-PC-PLA
S-FL-FRM	Framing	S-PC-CHR
S-FL-JNT	Joints, expansion, construction	S-PC-JOC
S-FL-JST	Joists	S-PC-PLP
S-FL-OLN	Floor outlines	S-PC-CON
S-FL-OPN	Floor openings	S-PC-OUV
S-FL-SLB	Floor slabs	S-PC-DPP
S-FL-STR	Structural landings	S-PC-ESC
<b>S-FN</b>	<b>Foundations</b>	<b>S-FD</b>
S-FN-FIL	Backfill, soil line	S-FD-REM
S-FN-FTG	Footings	S-FD-SEM
S-FN-OLN	Foundation outlines	S-FD-CON
S-FN-PIL	Piles, caissons, piers	S-FD-PIE
<b>S-GR</b>	<b>Structural Grid</b>	<b>S-QU</b>
S-GR-EXT	Structural grid lines outside building	S-QU-EXT
S-GR-INT	Structural grid lines inside building	S-QU-INT
<b>S-RF</b>	<b>Roofs</b>	<b>S-TO</b>
S-RF-BEM	Beams	S-TO-POU
S-RF-BRC	Bracing	S-TO-ENT
S-RF-DEK	Decking, waffle	S-TO-PLA
S-RF-FRM	Framing, roof trusses	S-TO-CHR
S-RF-JNT	Joints, expansion, construction	S-TO-JOC
S-RF-JST	Joists	S-TO-PLP
S-RF-OLN	Roof outlines	S-TO-CON
S-RF-OPN	Roof openings	S-TO-OUV
S-RF-SLB	Roof slabs	S-TO-DPP
<b>S-WL</b>	<b>Walls, Columns</b>	<b>S-MU</b>
S-WL-BRC	Cross bracing	S-MU-ENT
S-WL-BRG	Bearing walls	S-MU-POR
S-WL-COL	Columns	S-MU-COL
S-WL-JNT	Joints, expansion, construction	S-MU-JOC
S-WL-OPN	Wall openings	S-MU-OUV
S-WL-RWL	Retaining walls	S-MU-STM

## Annex B – Layer Field Descriptions

Ext.	Description	Ext.	Description
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### Group Field

The following table lists the Group field abbreviations that can be used to create new layer names. This is the second part of the layer name following the Discipline field:

X-**XX**-XXX

AP	Approach Slabs	OI	Oil Distribution
AZ	Airport Zoning	PA	Sound and PA Systems
BC	Building Common Areas "Accessory B"	PB	Plumbing
BH	Borehole Data (Geotechnical)	PG	Propane Gas
BP	Blocking Plan	PH	Telephone Systems
BS	Building Service Areas	PK	Parking
BW	Breakwater Features	PL	Plan
CF	Cadastral Fabric	PP	Fuel and Process Piping
CI	Circulation	PR	Profile Data
CK	Clock Systems	RF	Roofs
CL	Ceilings	RO	Roads
CS	Control Systems	RW	Railways
DA	Data Systems	SA	Sanitary Sewer
DI	Diesel Fuel Distribution	SB	Substructure
DK	Deck	SC	Schedules
DM	Dams	SD	Site Distribution and Electrical Equipment
DR	Doors	SE	Security Systems
DT	Details	SF	Natural Site Features
DW	Domestic Water	SG	Signal Systems
EG	Emergency Generation	SI	Signage
EI	Employee Information	SK	Skid-way, Haul-outs, Slipways
EL	Emergency Lighting	SM	Schematics
EM	Emergency	SN	Hydrographic Survey Information, Non-Legal
EN	Environment	SP	Legal Site Plan
EP	Emergency Power Equipment	SR	Scour Protection
EQ	Equipment	SS	Superstructure
EW	Emergency Power Wiring and Cabling	SU	Surface Maintenance Building
EX	Exterior Site Areas	SV	Survey
FC	Floor Common Areas	SW	Storm Water and Drainage
FL	Floors	SY	System Furniture
FN	Foundations	TL	Title Block
FP	Fire Protection	TP	Topographical Information
FR	Electrical Fire Protection	UC	User Common
FU	Furniture	US	Usable
FW	Flat Wiring	VA	Ventilation and Air Conditioning
GA	Gross Area	VD	Video Conferencing Systems
GD	Grounding	VG	Vegetation
GL	Global	WD	Windows
GR	Grid	WF	Wharf Features
HC	Heating and Cooling	WL	Walls, Columns
HY	Hydrology	WM	Water and Fire
LD	Landscaping	ZN	Zoning
LG	Legend		
LP	Lightning Protection		
NG	Normal Power Generation		
NL	Normal Lighting		
NP	Normal Power Equipment		
NV	Navigation		
NW	Normal Power Wiring and Cabling		
NZ	Natural Gas		

## Single Layer Field and First Layer Name Extension

Ext.	Description	Ext.	Description
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The following table lists the Single Layer field and First Layer Name Extension abbreviations that can be used to create new layer names. This is the third or fourth part (if required) of the layer name following the Group field:

X-XX-**XXX** X-XX-XXX-**XXX**-X

3DM	3D model components of 2D symbols	CLK	Clock system
ABN	Abandoned	CLE	Cleaning, clean out
ABU	Abutments	CLN	Control lines
ABV	Above ground, above grade	CLR	Colours
ACC	Accessories	CLS	CLSR boundaries, reserves, parks
ACR	Fire department access routes	CLT	Control wiring for emergency lighting
AIR	Control air piping	CMA	Compressed air
ALI	Alignment	CMB	Combined sewers
ALM	Intrusion alarms	CMP	Computers
ANN	Annual flowers	CNB	Flat wiring connection boxes
ANT	Antenna	CNV	Convectors
APC	Approach surface (airport)	CO2	Carbon dioxide gas
APP	Approximate	COA	Combustion air ductwork
APR	Approach slabs	COD	Conduits
ART	Artwork	COL	Columns
ASP	Asphalt	CON	Concrete
ATT	Attributes	CNT	Construction
AWP	Acid waste piping (medical)	COR	Corridors
BAR	Barriers, railings	COT	Cooling tower
BDY	Legal limits, fee simple, admin., control	CRB	Curbs
BED	Vessel beds	CRP	Carpet
BEM	Beams	CRW	Crown slopes, crowns
BEN	Local benchmarks	CSY	Control system schematics
BIR	Bird hazard (airport)	CPT	Control points
BKH	Bulkheads	CTL	Controls
BLK	Block	CTM	Contamination (environment)
BND	Boundaries	CTP	Countertops
BRC	Bracing	CTW	Catwalks
BRF	Barrier-free	CUL	Culverts
BRG	Bearing	CVY	Horizontal conveyors, moving sidewalks
BRD	Bridges	CWL	Cope walls, cope beams
BRK	Brick	CWK	Cribwork, ballast floor
BRL	Break lines	DAS	Data systems schematics
BRM	Crest of breakwater, berms	DAT	Chart datum contour, 0.00 m
BUO	Buoys	DBR	Debris, rubble, loose rock and soil
BYP	By-pass box	DCB	DC battery systems
CAB	Cabinet	DCL	Ditch centre lines
CAI	Caissons	DEC	Deciduous
CAL	Callout blocks	DEK	Deck
CAN	Canadian boundaries	DEP	Space allocation by department
CAR	Cards	DIF	Diffusers
CAT	Catchments area	DIG	Digitized or vectorized from scanned Image
CBL	Flat wiring cable location	DIM	Dimensions
CBT	Cable trays, ducts, and raceways	DIV	Divisions
CEX	Chemical extinguisher	DRA	Drainage
CHL	Chilled water	DRG	Dredged area or limits
CHN	Chainage	DRK	Derricks, cranes, gallows
CLD	Cold water	DRN	Drains, scuppers
CLG	Ceiling-mounted equipment, wiring, or finishes	DRS	Duct riser diagrams
CLI	Centrelines	DSK	Desks, work surfaces, tables



Ext.	Description	Ext.	Description
DUC	Ducts	GRV	Gravel
DWV	Drainage waste and vent system	GUA	Guards
EAS	Easement	GUT	Gutter lines
EFP	Electrical fire protection schematics	GWY	Gangways
ELD	Electromagnetic locking devices	HAT	Hatching
ELE	Elevators	HED	Door and window headers
ELK	Electrical security locks	HEG	Helium gas
ELV	Elevation (survey points)	HIG	High
EME	Emergency	HNT	High normal tide
ENC	Encroachments (unusable space)	HOR	Horizontal
EPE	Explosion-proof equipment	HOT	Hot water
EPR	Emergency power wiring & equipment	HTE	Heating units
EQP	Equipment	HVD	High voltage distribution
ESC	Escalator	HWA	Heating water
ESG	Exit signs	HWL	High water lines
EVR	Evergreen	HWY	Highway plan
EXH	Exhaust	HYD	Hydronic equipment
EXJ	Expansion joints	HYG	Hydrogen gas
EXP	Exposed inside/outside wiring	ICE	Ice thickness
EXT	Exterior	IDN	Identification
FDR	Floor drains	IMP	Imports (Revit families)
FEN	Fencing	IND	Industrial
FEX	Foamed extinguisher	INS	Insulation
FHY	Fire hydrants	INT	Interior
FIL	Backfill, soil line	IOT	Inlet outlet
FIN	Finishes	IRR	Irrigation system
FIR	Fire egress	JER	Jersey wall
FIX	Plumbing fixtures	JNT	Joints
FLG	Flagpoles	JST	Joists
FLO	Flow, discharge	KRK	Kirk key interlocks
FLR	Floor-mounted equipment, wiring or finishes	LAD	Ladders
FLU	Flue, vent, breaching	LAN	Local area network
FLW	Flowers	LAY	Layout line work
FND	Fenders	LEV	Floor level changes, ramps, truck wells
FOI	Fuel oil	LGT	Lighting control schematics and diagrams
FRL	Fire lines	LIM	Limits
FRM	Framing	LIN	Line work
FST	Floating wharfs	LNT	Low normal tide
FTG	Footing	LOB	Floor elevator lobbies
FTN	Fountains, pools	LOG	Borehole logs and data
FUR	Site furnishings, benches, garbage cans, etc.	LGO	Logos
FWL	Fire walls	LOW	Low
GAB	Gabions	LTG	Normal powered lighting
GCV	Ground cover	LTP	Lightning protection schematics
GDP	Guideposts	LVD	Low voltage distribution
GEN	Generators	LWL	Low water lines
GLY	Glycol	MAJ	Major contours
GLZ	Glass, glazing	MAN	Manholes
GND	Grounding schematics	MAR	Marshes, wetlands
GPS	Global Positioning System	MEC	Electrical connections to mechanical equipment
GRA	Grading	MEG	Methane gas
GRD	Grid	MET	Meters
GRI	Grilles	MIL	Architectural specialties, casework and millwork
GRL	Guides, guardrails, median dividers, bollards	MIN	Minor contours
GRP	Space allocation by group / branch	MLI	Main lines
GRS	Grass, lawn area	MMS	Maintenance Management System
		MNG	Storm water management pond

Ext.	Description	Ext.	Description
MON	Monuments	RFL	Refrigerant liquid
MOR	Mooring cleats, bollards	RLN	Reference lines
MRK	Markings and road striping	RME	Read Me info
MSH	Mass hauling diagrams	RMN	Remnants (archaeology)
MTR	Metering wiring & equipment	RMP	Ramps
MUN	Municipal and utility services	RMS	Rooms
NGA	Natural gas	ROD	Drivable road limits (asphalt) road, lots
NIT	Nitrogen (medical)	ROW	RO water or distilled water (medical)
NOD	Node, horizontal reference point	RPL	Reference plan
NOF	Non-office furniture, first aid room beds, etc.	RPS	Real Property information
NPR	Normal power schematics, risers	RRP	Riprap
OEQ	Office equipment	RWL	Retaining walls
OFF	Office signage	SAF	Life safety
OLN	Outlines	SAN	Sanitary
OPN	Openings	SCD	Secondary
ORN	Ornamental	SCR	System furniture panels, screens
OUT	Outlets	SEC	Security zoning
OTA	Outside air	SED	Seeded area
OTH	Other	SEL	Super elevation
OVH	Overhead	SEN	Motion sensors
OXY	Oxygen (medical)	SET	Seating
PAN	Distribution panel (electrical, telephone)	SEP	Septic (field, tank, etc.)
PAR	Parcel line work	SEW	Sewer
PAS	Public address system schematics	SFT	Shafts
PER	Perennial	SGL	Sign layouts and details
PGA	Propane gas	SGN	Signs
PIC	Inserted pictures	SHL	Shelving
PIL	Piles	SHO	Shoulder
PIP	Pipes, piping	SIG	Signalling devices
PIR	Piers	SIL	Window sills
PIV	Post indicator valve	SIZ	Size
PIT	Borrow pit	SKD	Skid timbers, skid poles
PLM	Plume outline	SLB	Slabs
PLN	Approach slabs in plan view	SLI	Service lines
PLT	Plants	SMP	Soil sample locations
PMP	Pumping stations	SND	Sand
PNT	Survey points	SNL	Stringers
POL	Poles and towers (electrical, communication)	SOD	Sodded
PRI	Primary	SPA	Spars
PRF	Profiles	SPC	Special
PRO	Provincial boundaries	SPK	Sprinkler system
PRS	Piping riser diagrams	SPO	Sports facilities, goal nets, etc.
PRT	Partitions (walls)	SPR	Stratigraphic profiles
PST	Posts	SPT	Spot elevations
RAD	Radiant heat	SRB	Shrubs
RAI	Railway	SRF	Surface model line work
RAS	Raised floors	SSP	Steel sheet piling
RAW	Raw water lines	STA	Stations (survey)
RCK	Rock	STB	Setbacks
RCL	Recirculation	STG	Staging layout plan
RDR	Roof drains	STI	Strip (airport)
REB	Reinforcing	STL	Steel
REC	Receptacles	STM	Steam
REF	Refrigerant equipment	STO	Stone
REG	Regional and municipality boundaries	STP	Standpipe
RET	Return	STR	Stairs, stairwells, and ladders
RFG	Refrigerant gas	SUB	Sub
		SUP	Supply
		SUR	Work surfaces, D-tops, P-tops, etc.

Ext.	Description	Ext.	Description
SWK	Sidewalks	VAC	Vacuum piping
SYM	Symbols	VAL	Valves
TAB	Tables	VAV	Variable air volume boxes
TEL	Telephone	VCE	Emergency voice communication
TEN	Tenant	VCL	Video controllers (Digital)
TER	Terraces	VCM	Video cameras and monitors
TID	Tide gauges, tidal equipment, tide datum	VEN	Vents
TIE	Tie rods, anchor blocks, tie-back walls	VER	Vertical
TIM	Timber	VID	Video system schematics
TMP	Temporary	VIN	Vines
TMT	Sewage treatment areas	VPC	Valve pump chamber
TNK	Tanks	VPT	Viewports
TOE	Toe of bank, breakwater, berms	WAL	Wall-mounted equipment or wiring
TOP	Top of bank, crest of breakwater, berms	WEL	Well
TRE	Trees	WIN	Windows
TRL	Trails	WLI	Water lines
TRS	Transitional surface (airport)	WLK	Roof boardwalks, catwalks
TUN	Tunnels	WOR	Working area
TXT	Text	WRG	Wiring
UCD	Underlying cadastral fabric, deeds, lots, plans	WSR	Washrooms
UND	Underground, below grade	WST	Waste schematics
UNT	Space allocation by units	WTR	Watercourse
UPS	Ups and conditioned power	XRE	External reference
		ZNS	Zoning surfaces

## Second Layer Name Extension

Ext.	Description	Ext.	Description
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The following table lists the Second Layer Name Extension abbreviations that can be used to create new layer names. This is the fourth or fifth part of the layer name following the Single Layer field or First Layer Name Extension:

X-XX-XXX-**X**    X-XX-XXX-XXX-**X**

1 to 9	Options or Phases 1 to 9
A	English Text (Anglais)
B	As Built (As Constructed)
E	Existing
F	French Text
M	To be Moved or Relocated
N	New
P	Planned or Proposed
S	Base
X	To Be Removed

## Annex C – Glossary

**"As-built"** shall mean a set of construction drawings reflecting on-site changes required during the project as well as the original design intent.

**"AutoCAD®"** shall mean the CADD software developed by Autodesk® Inc.

**"Base plan"** shall mean a clean, two-dimensional floor plan of a building drawn from field surveys containing all pertinent graphic information. The intent is to use base plan files for project drawings, then update them once a project is complete and the area affected is re-measured.

**"CADD"** shall mean Computer-Aided Design and Drafting.

**"CAFM"** shall mean Computer-Aided Facilities Management.

**"CLSR"** shall mean Canadian Land Survey Records.

**"DM-5"** shall mean Enterprise Document and Record Management. This is a PWGSC internal electronic document filing system (formally known as EDRM or TIDIS).

**"DOS"** shall mean the Disk Operating System which manages the flow of information to and from various parts of the Personal Computer system.

**"GIS"** shall mean Geospatial Information System.

**"Layers"** shall mean the AutoCAD® system of dividing drawing elements.

**"Legacy drawings"** shall mean older hardcopy drawings, microfiche aperture cards not in digital format, or older CADD files not produced to the present standard.

**"PWGSC"** shall mean the Department of Public Works and Government Services Canada.

**"RPB"** shall mean Real Property Branch, a branch of PWGSC.

**"SDIM"** shall mean Spatial Data Information Management, a general term referring to managing CADD/CAFM/GIS drawings.