

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:

**Regional Manager/Real Property
Contracting/PWGSC
Ontario Region, Tendering Office
12th Floor, 4900 Yonge Street
Toronto, Ontario
M2N 6A6
Ontario**

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

Regional Manager/Real Property Contracting/PWGSC
Ontario Region, Tendering Office
12th Floor, 4900 Yonge Street
Toronto, Ontario
M2N 6A6
Ontario

Title - Sujet Dams/Water Retaining Structures Eng	
Solicitation No. - N° de l'invitation EQ754-171055/A	Date 2016-09-30
Client Reference No. - N° de référence du client 20171055	GETS Ref. No. - N° de réf. de SEAG PW-\$PWL-041-2219
File No. - N° de dossier PWL-6-39080 (041)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-11-15	Time Zone Fuseau horaire Eastern Standard Time EST
Delivery Required - Livraison exigée	
Address Enquiries to: - Adresser toutes questions à: Chan, Ricky	Buyer Id - Id de l'acheteur pwl041
Telephone No. - N° de téléphone (416)512-5276 ()	FAX No. - N° de FAX (416)512-5862
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Ontario Region	
Security - Sécurité 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

REQUEST FOR STANDING OFFER (RFSO)

DAMS & WATER RETAINING STRUCTURES

ENGINEERING SERVICES

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SUPPLEMENTARY INSTRUCTIONS TO PROPONENTS (SI)

SI 1 INTEGRITY PROVISIONS – DECLARATION OF CONVICTED OFFENCES

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

SI 2 FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - CERTIFICATION

By submitting a proposal, the Proponent certifies that the Proponent, and any of the Proponent's members if the Proponent is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from Employment and Social Development Canada (ESDC)-Labour's website.

Canada will have the right to declare a proposal non-responsive, or to set-aside a Standing Offer, if the Proponent, or any member of the Proponent if the Proponent is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of issuing of a Standing Offer or during the period of the Standing Offer.

Canada will also have the right to terminate the Call-up for default if a Consultant, or any member of the Consultant if the Consultant is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list during the period of the contract.

The Proponent must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification (see Appendix A - Declaration/Certifications Form), before the issuance of a Standing Offer. If the Proponent is a Joint Venture, the Proponent must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

SI 3 SECURITY REQUIREMENTS

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

Should a Proponent not have the level of security indicated above, the security clearance process can be initiated by the Proponent by contacting the PWGSC Security Advisor at the coordinates below:

Regional Chief Security and Emergency Preparedness

Telephone: 416-512-5968

Facsimile: 416-952-6481

Email:

ONTSecurityandEmergencyManagement.SecuriteetGestiondes@pwgsc-tpsgc.gc.ca

Successful proponent(s) issued a standing offer as a result of this RFSO, who do not possess 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 is furthest away

Solicitation No. - N° de l'invitation

EQ754-171055/A

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

20171055

Amd. No. - N° de la modif.

File No. - N° du dossier

PWL-6-39080

Buyer ID - Id de l'acheteur

pw1041

CCC No./N° CCC - FMS No/ N° VME

from the ideal business distribution. Refer to the Standing Offer Particulars SP 5.1.a for information regarding ideal business distribution.

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GENERAL INSTRUCTIONS TO PROPONENTS

Integrity Provisions – Proposal

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

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

GI 1 DEFINITION

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

"Applicable Taxes":

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

"Consultant Team":

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

"Key Personnel":

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

"Price Rating":

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

"Proponent":

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

"PWGSC Evaluation Board":

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

"Technical Rating":

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

GI 2 INTRODUCTION

1. Public Works and Government Services Canada (PWGSC) is inviting Civil Engineering consulting firms with strong multidisciplinary engineering experience and expertise in Dams and Water-Retaining Structures (locks, concrete and masonry retaining walls, earth embankments, dykes and canals) to submit proposals for Standing Offers. The range of services required by the selected consultant team(s) will include but not be limited to: Dam safety reviews, structural assessment,

geotechnical investigation/studies, materials testing, hydraulics/hydrology investigations/studies/modeling, monitoring, seismic assessment, flood and inundation assessments, planning assistance, topographic surveys, production of engineering reports, operation manuals and emergency preparedness and response plans; development of designs, drawings and specifications for new projects and repair/rehabilitation of existing projects; contract/project management support including tendering, contract/construction inspection, technical advice and direction. The work may be limited to studies in support of in-house design projects, or may include projects from initial studies to full design and contract management of minor and major projects. Many of the dams and water-retaining structures are cultural resources with heritage aspects that must be considered. The selected consultants must be able to provide the range of services as identified in the Required Services section of this document.

2. Proponents shall be licensed or eligible to be licensed to practice in the province of Ontario. Firms should be able to demonstrate successful delivery of these services for a broad variety of projects over the last ten (10) 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 award up to four (4) Standing Offers, each for a period of three (3) years from the date of issuance of the Standing Offers. The total dollar value of all Standing Offers is estimated to be \$10,000,000.00 (HST Included). Individual call-ups will vary, up to a maximum of \$1,000,000.00 (HST included) under exceptional circumstances. Proponents should note that there is no guarantee that the full or any amount of the Standing Offers will be called-up; PWGSC will award 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), the World Trade Organization - Agreement on Government Procurement (WTO-AGP), the Canada-Colombia Free Trade Agreement (FTA) and the Canada-Peru FTA.

GI 3 PROCUREMENT BUSINESS NUMBER

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

GI 4 CONTRACTING AUTHORITY AND DEPARTMENTAL REPRESENTATIVE

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

Ricky Chan, Contracting Officer
Public Works and Government Services Canada
Real Property Contracting
4900 Yonge Street, 12th Floor
Toronto, ON
M2N 6A6
Tel: (416) 512-5276
Fax: (416) 512-5862
E-mail address: Ricky.Chan@pwgsc-tpsgc.gc.ca

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

3. A Departmental Representative will be identified at time of each individual Call-Up.
4. The Departmental Representative will be responsible for all matters concerning the technical content of the work under the Call-Up.

GI 5 QUANTITY

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

GI 6 PWGSC OBLIGATION

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

GI 7 RESPONSIVE PROPOSALS

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

GI 8 COMMUNICATIONS - SOLICITATION PERIOD

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

GI 9 OVERVIEW OF SELECTION PROCESS

1. The Standing Offer selection process is as follows:
 - a) a Request for Standing Offer is obtained by proponents through the 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.

8. Canada will make available Notices of Proposed Procurement (NPP), RFSOs and related documents for download through the Government Electronic Tendering Service (GETS). Canada is not responsible and will not assume any liabilities whatsoever for the information found on websites of third parties. In the event an NPP, RFSO or related documentation would be amended, Canada will not be sending notifications. Canada will post all amendments using GETS. It is the sole responsibility of the Proponent to regularly consult GETS for the most up-to-date information. Canada will not be liable for any oversight on the Proponent's part nor for notification services offered by a third party.

GI 11 NON-ACCEPTANCE OF ELECTRONICALLY TRANSMITTED PROPOSALS

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

GI 12 EVALUATION OF PRICE

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

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

GI 16 NOT APPLICABLE

GI 17 INSURANCE REQUIREMENTS

1. The successful Proponent shall be required to obtain and maintain Professional Liability and Comprehensive General insurance coverage in accordance with the requirements set out elsewhere in the Request for Standing Offer documents.
2. No insurance requirement stipulated in the Request for Standing Offer documents should be construed as limiting any insurance required by federal, provincial or municipal law. Neither should

it limit any coverage which the successful Proponent and other members of the consultant team may consider to be necessary for their own protection or to fulfill their obligations.

3. By virtue of submission of a proposal, the Proponent certifies that the Proponent and the other members of the consultant team as may be applicable are capable of obtaining, and will obtain and maintain liability insurance in accordance with the requirements set out in the proposal documents.

GI 18 JOINT VENTURE

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

GI 19 LATE SUBMISSIONS

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

GI 20 LEGAL CAPACITY

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

GI 21 DEBRIEFING

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

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 the Proponent is unable to provide the services of an individual named in its proposal, the Proponent may propose a substitute with at least equivalent qualifications, experience and expertise. The Proponent must advise the Contracting Authority of the reason for the substitution and provide the name, demonstrate equivalency of qualifications, experience and expertise of the proposed replacement for Canada's approval at its sole discretion.

GI 29 CODE OF CONDUCT FOR PROCUREMENT – PROPOSAL

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

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STANDING OFFER PARTICULARS (SP)

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

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 three (3) 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 \$1,000,000.00 (HST 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; 37% of the business for the top ranked consultant, 26% for the 2nd ranked consultant, 21% for the 3rd ranked consultant and 16% for the 4th ranked consultant. In the event fewer than four (4) consultants are successful, the undistributed % of business will be redistributed amongst the offerors being recommended using the following formula:

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

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

- b) Unless otherwise stated by the Departmental Representative, the Consultant is required to respond within five (5) working days in writing to the Departmental Representative to confirm acceptance or refusal of the Call-Up. Failure to respond within the five (5) working day deadline will constitute the Consultant's declination to the Call-up.

If accepted, the Consultant will be provided the scope of services and given a reasonable deadline for submission of a proposal. The proposal submission deadline will be established by the Departmental Representative and will be based on the size and complexity of project.

Should the Consultant fail to meet the response or proposal submission deadline, Canada reserves the right not to further consider the Consultant for the call-up, and select the next consultant who is furthest away from the ideal business distribution.

- c) The Consultant will be provided the scope of services and will submit a proposal to the Departmental Representative in accordance with the fixed hourly rates established under the Standing Offer. The Consultant's proposal shall include the category of personnel, name of personnel and the number of hours estimated/required to perform the services, as well as an estimate of proposed disbursements, if applicable. If the Consultant is unable to provide the services of an individual named in its proposal (submitted in response to the Request for Standing Offer), the Consultant may propose a substitute with at least the equivalent qualification, experience and expertise in the estimation of Canada. The Consultant must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement for Canada's approval in its sole discretion. If the Consultant is unable to provide a substitute with equivalent qualifications, experience and expertise, Canada may set aside the standing offer.
- d) 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.
- e) 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.

- f) 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.
 - g) 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.
3. The cost of As-built Record Documentation is to be 10% of the total value of the consulting fees on every individual construction project call-up, unless specified otherwise in the Project Brief.

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TERMS AND CONDITIONS

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

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0220DA GENERAL CONDITIONS

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- 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
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- GC 12 Rights to Intellectual Property
- GC 13 Conflict of Interest and Values and Ethics Codes for the Public Service
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- 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 Performance Evaluation - Contract
- GC 26 International Sanctions
- GC 27 Integrity Provisions - Standing Offer
- GC 28 Code of Conduct for Procurement – Standing Offer

GC 1 Definitions

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

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

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

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

Canada, Crown, Her Majesty or the Government

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Experience means accumulated, over an extended period of time, involvement in a specific type of technical/managerial activity.

Expertise means the sum of knowledge, skills, know-how, proficiency and capability possessed by an expert in a particular technical/managerial field and/or speciality.

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;

Suspension means a determination of temporary ineligibility by the Minister of PWGS;

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 there from.
3. The *Consultant* shall afford facilities for audit and inspection upon request and shall provide the *Departmental Representative* with such information as may be required from time to time with reference to the documents referred to in GC 10.2.
4. The *Consultant* shall, unless otherwise specified, keep the time sheets and cost records available for audit and inspection for a period of at least six (6) years following completion of the *Services*.
5. If the verification is done after payment by *Canada*, the *Consultant* agrees to repay any overpayment immediately upon demand.

GC 11 National or Departmental Security

1. If the *Departmental Representative* is of the opinion that the Project is of a class or kind that involves national or departmental security, the *Consultant* may be required:
 - (a) to provide any information concerning persons employed for purposes of the Standing Offer unless prohibited by law;
 - (b) to remove any person from the Project and its site if that person cannot meet the prescribed security requirements; and
 - (c) to retain the Project *Technical Documentation* while in the *Consultant's* possession in a manner specified by the *Departmental Representative*.
2. Notwithstanding the provisions of GC 12, if the Project is of a class or kind that involves national or

departmental security, the *Consultant* shall not issue, disclose, discard or use the Project *Technical Documentation* on another project without the written consent of the *Departmental Representative*.

GC 12 Rights to Intellectual Property

1. Definitions

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

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

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

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

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

2. Identification and Disclosure of Foreground

The *Consultant* shall:

- (a) promptly report and fully disclose to Canada all Foreground that could be Inventions, and shall report and fully disclose to Canada all other Foreground not later than the time of completion of the *Services* or such earlier time as Canada or the Standing Offer and/or Call-Up may require, and
- (b) for each disclosure referred to in (a), indicate the names of all *Sub-Consultants* at any tier, if any, in which IP Rights to any Foreground have vested or will vest.

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

3. IP Rights Vest with *Consultant*

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

4. Ownership Rights in Deliverables

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

5. Licence to Foreground

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

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

6. Licence to Foreground for Other Projects

The *Consultant* hereby grants to *Canada* a non-exclusive, perpetual, world-wide, irrevocable licence to exercise all IP Rights that vest in the *Consultant* pursuant to paragraph GC 12.3 for the purpose of planning, designing and constructing or otherwise implementing any project other than the Project, and for any purpose set out in paragraph GC 12.5 as it relates to such other project. In the event that *Canada* exercises such IP Rights in another project, and provided that *Canada* does not already have equivalent rights under a previous contract or otherwise, *Canada* agrees to pay to the *Consultant* reasonable compensation determined in accordance with current industry practice and having regard to *Canada's* contribution to the cost of development of the Foreground. The *Consultant* shall ensure that in any sale, assignment, transfer or licence of any of the IP Rights that

vest in the *Consultant* under the Standing Offer and/or Call-Up, the purchaser, assignee, transferee or licensee agrees to be bound by the terms of this provision and to accept reasonable compensation as is contemplated herein. The *Consultant* shall also ensure that any such purchaser, assignee, transferee or licensee of the IP Rights is required to impose the same obligations on any subsequent purchaser, transferee, assignee or licensee.

7. Licence to Background

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

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

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

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

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

9. *Consultant's* Right to Grant Licence

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

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 arm's 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 reduction in coverage."

GC 17 Resolution of Disagreements

- 1. In the event of a disagreement regarding any aspect of the *Services* or any instructions given under the Standing Offer and subsequent Call-ups:

- (a) The *Consultant* may give a notice of disagreement to the *Departmental Representative*. Such notice shall be promptly given and contain the particulars of the disagreement, any changes in time or amounts claimed, and reference to the relevant clauses of the Standing Offer and Call-up;
 - (b) The *Consultant* shall continue to perform the *Services* in accordance with the instructions of the *Departmental Representative*; and
 - (c) The *Consultant* and the *Departmental Representative* shall attempt to resolve the disagreement by negotiations conducted in good faith. The negotiations shall be conducted, first, at the level of the *Consultant's* project representative and the *Departmental Representative* and, secondly and if necessary, at the level of a principal of the *Consultant* firm and a senior departmental manager.
2. The *Consultant's* continued performance of the *Services* in accordance with the instructions of the *Departmental Representative* shall not jeopardize the legal position of the *Consultant* in any disagreement.
3. If it was subsequently agreed or determined that the instructions given were in error or contrary to the Standing Offer or Call-up, *Canada* shall pay the *Consultant* those fees the *Consultant* shall have earned as a result of the change(s) in the *Services* provided, together with those reasonable disbursements arising from the change(s) and which have been authorized by the *Departmental Representative*.
4. The fees mentioned in GC 17.3 shall be calculated in accordance with the Terms of Payment set out in the Standing Offer and the relevant Call-up.
5. If the disagreement is not settled, the *Consultant* may make a request to the *Departmental Representative* for a written departmental decision and the *Departmental Representative* shall give notice of the departmental decision within fourteen (14) days of receiving the request, setting out the particulars of the response and any relevant clauses of the Standing Offer or Call-up.
6. Within fourteen (14) days of receipt of the written departmental decision, the *Consultant* shall notify the *Departmental Representative* if the *Consultant* accepts or rejects the decision.
7. If the *Consultant* rejects the departmental decision, the *Consultant*, by notice may refer the disagreement to *Mediation*.
8. If the disagreement is referred to *Mediation*, the *Mediation* shall be conducted with the assistance of a skilled and experienced mediator chosen by the *Consultant* from a list of mediators proposed by *Canada*, and departmental *Mediation* procedures shall be used unless the parties agree otherwise.
9. Negotiations conducted under the Standing Offer and any resulting Call-up, including those conducted during *Mediation*, shall be without prejudice.

GC 18 Amendments

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

GC 19 Entire Agreement

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

GC 20 Contingency Fees

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

GC 21 Harassment in the Workplace

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

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, demonstration of equivalent qualifications, experience and expertise of the proposed replacement entity or person, and
 - (c) if applicable, proof that the entity or person has the required security clearance granted by *Canada*.
3. The *Consultant* shall not, in any event, allow performance of any part of the *Services* by unauthorized replacement entities or persons, and acceptance of a replacement entity or person by the *Departmental Representative* shall not relieve the *Consultant* from responsibility to perform the *Services*.
4. The *Departmental Representative*, with the authority of *Canada*, may order the removal from the *Consultant* team of any unauthorized replacement entity or person and the *Consultant* shall immediately remove the entity or person from the performance of the *Services* and shall, in accordance with paragraphs 1. and 2., secure a further replacement.
5. The fact that the *Departmental Representative* does not order the removal of a replacement entity or person from the performance of the *Services* shall not relieve the *Consultant* from the Consultant's responsibility to meet all the Consultant's obligations in the performance of the *Services*.

GC 24 Joint and Several Liability

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

GC 25 Performance Evaluation – Contract

1. Consultants shall take note that the performance of the Consultant during and upon completion of the services shall be evaluated by Canada. The evaluation includes all or some of the following criteria:
 - a. Design
 - b. Quality of Results
 - c. Management
 - d. Time
 - e. Cost
2. A weighting factor of 20 points will be assigned to each of the five criteria as follows:
 - a. Unacceptable: 0 to 5 points
 - b. Not satisfactory: 6 to 10 points
 - c. Satisfactory: 11 to 16 points
 - d. Superior: 17 to 20 points
3. The consequences resulting from the performance evaluation are as follows:
 - a. For an overall rating of 85% or higher, a congratulation letter is sent to the Consultant.
 - b. For an overall rating of between 51% and 84%, a standard, meets expectations, letter is sent to the Consultant.
 - c. For an overall rating of between 30% and 50%, a warning letter is sent to the Consultant indicating that if, within the next two (2) years, they receive 50% or less on another evaluation, the firm may be suspended from any new PWGSC solicitations for construction services, architectural and engineering services or facility maintenance services, of real property projects, for a period of one year.
 - d. For an overall rating of less than 30%, a suspension letter is sent to the Consultant indicating that the firm is suspended from any new PWGSC solicitations for construction services, architectural and engineering services or facility maintenance services, of real property projects, for a period of one year.
 - e. For a rating of 5 points or less on any one criterion, a suspension letter is sent to the Consultant indicating that the firm is suspended from any new PWGSC solicitations for construction services, architectural and engineering services or facility maintenance services, of real property projects, for a period of one year.

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

GC 26 International Sanctions

1. Persons in Canada, and Canadians outside of Canada, are bound by economic sanctions imposed by Canada. As a result, the Government of Canada cannot accept delivery of goods or services that originate, either directly or indirectly, from the countries or persons subject to economic sanctions (<http://www.international.gc.ca/sanctions/index.aspx?lang=eng>).
2. The Consultant must not supply to the Government of Canada any goods or services which are

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subject to economic sanctions.

3. The Consultant must comply with changes to the regulations imposed during the period of the Call-Up. The Consultant must immediately advise Canada if it is unable to perform the Services as a result of the imposition of economic sanctions against a country or person or the addition of a good or service to the list of sanctioned goods or services. If the parties cannot agree on a work around plan, the Call-Up will be terminated for the convenience of Canada in accordance with terms and conditions of the Standing Offer and/or Call-Up.

GC 27 Integrity Provisions - Standing Offer

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

GC 28 Code of Conduct for Procurement – Standing Offer

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

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SUPPLEMENTARY CONDITIONS

SC 1 Federal Contractors Program for Employment Equity - Setting aside and Default by the Consultant

The Consultant understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Consultant and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Standing Offer and contract. If the AIEE becomes invalid, the name of the Consultant will be added to the "FCP Limited Eligibility to Bid" list. The imposition of such a sanction by ESDC may result in the setting aside of the Standing Offer and will constitute the Consultant in default as per the terms of the contract.

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, Dam Information Model (DIM) and Lock Information Model (LIM) 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) transportation costs for material samples and models, and 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; and
 - (i) 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, DIM and LIM files, specifications and other Technical Documentation additional to those specified in the Standing Offer Brief;
 - (b) transportation costs for material samples and models additional, courier and delivery

charges, for deliverables additional to those specified in the Standing Offer Brief;

- (c) Travel and Living Expenses: Firms are advised that any travel-related expenses associated with the delivery of services will be calculated from the applicable government location (listed below) and/or from the consultant's closest branch office to the project site, whichever is closer. Travel-related expenses will be paid (with prior approval of the Departmental Representative) 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

The government locations that will be used to calculate disbursements related to travel and living expenses to the project site are listed below:

Central Ontario: 4900 Yonge Street, Toronto, Ontario

Eastern Ontario: 86 Clarence Street, Kingston, Ontario

and

- (d) Additional services' disbursements as authorised by the Departmental Representative, including Sub-Consultants and Specialists, required in support of the requested services under a call-up and which cannot be covered under the fixed hourly rate established under the Standing Offer such as diving inspections, 3D underwater scans, heritage recording, material and/or in-situ testing services, etc. The cost for these services shall be administered as follows;
- i) Unless otherwise authorized by the Departmental Representative, the above mentioned disbursements shall be obtained through competitive bidding with a minimum of two (2) quotes. Copies of all quotes shall be submitted together with the Consultant proposal for the call-up; or
- ii) The disbursements shall be evaluated such that, in the event that competitive quotes are not obtained, the Consultant shall submit copies of invoices from other projects to help demonstrate the quote to be a fair, reasonable and competitive price.
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 appear necessary, indicate the extent of, and the reasons and justifications for such changes, and obtain a written approval of the *Departmental Representative*. If deemed not sufficiently justified or unavoidable, the *Departmental Representative* may deny Consultant's request for schedule change(s);
- (c) ensure personnel availability at all times. Shortfall in availability of originally designated personnel or of additional personnel at the Consultant's branch office(s), and/or under-performance/delays caused by external sub-Consultants and/or Specialists may not constitute sufficient grounds for delivery schedule revision, as the Consultant's Standing Offer Manager (refer to AA 1.1.2.1) is to take all the necessary steps and efforts, including mobilisation of additional personnel and/or appropriate substitutions of employees and firms, to achieve the original, approved time schedule.

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

EQ754-171055/A

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

20171055

Amd. No. - N° de la modif.

File No. - N° du dossier

PWL-6-39080

Buyer ID - Id de l'acheteur

pw1041

CCC No./N° CCC - FMS No/ N° VME

STANDING OFFER BRIEF

Agreement Description (AD)
Agreement Administration (AA)
Required Services (RS)

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AGREEMENT DESCRIPTION (AD)

AD 1 Introduction

AD 1.1 General Objectives

AD 1.2 Consultant Team

AD 1 INTRODUCTION

AD 1.1 GENERAL OBJECTIVES

The services rendered by the Consultant will be in support of PWGSC Engineering Services for Dams and Water-Retaining Structures (locks, masonry and concrete retaining walls, earth embankments, dykes and canals) in the Ontario Region excluding Ottawa-Carleton. Individual commissions will provide support to Government of Canada (GC) Departments and Agencies and may include one or more of the Required Services listed in RS 2 related to Dams and Water-Retaining Structures. Firms will provide expertise in most, if not all, of the Required Services listed in RS 2.

Please be advised that, in general, any engineering services for Dams and Water-Retaining Structures provided must be complete and conclusive in that they identify all major issues that will have a significant impact on the project. This will promote a surprise-free environment which will enhance the success of project implementation. Also, please note that the Canadian Federal Government continues to ensure that sustainable development principles are built into the policy of the federal organizations. The Consultant will be expected to incorporate sustainable design principles in their project solutions.

AD 1.2 CONSULTANT TEAM

1. The consultant team for this Standing Offer must be capable of providing the following services related to dams and water-retaining structures:
 - (a) Civil Engineering - provide civil and structural engineering services for the inspection, investigation, monitoring, design and analysis of new or existing earth, reinforced concrete and/or masonry dams and water retaining structures or their components such as gains, gates, stoplogs, concrete and/or timber decks, abutments, walls, sills, log lifting mechanisms, railings etc, etc. or associated infrastructure. Undertake Dam Safety Reviews in accordance with the Canadian Dam Association's (CDA) Dam Safety Guidelines, CDA Technical Bulletins and the Directive for Dam Safety Program of Parks Canada Agency for Dams and Water-Retaining Structures for structures owned by Parks Canada. With the assistance of and in strict coordination with other disciplines, develop options, designs, tender packages and 3D electronic models for new and/or repair/rehabilitation of existing dams and water-retaining structures and their components.
 - (b) Mechanical Engineering – provide inspection, investigation, design and analysis of dam and water-retaining structure's machinery such as existing guillotine, vertical and radial dam gates, stoplog lifting mechanisms, lock gates and valves and their associated manual, hydraulic and/or electrical operation systems. Development of drawings and specifications for new and/or repair/rehabilitation of existing dam machinery and operation systems to relevant codes or guidelines.
 - (c) Electrical Engineering - provide electrical engineering services to carry out inspection, investigation, design and analysis of electrical, monitoring and

control systems associated with dam and water-retaining structure machinery and electrical power supply to site. Develop drawings and specifications for the design/repair/rehabilitation of electrical systems to relevant codes or guidelines.

- (d) Water Hydraulics Engineering – application of water hydraulics to support other disciplines in the design of new and the analysis and development of repair/rehabilitation options of existing dams and water-retaining structures and their components.
 - (e) Geotechnical Engineering – provide inspection, investigation, monitoring and analysis of new and existing earth dams, dam embankments, riverbeds and water-retaining structures and associated structures. If a Call-up requires construction services, preparation of a Geotechnical Baseline Statement, which is to form a uniform basis for construction contract bidding purposes only, is required. Investigation work may include stability analysis, verification of soil and bedrock conditions, testing and assessment of soil and bedrock design parameters as well as condition verification and assessment of construction materials. Develop drawings and specifications for the design/repair/rehabilitation of dams and water-retaining structures and their components to relevant codes or guidelines. Geotechnical work may also include in-water investigations.
 - (f) Seismology Engineering - application of seismic analysis for the development of site specific seismic parameters such as ground velocity, acceleration and response spectra, which are beyond the event data published by the Geological Survey of Canada.
 - (g) Hydrology Engineering - application of hydrology principles to analyze and assess inflow design flood events and undertake inundation studies for the design, analysis and development of new and the repair/rehabilitation of existing dams and water-retaining structures and their components. Both major and minor watershed hydrological studies will be undertaken to assess flood flows and produce risk assessments.
 - (h) Cost Estimating - provide specialized services and collaborate with other Consultant Team members to carry out detailed and accurate construction cost estimates at various stages of investigations/analysis/design, as required, including cost estimates for Structural/Civil, Mechanical and Electrical/Controls and other works in relation to dam and water retaining structures projects. Include construction-specific, time-specific, site-specific and area-specific factors in all cost estimates produced. Advise other professionals on the Consultant Team, as necessary, as to alternative types, means, methods and sequencing of construction in order to optimize overall construction cost and time.
 - (i) Surveying - provide general surveying and specialized laser scanning services to support the work of other Consultant Team members, if and as required. This may include developing survey drawings, 3D scans/models of structures, embankments and/or of individual structure components, as well as 3D underwater point-cloud scans.
2. The consultant team may be augmented/supported by other specialties or services as required by the work under the individual Call-Ups, and as agreed to by the Departmental Representative.

AGREEMENT ADMINISTRATION (AA)**AA 1 General Information**

- AA 1.1 Roles and Responsibilities
- AA 1.2 Coordination with Departmental Representative
- AA 1.3 Health and Safety
- AA 1.4 Project Response Time Requirements
- AA 1.5 Official Languages

AA 2 Functional Requirements

- AA 2.1 Design Codes, Regulations and Reference Documents
- AA 2.2 Project Delivery Approach
- AA 2.3 Media
- AA 2.4 General Project Deliverable
- AA 2.5 Acceptance of Project Deliverables

AA 1 GENERAL INFORMATION**AA 1.1 ROLES AND RESPONSIBILITIES****AA 1.1.1 DEPARTMENTAL REPRESENTATIVE**

1. The Project Manager assigned to the project is the Departmental Representative.
2. The Departmental Representative, as determined on a project by project basis, has overall responsibility for the progress of the project, including management, administration and coordination of the activities as set out in this document and in a specific Call-up Project Brief or Terms of Reference.

AA 1.1.2 CONSULTANT

1. The Consultant shall be responsible for the project delivery of the Consultant Team's services, including management, administration, coordination and reporting of the activities by the Consultant Team as set out in this document.
2. The Consultant shall be responsible for gathering and identifying the needs of the client department/agency and incorporating those needs into the required project deliverables once written acceptance is issued by the Departmental Representative.
3. The Consultant shall establish and maintain, throughout the duration of each project, a team capable of effectively delivering the services described in this document and in a specific Call-up Project Brief or Terms of Reference.
4. The Consultant shall deliver the project within the time frame and assigned budget in accordance with the approved plan agreed to by the Departmental Representative.
5. Upon execution of the Consultant Call-Up, the Consultant shall be responsible for producing all work described in the Call-up document, in a conscientious and professional manner.
6. The Consultant shall coordinate project requirements with any other adjacent and site work that may be underway or that are being planned.

AA 1.1.2.1 CONSULTANT STANDING OFFER MANAGER

The Consultant Standing Offer Manager, who is permanently based at the Consultant's location, and holds a Senior Executive position in the Consultant's organization, at minimum shall:

1. Be the primary contact and the recipient of individual call-ups under the Standing Offer, and be the formal issuer of Consultant's proposal or refusal in regards to all call-ups;
2. Ensure that each individual call-up is responded to with a binding "yes" or a "no" within five (5) working days of its issue to the Consultant. Ensure that call-up proposal is submitted by the Consultant by the deadline stipulated by the Departmental Representative, of the call-up issue;
3. Be the primary contact for the Departmental Representative regarding performance and/or quality issues arising during a call-up project execution by the Consultant Team. A maximum response/contact time of 72 hours is required at all times;
4. Disseminate performance and quality issues to pertinent parties within the Consultant Team and ensure that problems and difficulties are quickly and permanently resolved;
5. Ensure high quality of work delivered by the Consultant Team at all times, through on-going internal Quality Reviews. Ensure proper coordination of work and deliverables between all disciplines;
6. Ensure a comprehensive, in-depth approach to all matters pertaining to public safety and to the mandate of a call-up;
7. Ensure timely commencement and deliveries of every portion of all projects, and timely overall project completion on each call-up;
8. Ensure quick response time, prompt execution and on-schedule completion of all work by all members of the Consultant Team, including, if necessary, rapid replacement of notably under-performing personnel and/or sub-consultants;
9. Ensure on-going fiscal responsibility of all members of the Consultant Team;

The Contracting Authority and the Departmental Representative must be informed in writing by the Consultant of a departure of Consultant's Standing Offer Manager within five (5) working days of such departure.

AA 1.1.2.2 Consultant's Call-up Team Leader

1. For each accepted call-up, a Call-up Team Leader is to be designated from among senior staff of the Consultant's firm unless otherwise specified by the Departmental Representative.
2. The designated Call-up Team Leader is to be in full control of call-up project time assignments for each individual member of the Consultant's Team proposed for a specific call-up, irrespective of and overriding member's physical location, departmental designation and otherwise normal supervisor/manager assignment.

AA 1.1.3 GENERAL INSTRUCTIONS

For any of the Required Services listed in RS 2, the Consultant shall:

1. Attend/Chair regular project status meetings during the life of the project and prepare and distribute minutes in a timely fashion.
2. Submit weekly project progress reports in writing to the Departmental Representative.
3. **When the client requests a change that may alter the scope of work or add to the cost of the project, and/or the cost of services, request approval of the Departmental Representative prior to incorporation in the design.**

AA 1.2 COORDINATION WITH DEPARTMENTAL REPRESENTATIVE

The Consultant shall:

1. Carry out services in accordance with approved documents and directions given by the Departmental Representative.
2. Correspond only with the Departmental Representative at the times and in the manner dictated by the Departmental Representative.
3. Ensure all communications carry the appropriate Project Title, Project Number and File Number depending on the project particulars.
4. Advise the Departmental Representative of any changes that may affect schedule or budget or are inconsistent with instructions or written approvals previously given. The Consultant shall detail the extent and reasons for the changes and obtain written approval before proceeding.

AA 1.3 HEALTH AND SAFETY

1. PWGSC recognizes its obligation to protect health and ensure safety of all persons working on projects for which it manages consultant and construction contracts. It also recognizes that federal occupational health and safety legislation places certain specific responsibilities upon PWGSC as the employer and on Other Government Departments as owners of the work place.
2. In order to meet those responsibilities, PWGSC insists that their consultants implement due diligence to help ensure that roles and responsibilities assigned under Part II of the Canada Labour Code and the Canada Occupations Health and Safety Regulations are implemented and observed when involving consultant staff to undertake works on federal sites and work places.

AA 1.4 PROJECT RESPONSE TIME REQUIREMENTS

1. Unless otherwise stated by the Departmental Representative, the Consultant is required to respond within five (5) working days in writing to the Departmental Representative to confirm acceptance or refusal of the Call-Up. Failure to respond within the five (5) working day deadline will constitute the Consultant's refusal to accept the Call-up.

If accepted, the Consultant will be provided the scope of services and given a reasonable deadline for submission of a proposal. The proposal submission deadline will be established by the Departmental Representative and will be based on the size and complexity of project.

Canada reserves the right to contract separately with other firms/consultants should the Consultant fail to meet either the response deadline or the submission deadline in a timely manner.

2. The consultant must be able to demonstrate the availability of adequate resources within their proposed team(s) to deliver the scope of services outlined in this Standing Offer in a timely fashion.
3. It is a requirement of all projects covered under this Standing Offer that the prime consultant and their proposed sub-consultants be personally available to attend meetings and respond to inquiries within 72 hours of being given notice by the Departmental Representative.

AA 1.5 OFFICIAL LANGUAGES

This Standing Offer requires services in the English language.

AA 2 FUNCTIONAL REQUIREMENTS

AA 2.1 DESIGN CODES, REGULATIONS AND REFERENCE DOCUMENTS

1. The standards, codes and regulations to be used for the inspection, investigation, design and construction of dams and water-retaining structures shall be the latest edition of the following (including all amendments, supplements and revisions thereto):
 - a. Dam Safety Guidelines, from the Canadian Dam Association;
 - b. Guidelines for Public Safety around Dams, from the Canadian Dam Association;
 - c. Canadian Dam Association Technical Bulletins;
 - d. Directive for Dam Safety Program of Parks Canada Dams and Water-Retaining Structures, from Parks Canada;
 - e. National Building Code of Canada (NBCC);
 - f. Design of Concrete Structures to Canadian Standards Association's CSA A23.3;
 - g. Concrete Materials, Construction Methods and Testing to CSA A23.1, A23.2 and A23.4;
 - h. Design of Steel Structures to CSA S16 and/or to CSA S6 / S6.1 as pertinent;
 - i. Canadian Electrical Code C22.1;
 - j. CSA Z462 Work Place Electrical Safety Standard;
 - k. Ontario Electrical Safety Code;
 - l. CSA Z432 Machine Safety Standard;
 - m. Canadian Manual of Foundation Engineering, from the National Research Council;
 - n. PWGSC Dam Inspection Manual (DIM 2010);
 - o. Federal and Provincial Occupational Health and Safety Regulations and Acts, including Canada Labour Code, Part II;
 - p. Federal and Provincial Environmental Regulations and Acts;
 - q. Transport Canada – Navigation Protection Act;
 - r. Transport Canada – Historic Canals Regulations;
 - s. Standards and Guidelines for the Preservation of Historic Places in Canada;
 - t. The Trent-Severn Waterway - Statement of Commemorative Integrity;
 - u. Department of Fisheries and Oceans - Fisheries Act;
 - v. Federal, Provincial and Municipal Traffic Acts and Regulations;
 - w. Canadian Highway Bridge Design Code (CHBDC) and Commentary CSA S6 and S6.1, as well as Ontario Traffic Control Manual, and Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads;
 - x. In addition to the above mentioned documents, the Consultant shall make use of the following reference documents :
 - (i) "Design of Small Dams", from US Department of Interior Bureau of Reclamation (USBR);

- (ii) "Mechanical and Electrical Design for Lock and Dam Operating Equipment", EM 111-2-2610 from US Army Corps of Engineers (USACE);
 - (iii) USBR's "A Procedure for Estimating Loss of Life Caused by Dam Failure" (DSO-99-06) - for the calculation of loss of life for dam classification ;
 - (iv) "Engineering Guidelines for the Evaluation of Hydropower Projects", Chapter 2 - Selecting and Accommodating Inflow Design Floods for Dams, FERC (Federal Energy Regulatory Commission), - for the development of assumptions for the dam breach analysis;
 - (v) Canadian Electricity Association Technologies Inc. (CEATI) - "Static Ice Loads on Hydroelectric Structures - Summary Report, Ice Load Design Guide, and Ice Load Prediction Computer Program".
 - (vi) USACE's "Hydraulic Design of Flood Control Channels", EM 1110-2-1601
 - (vii) USACE's "Hydraulic Design of Spillways", EM 1110-2-1603
 - (viii) USACE's "Design of Hydraulic Steel Structures", EM 1110-2-2105
 - (ix) USACE's "Design of Vertical Lift Gates", EM 1110-2-2701
 - (x) USACE's "Design of Spillway Tainter Gates", EM 1110-2-2702
 - (xi) USACE's "Wire Rope Selection Criteria for Gate Operating Devices", EM 1110-2-3200
 - (xii) USBR's "Cavitation in Chutes and Spillways", Eng. Monograph No. 42
 - (xiii) FEMA – "Dam Owner's Guide to Plant Impact on earth Dams"
 - (xiv) FEMA - "Technical Manual for Dam Owners - Plant Impact on Earthen Dams" FEMA publication 534.
2. In the event of any conflicts or discrepancies between the Dam Safety Guidelines and Parks Canada Directive for Dam Safety Program of Parks Canada Dams and Water-Retaining Structures, the Parks Canada Directive will take precedence.
 3. The Consultant has the option of consulting other regulations, standards, codes and references as deemed necessary.

AA 2.2 PROJECT DELIVERY APPROACH

1. Unless otherwise specified in the Call-Up, the traditional design-tender-build approach will be used. The consultant may be required to prepare the tender package and ensure full coordination.
2. PWGSC will tender contracts through several contracting authorities.

AA 2.3 MEDIA

1. The Consultant shall not respond to requests for project related information or questions from the media. Such inquiries are to be directed to the Departmental Representative.

AA 2.4 GENERAL PROJECT DELIVERABLES

1. Where deliverables and submissions are required under the Call-Ups, they shall be submitted in accordance with the Standing Offer. Additional details and/or requirements may be specified in the Call-Up.
2. All specifications and drawings will be generated and distributed in the format using layering and file protocols as prescribed in the "Doing Business with PWGSC", Appendix D to the Standing Offer.
3. Unless otherwise indicated in the Call-Up or in the Standing Offer, provide four (4) copies of all deliverables plus one electronic version in a format using PWGSC operational platforms such as: Microsoft office (Word, Excel, Access), latest versions of AutoCAD Standard and National Master Specification (NMS). 3D Dam and Lock Information Models (DIM & LIM) are to be supplied in AutoCAD Standard file. In addition provide PDF electronic copy of

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all final reports and contract documents. All submissions and electronic documents shall be signed, sealed and dated by a **Professional Engineer (P.ENG)** licensed in the province of Ontario.

All documents (drawings and specification) are to be produced in accordance with PWGSC document "Doing Business with PWGSC" attached at Appendix D or the applicable document depending on project requirements. All documents are to be produced in the amounts and types shown below and at the project delivery stage described in each individual Call-up.

Reports (Investigations and Studies)

No. of copies:	hard copies	CADD files	PDF Files
	.....4.....	..... 1.....	..... 1.....

Design Concept Documents

No. of copies:	hard copies	CADD files	PDF Files
	.....4.....	..... 1.....	..... 1.....

Design Development Documents

No. of copies:	hard copies	CADD files	PDF Files	NMS File
	..... 3.....	..... 1.....	..... 1.....	.....1.....

Construction Documents

No. of copies:	hard copies	CADD files	PDF Files	NMS File
50% complete	.....3.....	..... 1.....	..... 1.....	..... 1.....
99% complete	..... 3.....	..... 1.....	..... 1.....	..... 1.....
100% complete	..... 3.....	..... 1.....	..... 1.....	..... 1.....

Tender Documents

No. of copies:	hard copies	CADD files	PDF Files	NMS File
Drawings	.....1.....	..... 1.....	..... 1.....	
Specifications	.. 1 bound..		..... 1.....	..... 1.....
Specifications	.. 1 unbound			

As-Built Record Documents

No. of copies	hard copies	CADD files	PDF Files	NMS File
DIM / LIM		..... 1.....	..... 1.....	
All others	..... 1.....	..... 1.....	..... 1.....	..... 1.....

The schedule for the delivery of services will be determined at the time of each individual Call-up.

AA 2.5 ACCEPTANCE OF PROJECT DELIVERABLES

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1. While PWGSC acknowledges the Consultant's obligations to meet project requirements, the project delivery process entitles PWGSC to review work. PWGSC reserves the right to reject undesirable or unsatisfactory work. The Consultant must obtain Departmental Representative acceptances during each of the project stages.
 2. Acceptances indicate that based on a general review of material for specific issues, the material is considered to comply with governmental and departmental objectives and practices, and that overall project objectives are being satisfied.

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3. The acceptance does not relieve the Consultant of professional responsibility for the work and compliance with the contract.
 4. PWGSC acceptances do not prohibit rejection of work, which is determined to be unsatisfactory at later stages of review. If progressive design development or time / cost / risk updates or technical investigation reveals that earlier acceptances must be withdrawn (as a result of undiscovered Consultant mistake, error or disregard of requirements/requests), the Consultant is responsible for redesigning work and resubmitting for acceptance at the Consultant's cost.
 5. Acceptances by the Client / Users and other agencies and levels of government must be obtained to supplement PWGSC acceptances. The Consultant shall assist the Departmental Representative in securing all such acceptances and adjust all documentation as required by such authorities when securing acceptance.

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REQUIRED SERVICES (RS)

RS 1 Introduction

RS 2 Scope of Services

- RS 2.1 Required Services
- RS 2.1.1 Analysis of Project Scope of Work
- RS 2.1.2 Investigations, Studies and Reports
- RS 2.1.3 Design Concept
- RS 2.1.4 Design Development
- RS 2.1.5 Construction Documents, Pre-Tender Construction Cost Estimate and Project Schedule
- RS 2.1.6 Tender Call, Bid Evaluation and Construction Contract Award
- RS 2.1.7 Construction and Contract Administration
- RS 2.1.8 Resident Site Services During Construction
- RS 2.1.9 Commissioning
- RS 2.1.10 Estimating and Cost Planning
- RS 2.1.11 Risk Management
- RS 2.1.12 Operation, Maintenance and Surveillance (OMS) manual, Emergency Response Plan (ERP) and Emergency Preparedness Plan (EPP)
- RS 2.1.13 Post Construction Services
- RS 2.1.14 Additional Services
- RS 2.1.15 Sub-Consultant/Specialist Coordination

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REQUIRED SERVICES (RS)

RS 1 INTRODUCTION

1. Call-Ups may include any or all of the following services. Specific services will be identified in each call-up:
 - (a) Analysis of Project Scope of Work
 - (b) Investigations, Studies and Reports
 - (c) Design Concept
 - (d) Design Development
 - (e) Construction Documents, Pre-Tender Construction Cost Estimate and Project Schedule
 - (f) Tender Call, Bid Evaluation and Construction Contract Award
 - (g) Construction and Contract Administration
 - (h) Resident Site Services During Construction
 - (i) Commissioning
 - (j) Estimating and Cost Planning
 - (k) Operation, Maintenance and Surveillance (OMS) manual, Emergency Response Plan (ERP) and Emergency Preparedness Plan (EPP)
 - (l) Risk Management
 - (m) Post Construction Services
 - (n) Additional Services
 - (o) Sub-Consultant/Specialist Coordination

RS 2 SCOPE OF

SERVICES RS 2.1 Required

Services

RS 2.1.1 Analysis of Project Scope of Work

1. The Consultant shall analyze the Project Brief and advise the Departmental Representative of any noted problems or the need for more information, clarification or direction. Note that there may be projects which must consider heritage and environmental concerns.
2. Visit the site(s) to perform measurements, surveys and obtain local information applicable to the design.
3. Provide a Health and Safety plan and an environmental protection plan for all required consultant services.
4. Subject to applicable security restrictions, the Consultant will be given access to existing plans, survey notes, design notes, specifications or reports that will aid in the work. All such documents must be returned to the Departmental Representative on termination of the contract.

RS 2.1.2 Investigations, Studies and Reports

1. The Consultant shall perform inspections and /or investigations and provide reports as required by the Departmental Representative. Required inspections and investigations may include:

- (a) Engineering Inspections and measurements;
- (b) Dam Safety Review Inspections, investigations and reports;
- (c) Routine Inspections (assist with);
- (d) Special Inspections;
- (e) Code and regulatory compliance assessments;
- (f) Hydrotechnical evaluations/studies;
- (g) As Low As Reasonably Practical (ALARP) studies;
- (h) Seismology evaluations/studies;
- (i) Water hydraulic assessments (river and dam);
- (j) Geotechnical and materials investigations;
- (k) Diving/Remotely Operated Vehicle (ROV) Inspections;
- (l) Feasibility and Investment Analysis Report;
- (m) Instrumentation and monitoring work;
- (n) Structural analyses/evaluations/studies;
- (o) Assessment of electrical, control and mechanical components and systems;
- (p) Operator and public safety assessments;
- (q) Topographic and bathymetric surveys, above-water laser scans, underwater 3D scans and aerial photography;
- (r) Lock and Dam operation procedures;
- (s) Vegetation inspection and assessment of existing earth embankment dams.

2. The Departmental Representative may have a portion or all of the field work carried out under a separate contract. The Consultant may be required to prepare the Terms of Reference for the field work and coordinate/manage the work of the other contract.

RS 2.1.3 Design Concept

The Consultant is to explore design options and analyse them against identified priorities and program objectives. Within this process, up to three options are to be evaluated and compared to each other in sufficient detail and clarity to recommend a single preferred option for Design Development stage (RS 2.1.4).

The Consultant shall:

- (a) submit to the Departmental Representative, design concept documents in sufficient detail to illustrate the design concept and to demonstrate compliance with the Project requirements
- (b) all design issues beyond the dam or water-retaining structures themselves may need to be considered which could include controls, mechanical, electrical, hydraulic, signage, lighting, public access and safety, commissioning following a complete replacement or a major intervention affecting operation, etc.
- (c) conceptual design needs to also consider issues such as construction approach and methodology, long-term cost-benefit considerations, project budget and timelines, environmental considerations, and constructability. Issues such as land ownership restrictions and continued usage of site, pedestrian and vehicular traffic detours and control, staging and storage areas, etc. are to be considered.
- (d) for up to three conformant and most appropriate repair, rehabilitation and/or replacement options recommended by the Consultant and accepted by the Departmental Representative for detailed Design Concept analysis:
 - (i) submit preliminary Class C Construction Cost Estimate prepared by a Cost Estimating specialist, Cost Plan, Project Risk Management Plan and Project Schedule to confirm the feasibility of the Project, and provide copies of all design

- concept documents in the type and number specified in AA 2.4.
- (ii) demonstrate that options accommodate the Client User Program, and adhere to the project budget. Drawings will include analytical diagrams, schematic bubble diagrams, plans, elevations, and sections. Perspective sketches may be requested.
- (iii) provide option analysis, complete with life cycle cost analysis.
- (e) recommend a single preferred Conceptual Option for Design Development consideration.

RS 2.1.4 Design Development

The Consultant shall, after acceptance of the design concept documents, prepare and

- (a) refine the approved preferred Conceptual Design Option to a level of detail which will facilitate Class B-cost estimates, design, Code non-conformances review and discussions with the Departmental Representative and the Client Department.
- (b) submit to the Departmental Representative, design development documents in sufficient detail to define the size, intent and character and cost of the entire Project;
- (c) submit an updated and refined Construction Cost Estimate prepared by a Cost Estimating specialist and based on the design development documents, as well as an updated Cost Plan, Project Risk Management Plan and Project Schedule; and
- (d) provide copies of all design development documents in the type and number specified in AA 2.4.

RS 2.1.5 Construction Documents, Pre-Tender Construction Cost Estimate and Project Schedule

1. The Consultant shall, after acceptance of the design development documents by the Departmental Representative and after receiving a written directive to proceed, prepare and:
 - (a) submit for review to the Departmental Representative construction documents detailing the requirements for the construction of the Project at each stage of completion specified in the Project Brief. All documents prepared by Sub-consultants and other external specialists shall be reviewed, corrected as necessary, and signed "Reviewed and Accepted" by the Consultant prior to their submission to the Departmental Representative;
 - (b) submit an updated and refined Construction Cost Estimate prepared by the Cost Estimating specialist, Project Risk Management Plan and Project Schedule at each specified stage of completion;
 - (c) submit a comprehensive Engineering Design Brief referencing applicable design Codes and Guides throughout, in a PDF format for PWGSC archiving and future reference purposes;
 - (c) provide copies of all construction documents submitted in the type and number specified in AA 2.4.
2. The Consultant shall prepare for tender call purposes and submit to the Departmental Representative for acceptance a final Class A Construction Cost Estimate prepared by the Cost Estimating specialist and based on the approved construction documents, together with a breakdown thereof, as well as an updated Project Schedule and Risk Management Plan covering the construction phase of the project.

RS 2.1.6 Tender Call, Bid Evaluation and Construction Contract Award

1. Tender Call:

The Consultant shall, after acceptance of the final submission of the construction documents by

the Departmental Representative, provide one (1) complete electronic set of the approved working drawings signed and sealed by a Professional Engineer licensed in the Province of Ontario, suitable for both editing and reproduction, and two (2) sets of the approved specifications, one electronic set to be suitable for reproduction and the other set to be properly bound and covered as required by PWGSC Procurement Department. The Consultant shall, on request:

- (a) provide the Departmental Representative with information required for interpretation and clarification of the construction documents;
- (b) assist in the evaluation and approval of equivalent alternative materials, methods and systems;
- (c) assist with the preparation of addenda;
- (d) attend job or site showings as required.

2. Bid Evaluation and Construction Contract Award:

The Departmental Representative shall be responsible for assembling and issuing tender documents and arranging for the receipt of tenders and awarding of the Construction Contract.

The Consultant shall, on request:

- (a) review and evaluate the bids received for the construction of the Project, and advise on their relative merits and/or shortcomings;
- (b) provide information to support price negotiations.

RS 2.1.7 Construction and Contract Administration

1. Construction Schedule

The Consultant shall:

- (a) as soon as practical after the award of the Construction Contract, request from the Contractor a detailed construction schedule, and, after review for conformity with the Project Schedule and implementation of necessary adjustments, forward two (2) annotated, signed "Reviewed and Accepted" and dated copies of the consultant-accepted construction schedule to the Departmental Representative;
- (b) monitor and report to the Departmental Representative the progress of the construction or lack thereof, on an on-going basis; and
- (c) immediately notify the Departmental Representative of any known and anticipated delays which may affect the completion date of the Project, and keep accurate records of the causes and duration of delays.

The Departmental Representative shall evaluate all requests from the Contractor for time extensions, and shall issue directions to the Contractor and the Consultant.

2. Construction Safety

- (a) All construction projects performed by the contractor are subject to provincial safety regulations.
- (b) The contractor must provide Site Specific Health and Safety Plans in accordance with the contract; this will include emergency response plans, fire plans, etc. The Consultant is to ensure that these plans are adhered to.
- (c) In addition to the above, the Contractor(s) must comply with the municipal

safety laws and regulations, and with any instructions issued by the officers of these authorities having jurisdiction relating to construction safety. Consultant is to ensure that these are adhered to and immediately report any and all non-conformances/violations.

3. Environmental Protection

- (a) All construction projects performed by the contractor are subject to federal and provincial environmental regulations.
- (b) The contractor must provide Site Specific Environmental Protection Plan in accordance with the contract. Consultant is to ensure that these plans are adequate and adhered to at all times.

4. Construction Meetings

The Consultant shall:

- (a) advise the Contractor to hold and attend construction meetings as required by the Construction Contract;
- (b) advise the Departmental Representative of the dates and times of the proposed meetings;
- (c) attend all such meetings;
- (d) maintain a record of the proceedings of such meetings and provide the Departmental Representative with a copy thereof within a maximum of five (5) working days of the meeting.

5. Clarification and Interpretation

The Consultant shall promptly provide clarifications and interpretations of the construction documents in written or graphic form, to the Contractor, with a copy to the Departmental Representative, for the proper execution and progress of the construction as and when necessary.

6. Shop Drawings and Submittals

The Consultant shall:

- (a) specify in the construction documents the shop drawings that are to be submitted by the Contractor;
- (b) review in a timely manner the shop drawings provided by the Contractor to determine conformity with the general concept and design intent of construction documents and indicate to the Contractor such conformance with the general concept, or lack thereof;
- (c) provide the Departmental Representative with one (1) copy signed "Reviewed and Accepted" and dated when such conformity is confirmed.

7. Testing and Inspection

The Consultant shall:

- (a) recommend the need for, and review, test reports of materials and/or construction;
- (b) recommend quality assurance testing to be undertaken during construction, evaluate the results and advise the Departmental Representative accordingly. On projects requiring coating of structural steel members/elements/components,

comprehensive services of a NACE-accredited Level 3 Painting Inspector shall be retained in a manner assuring proper quality of base preparation and of coating system application;

- (c) request the Contractor to take remedial action when observed material or construction fails to comply with the requirements of the Construction Contract, and advise the Departmental Representative accordingly;
- (d) specify in the construction documents product and performance testing to be undertaken by the Contractor, including Commissioning of all replacement dams and water retaining structures, and of existing ones that have undergone major repairs which may affect their operation;
- (e) ensure that all specified testing, commissioning and other quality assurance specifications and recommendations are adequately implemented throughout the construction process.

8. Site Visits

The Consultant shall:

- (a) conduct periodic visits to the site to determine, on an adequate sampling basis, whether this work is in conformity with the construction documents and design intent;
- (b) record and report to the Departmental Representative on the progress, non-conformities and deficiencies observed during each site visit, and provide the Contractor with written progress reports and lists of deficiencies observed; (c) recommend the action to be taken.
- (d) assist PWGSC in ensuring prompt implementation by the Contractor of all remedial actions which have been accepted by the Departmental Representative in writing, and issue a written confirmation of their completion to the Departmental Representative and to the Contractor.

The Consultant **shall not**:

- (a) advise the client/users in any matter without obtaining guidance from PWGSC;
- (b) enter into the area of responsibility of the Contractor's superintendent;
- (c) respond to requests for project related information or questions from the media, municipalities or public. Such inquiries are to be directed to the Departmental Representative.

9. Changes to Construction Contract

The Consultant shall:

- (a) submit all requests and recommendations for changes to the Construction Contract and their implications to the Departmental Representative for approval;
- (b) obtain quotations from the Contractor for contemplated changes, review the prices for acceptability and fairness, assess the effect on construction progress and completion date, and submit recommendations to the Departmental Representative.

The Departmental Representative shall issue Change Orders for all approved changes.

10. Contractor's Progress Claims

The Consultant shall:

- (a) request from the Contractor a cost breakdown of the Construction Contract Award Price in detail appropriate to the size and complexity of the Project, or as may

otherwise be specified in the Construction Contract, and submit the cost breakdown to the Departmental Representative prior to the Contractor's first progress claim;

- (b) examine progress claims in a timely manner and, if acceptable, certify the progress claims for work completed and materials delivered pursuant to the Construction Contract, and submit them to the Departmental Representative for approval and processing; and
- (c) if the construction is based on unit prices, measure and record the quantities of labour, materials and equipment involved for the purpose of certifying progress claims.

11. Interim Completion of the Project

The Consultant shall:

- (a) review the construction with the Departmental Representative and the Contractor, and record all unacceptable and incomplete work detected;
- (b) request from the Contractor, review for completeness and adequacy and provide the Departmental Representative with, all operation and maintenance manuals and any other documents or items to be provided by the Contractor, in accordance with the Construction Contract;
- (c) prepare and submit to the Departmental Representative for approval and processing, and as a basis for payment to the Contractor, an Interim Certificate of Completion as required by the Construction Contract, together with supporting documents properly signed and certified.

12. As-Built Record Drawings and 3D Models

For complete dam or lock replacement projects, As-Built Record Documentation shall include a 3D Dam or Lock Information Model (DIM or LIM) in an electronic format 100% compatible with AutoCAD Standard software. Detailed requirements for 3D DIM / LIM may vary on different projects, and shall be established in the Call-up Project Brief.

The Consultant shall, before issuance of the Final Certificate of Completion:

- (a) prepare and provide the Departmental Representative with a complete set of as-built record drawings, and 3D DIM / LIM model as the case may be, of the type and number as specified;
- (b) verify that record drawings are suitable for digital storage and retrieval, incorporating all recorded changes to the original working drawings based on as-built prints, drawings and other information provided by the Contractor and Subconsultants/Specialists, together with change orders and site instructions;
- (c) verify that record drawings are labeled "Record", dated, sealed and signed by the Consultant, and provide also a marked-up copy of the specifications recording changes thereto;
- (d) The consultant shall, within eight (8) weeks of issuing the final Certificate of Completion, furnish PWGSC with a complete set of AutoCAD "as-built record" drawings/files and with pertinent 3D Model files, which comply with all the requirements as specified in the PWGSC National CADD Standard and in this Project Brief.

13. Final Completion of the Project

The Consultant shall:

- (a) advise the Departmental Representative in writing that the construction has been completed in general conformity with the Construction Contract and the Approved Design;
- (b) make a final review of the construction with the Departmental Representative and the Contractor and, if satisfactory, prepare and submit to the Departmental Representative for approval and final payment to the Contractor, a Final Certificate of Completion as required by the Construction Contract, together with supporting documents properly signed and certified, including manufacturers' and suppliers' warranties.

RS 2.1.8 Resident Site Services During Construction

The Consultant shall ensure that every Resident Site Representative is intimately familiar with the general concept of the design and execution of works, as well as with all pertinent details and requirements of construction, sequencing, methodologies, etc. shown on Project Drawings and described in the Project Specifications, such that potential Contractor site errors are corrected in advance and at all times.

The Consultant's Resident Site Representatives shall:

- (a) Assist the Consultant in carrying his construction and contract administration duties.
- (b) Inspect all phases of the work in progress, for the purpose of bringing to the attention of the Contractor, after confirming with both the Consultant and the Departmental Representative, any discrepancies between the work, the contract documents and accepted construction procedures and practices.
- (c) Assist PWGSC in ensuring prompt implementation by the Contractor of all remedial actions which have been accepted by the Departmental Representative in writing, and issue a written confirmation of their completion to the Consultant, to the PWGSC Project Manager and to the Contractor.
- (d) Maintain a detailed and descriptive daily log of such inspections and of unexpected occurrences on site, and on a consistent day of each week electronically issue a weekly written report, which is to include pertinent photographs and be prepared in the format to be directed, to the Consultant and to the Departmental Representative. Once the report is reviewed and accepted by both parties, the Consultant is to distribute it to the Contractor and the affected Sub-contractors .
- (e) Prepare any other reports or surveys as may be requested by the Departmental Representative through the Consultant.
- (f) verify quantities of materials received and record work progress through photographs (digital files to be held by PWGSC).(g) submit a weekly photographic record of construction activity and site progress.

The Consultant's Resident Site Representatives **shall not**:

- (a) advise the client/users in any matter without obtaining guidance from PWGSC;
- (b) enter into the area of responsibility of the Contractor's superintendent;
- (c) respond to requests for project related information or questions from the media, municipalities or public. Such inquiries are to be directed to the Departmental Representative.

RS 2.1.9 Commissioning

The Consultant shall develop the specification and plan for commissioning of every new/replacement dam and water retaining structure and also for existing ones that have undergone major repairs/rehabilitation work that may affect their operation, provide commissioning services to verify that the department's functional requirements are correctly interpreted during the design stage and construction stages, and that the structures operate consistently, under all normal load conditions, temperatures, weather conditions, and in all operating positions. Consultant is required to develop a commissioning plan and specification to be incorporated into the construction tender documents which will detail how the commissioning is to proceed, and may be required to do so for other structures or components if so specified in a Call-up Project Brief.

RS 2.1.10 Estimating and Cost Planning

The Consultant shall provide:

- (a) cost consulting services by a Cost Estimating Specialist from the commencement of project design through to construction completion, including the preparation of complete estimates for all construction trades; estimates are to consider escalation, inflation, markets, contingency costs, etc.
- (b) The consultant responsible for estimating shall attend all project meetings throughout the design phases and be prepared to present and defend the estimates directly to the Departmental Representative.

RS 2.1.11 Risk Management

1. The Consultant shall provide support to the Project Manager in identifying risks and managing them throughout the project life cycle.
2. A risk management strategy is essential to the project management of PWGSC. Such a strategy combines project planning, design development planning, procurement planning and implementation planning.
3. Risk Management Process:
 - (a) Identify risk events based on past experience and using proposed checklist or other available lists;
 - (b) Qualify/quantify probability of risk event (Low, Medium, High) and their impact (Low, Medium, High);
 - (c) Prioritize risk events (i.e. concentrate efforts on risk events with High probability and Medium to High impact);
 - (d) Develop risk response (i.e. evaluate alternatives for mitigation. This is the real added-value of risk management); and
 - (e) Implement risk mitigation.

RS 2.1.12 Operation, Maintenance and Surveillance (OMS) manual, Emergency Response Plan (ERP) and Emergency Preparedness Plan (EPP)

The Consultant shall prepare an Operation, Maintenance and Surveillance (OMS) manual, Emergency Response Plan (ERP) and Emergency Preparedness Plan (EPP) as described in the Canadian Dam Association "Dam Safety Guidelines" and Directive for Dam Safety Program of Parks Canada Dams

and Water-Retaining Structures for structures owned by Parks Canada.

RS 2.1.13 Post Construction Services

The Consultant shall submit closure reports generally comprising of the following Record Documents:

1. Introduction:

- (a) Project history
- (b) Scope of work
- (c) Design development
- (d) Tendering process and award of contract

2. Project implementation:

- (a) Start - up meeting
- (b) Work plan and schedule of work
- (c) Field testing and quality control
- (d) Progress meetings and minutes
- (e) Health and safety
- (f) Change orders and site instructions

3. Issues and difficulties encountered during implementation:

- (a) Delays in the work
- (b) Review of claims

4. Operations and monitoring program

- (a) Inspections
- (b) Studies
- (c) Monitoring work

5. Conclusion and Summary including a Certificate of General Conformance

6. In Appendices:

- (a) Copy of specifications
- (b) Contract drawings
- (c) Contractor's Schedule
- (d) List of subcontractors and suppliers.
- (e) Digital photographs
- (f) As-built Record drawings and specification, with 3D DIM / LIM models on a USB drive where applicable.
- (g) Geotechnical, materials, testing reports if applicable
- (h) Environmental Considerations report
- (i) Bi-weekly progress summaries
- (j) Quality assurance (materials testing, water quality, specified materials, commissioning report, etc.)
- (k) Any other report related to the project

RS 2.1.14 Additional Services

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If required, any additional services will be identified at the time of each individual Call-up, and the Consultant will be responsible for the provision and management of these additional services.

RS 2.1.15 Sub-Consultant/Specialist Coordination

The Consultant shall perform all pertinent project management functions necessary for proper management of call-ups, including (but not limited to): management of its own in-house personnel, coordination of services between disciplines, management of sub-Consultants'/Specialists' services, and similar general management tasks.

The Consultant shall also coordinate and manage the services of additional sub-Consultants/Specialists* required to complete project requirements in support of the requested services under a Call-Up.

* Additional Sub-Consultants and Specialists refers to consultants outside of those included in the Consultant's Team Identification, attached in Appendix C, and as identified under TP 10.2.(d) Disbursements.

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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 three (3) 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 and work plans will be counted as one page per side.
8. The order of the proposals should follow the order of the Request for Standing Offer SRE 3 section, and each subsection should be identified with a Tab or a Page Divider.

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 forty (40) pages.

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

- Covering letter
- Table of Contents
- Tabs / Page Dividers (provided they are free of text and/or graphics)
- Declaration/Certifications Form (Appendix A)
- Integrity Provisions – Required Documentation
- Price Proposal Form (Appendix B)
- Team Identification (Appendix C)

- Front page of the Request for Standing Offer document
- Front page of revision(s) to the Request for Standing Offer document

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 Civil/Structural Engineering services, include staff specializing in Dams and Water-Retaining Structures, and must be licensed, or eligible to be licensed, certified or otherwise authorized to provide the necessary professional services to the full extent that may be required by provincial law in the province of Ontario.

This licensing and certification requirement also applies to key members of the Proponent's Team, including: Senior Personnel, Engineering Team Members, and other key Subconsultants/Specialists with the exception of the Cost Specialist and 3D Scanning Specialist.

You must indicate current professional license or how you intend to meet the provincial licensing requirements such that the project schedule is not adversely affected.

3.1.3 Integrity Provisions – Required Documentation

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

3.1.4 Consultant Team Identification

The consultant team to be identified must include the following members, all of whom specialize in Dam and Water-Retaining Structures within their respective fields:

Proponent (prime consultant)	- Civil/Structural Engineers
Key Sub-consultants/Specialists	- Hydrology Engineers
	- Seismology Engineers
	- Geotechnical Engineers
	- Water Hydraulics Engineers
	- Mechanical Engineers
	- Electrical/Controls Engineers

- Cost Estimating Specialists
- Surveying and 3D Scanning Specialist

Information required - name of firm, key personnel to be assigned to the standing offer for its duration and number of years of specialization in Dams and Water-Retaining Structures. For the prime and sub-consultants/specialist(s) indicate current professional license and issuing Canadian province, or country and state and/or how you intend to meet the Ontario provincial licensing requirements without generating any project delays. In the case of a joint venture identify the existing or proposed legal form of the joint venture (refer to General Instructions - Limitation of Submissions).

The Civil/Structural personnel must be in-house.

The consultant team is to be identified in Appendix C - Team Identification.

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 description and discussion of services that will be made available on individual Call-up for various types of dam and water-retaining structure projects;
 - (b) risk management strategies during : studies/investigations, design and construction phases.

3.2.2 Team Approach / Management of Services

1. *What we are looking for:*
How the overall Consultant Team will be managed and organized in its approach and methodology in the delivery of Required Services.
2. *What the Proponent should provide:*
A description of:
 - (a) Roles and responsibilities of key personnel;
 - (b) Assignment of resources and availability of back-up personnel, with emphasis on firm's capacity and ability to produce and complete required work on time coordinating all key disciplines, including project management;
 - (c) Management and organization (reporting structure chart); and
 - (d) Depth of firm's current staffing and capability to handle multiple projects concurrently in addition to ongoing work commitments for other clients. Provide number of specialized personnel (senior and intermediate) in each of the key disciplines (e) Quality control techniques which will be used on individual Call-ups resulting from this

standing offer (studies/investigations, design, and construction projects);

3.2.3 Proponent's Past Experience on Investigation/Study Projects

1. *What we are looking for:*

Demonstration that over at least the past ten (10) years, the Proponent, with or without its Sub-consultants/Specialists, has completed at least four (4) major investigations or studies of dams or water retaining structures requiring the pertinent scope of services listed in RS 2.1.2. The Proponent's participation in these projects should have involved a substantial portion of the pertinent scope of services listed.

2. *What the Proponent should provide:*

- a) A brief description of four (4) study/investigation projects completed within the last 10 years;
- b) For the above projects, include: the names of senior personnel and project personnel who were involved as part of the project team, their respective responsibilities, details of services provided, as well as separate design fees and construction costs per key discipline;
- c) Indicate the start and end dates the services were provided for the listed projects; and
- d) Overall project objectives, constraints and challenges encountered. Indicate how challenges were handled.

3. 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 indicate the responsibilities of each of the involved entities in each project.

3.2.4 Proponent's Past Experience on Design/Construction Projects

1. *What we are looking for:*

Demonstration that over at least the past ten (10) years, the Proponent, with or without its Sub-consultants/Specialists, has completed at least two (2) major dam and water retaining structure rehabilitations and two (2) dam and water retaining structure reconstruction projects requiring the majority of services listed in the Required Services (RS) section. The Proponent's participation in these projects should have involved a substantial portion of the scope of services listed in the Required Services (RS) section and the Proponent should have performed Civil/Structural work on these projects.

2. *What the Proponent should provide:*

- a) A brief description of four (4) significant projects (overall construction value between C\$3M and C\$30M) completed within the last 10 years, with at least two (2) projects that included significant Mechanical and Electrical/Controls design/construction components;
- b) For the above projects, include: the names of senior personnel and project personnel who were involved as part of the project team, their respective responsibilities, details of services provided, as well as separate design fees and construction costs per key discipline;
- c) Indicate the start and end dates the services were provided for the listed projects; and

- d) Overall project objectives, constraints and challenges encountered. Indicate how challenges were handled.
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 indicate the responsibilities of each of the involved entities in each project.

3.2.5 Senior Personnel Expertise and Experience

1. *What we are looking for:*

A demonstration that the Proponent has leadership and senior personnel, in-house and / or through listed Sub-consultants/Specialists, with the capability, capacity and expertise in each area listed in the Required Services (RS) section. A demonstration that the Proponent has senior personnel in-house with the capability, capacity and expertise to manage a Standing Offer arrangement and individual Call-ups, and to hire and successfully manage a team of external experts/specialists in all areas listed in the Required Services (RS) section, with the exception of Civil/Structural Engineering, which must be performed in-house. Senior Personnel should each have a minimum of ten (10) years of experience in their respective specialized fields of expertise.

2. *What the Proponent should provide: (one and half (1.5) pages **per** senior personnel is suggested)*

(a) submit a total of six (6) CVs for the following :

- i. Senior Personnel (one CV each discipline): Civil/Structural, Hydrology/Water Hydraulics, Mechanical, Electrical/Controls, Geotechnical/Seismology, Cost Estimating;

(b) Identify the personnel's proposed function, years of experience specifically on Dam and Water-Retaining Structure projects, the name of the firm, present position and number of years with the firm;

(c) professional accreditation and locale of accreditation;

(d) provide a list of dam and water-retaining structure projects worked on, describe work personally performed, project start/end dates, and project fees for this discipline; and

(e) accomplishments/achievements/awards.

3. In-house personnel means personnel within the Proponent's organization (see definition of Proponent in General Instructions GI 20).

3.2.6 Project Personnel Expertise and Experience

1. *What we are looking for:*

A demonstration that the Proponent has project personnel, in-house and / or through listed Sub-consultants/Specialists, with the capability, capacity and expertise to provide the required services and deliverables listed in the Required Services (RS) section. Project Personnel are the individuals who are proposed to perform the majority of analysis/design/investigative/modelling work required on each Call-up, and should each have a minimum of five (5) years of experience in their respective specialized fields of expertise,

2. *What the Proponent should provide: (one (1) page **per** project personnel is suggested)*

- (a) submit a maximum of 8 CVs for the following :
 - i. Intermediate engineers/specialists (minimum one (1) CV for each discipline): Civil/Structural, Hydrology/Water Hydraulics, Mechanical, Electrical/Controls, Geotechnical/Seismology;
 - ii. Intermediate specialist (one (1) CV): Cost Estimating;
- (b) Identify the personnel's years of experience specifically on Dam and Water-Retaining Structure projects, and the name of and number of years with the current employer;
- (c) professional accreditation and locale of accreditation;
- (d) provide a list of dam and water-retaining structure projects worked on, describe work personally performed, project start/end dates, and project fees for this discipline; 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).

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	1.0	0 - 10	0 - 10
Proponent's Past Experience in Study/Investigation Projects	2.0	0 - 10	0 - 20
Proponent's Past Experience in Design/Construction Projects	2.0	0 - 10	0 - 20
Senior Personnel Expertise and Experience	2.0	0 - 10	0 - 20
Project Personnel Expertise and Experience	2.0	0 - 10	0 - 20
Total	10.0		0-100

Generic Evaluation Table

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

	INADEQUATE	WEAK	ADEQUATE	FULLY SATISFACTORY	STRONG
0 point	2 points	4 points	6 points	8 points	10 points
Did not submit information which could be evaluated	Lacks complete or almost complete understanding of the requirements.	Has some understanding of the requirements but lacks adequate understanding in some areas of the requirements.	Demonstrates a good understanding of the requirements.	Demonstrates a very good understanding of the requirements.	Demonstrates an excellent understanding of the requirements.
	Weaknesses cannot be corrected	Generally doubtful that weaknesses can be corrected	Weaknesses can be corrected	No significant weaknesses	No apparent weaknesses
	Proponent do not possess qualifications and experience	Proponent lacks qualifications and experience	Proponent has an acceptable level of qualifications and experience	Proponent is qualified and experienced	Proponent is highly qualified and experienced
	Team proposed is not likely able to meet requirements	Team does not cover all components or overall experience is weak	Team covers most components and will likely meet requirements	Team covers all components - some members have worked successfully together	Strong team - has worked successfully together on comparable projects
	Sample projects not related to this requirement	Sample projects generally not related to this requirement	Sample projects generally related to this requirement	Sample projects directly related to this requirement	Leads in sample projects directly related to this requirement
	Extremely poor, insufficient to meet performance requirements	Little capability to meet performance requirements	Acceptable capability, should ensure adequate results	Satisfactory capability, should ensure effective results	Superior capability, should ensure very effective results

To be considered further, proponents **must** achieve a minimum weighted rating of sixty (60) out of the hundred (100) points available for the rated technical criteria as specified above.

No further consideration will be given to proponents not achieving the pass mark of sixty

(60) points.

SRE 4 PRICE OF SERVICES

All price proposal envelopes corresponding to responsive proposals which have achieved the pass mark of sixty (60) points 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
Total Score		100	0 - 100

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

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).

- | | |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Declaration / Certifications Form | – completed and signed form provided in Appendix A |
| <input type="checkbox"/> Integrity Provisions | – Required documentation – as applicable , in accordance with the <u>Ineligibility and Suspension Policy</u> (http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy- |

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-
- ☐ Integrity Provisions
- eng.html) and as per General instructions to Proponents (GI), Integrity Provisions – Proposal, **section 3a.**
- Declaration of Convicted Offences – **with its bid, as applicable**, in accordance with the Ineligibility and Suspension Policy (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>) and as per General instructions to Proponents (GI), Integrity Provisions – Proposal, **section 3b.**
- ☐ Proposal
- 1 original + [3] 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 envelope
- one (1) completed and submitted in a separate

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APPENDIX A

DECLARATION/CERTIFICATIONS FORM

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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 _____

Declaration / Certifications Form (page 2 of 5)

Federal Contractors Program for Employment Equity - Certification

I, the Proponent, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a proposal non-responsive, or may set-aside a Standing Offer, or will declare a consultant in default, if a certification is found to be untrue, whether during the proposal evaluation period, during the Standing Offer period, or during the contract period. Canada will have the right to ask for additional information to verify the Proponent's certifications. Failure to comply with any request or requirement imposed by Canada may render the proposal non-responsive, may result in the Standing Offer set-aside, or constitute a default under the contract.

For further information on the Federal Contractors Program for Employment Equity visit [Employment and Social Development Canada \(ESDC\)-Labour's website](#).

Date: _____ (YY/MM/DD) (If left blank, the date will be deemed to be the RFSO closing date.)

Complete both A and B.

A. Check one of the following:

- ☐ A1. The Proponent certifies having no work force in Canada.
- ☐ A2. The Proponent certifies being a public sector employer.
- ☐ A3. The Proponent certifies being a federally regulated employer being subject to the *Employment Equity Act*.
- ☐ A4. The Proponent certifies having a combined work force in Canada of less than 100 permanent full-time and/or permanent part-time employees.

A5. The Proponent certifies having a combined workforce in Canada of 100 or more employees; and

- ☐ A5.1. The Proponent certifies already having a valid and current Agreement to Implement Employment Equity (AIEE) in place with ESDC-Labour.

OR

- ☐ A5.2. The Proponent certifies having submitted the Agreement to Implement Employment Equity (LAB1168) to ESDC-Labour. As this is a condition to issuance of a standing offer, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- ☐ B1. The Proponent is not a Joint Venture.

OR

- ☐ B2. The Proponent is a Joint venture and each member of the Joint Venture must provide the Contracting Authority with a completed Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the General Instructions to Proponents)

Declaration / Certifications Form (page 3 of 5)

Former Public Servant (FPS) - Certification

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

Definitions

For the purposes of this clause,

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

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

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

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

Former Public Servant in Receipt of a Pension

As per the above definitions, is the Proponent a FPS in receipt of a pension? YES () NO ()

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

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

By providing this information, proponents agree that the successful Proponent's status, with respect to

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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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Declaration / Certifications Form (page 4 of 5)

Work Force Adjustment Directive

Is the Proponent a FPS who received a lump sum payment pursuant to the terms of a Work Force Adjustment Directive? YES () NO ()

If so, the Proponent must provide the following information:

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

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including the Goods and Services Tax or Harmonized Sales Tax.

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Declaration / Certifications Form (page 5 of 5)

Name of Proponent:

This Declaration forms part of the offer.

Education, Professional Accreditation and Experience:

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

DECLARATION:

I, the undersigned, being a principal of the Proponent, hereby certify that the information given on this form and in the attached Proposal is accurate to the best of my knowledge.

Name (print): _____

Capacity: _____

Signature _____

Telephone Number: () _____

Fax Number: () _____

E-mail: _____

Date: _____

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

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

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APPENDIX B

PRICE PROPOSAL FORM

APPENDIX B - PRICE PROPOSAL

INSTRUCTIONS

1. Complete the 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 HST 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, the following requirements must be strictly adhered to: Proponents **must** provide an hourly rate for **each** category of personnel. 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. **There must be neither no \$0 value nor NIL value. Failure to insert an hourly rate for each category of personnel will render your proposal non-responsive.**
5. In order to ensure that fair and competitive unit prices are received, the following requirements must be strictly adhered to: Proponents **must** provide a unit price for **each** category of service. **There must be neither no \$0 value nor NIL value. Failure to insert a unit price for each category of service will render your proposal non-responsive.**
6. The Fixed Hourly Rates and Unit Prices shall govern in establishing the Total Extended Amounts and/or Subtotals. Any arithmetical errors in this Appendix will be corrected by Canada
7. The hourly rates identified for all disciplines, including sub-consultants and specialists and unit prices for all laboratory services will be for the duration of the Standing Offer.
8. 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).
9. For the purposes of this clause, the definition of "Partners or Principals" is extended to included upper management, which includes Presidents, Vice-presidents, Regional Directors and Directors.

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ONTARIO REGION

Name of Proponent: _____

Address: _____

1. CIVIL/STRUCTURAL ENGINEER

Category of Personnel	Weight Factor (A)	Fixed Hourly Rate (B)	Total (C) = (A X B)
Partners or principals of the firm	5	\$	\$
Senior Engineer	25	\$	\$
Intermediate Engineer	35	\$	\$
Intermediate Technician	15	\$	\$
Junior Engineer	15	\$	\$
Administrative Support	5	\$	\$
Total	100		\$

2. HYDROTECHNICAL / WATER HYDRAULICS ENGINEER

Category of Personnel	Weight Factor (A)	Fixed Hourly Rate (B)	Total (C) = (A X B)
Partners or principals of the firm	5	\$	\$
Senior Engineer	25	\$	\$
Intermediate Engineer	35	\$	\$
Intermediate Technician	15	\$	\$
Junior Engineer	15	\$	\$
Administrative Support	5	\$	\$
Total	100		\$

3. GEOTECHNICAL/SEISMOLOGY ENGINEER

Category of Personnel	Weight Factor (A)	Fixed Hourly Rate (B)	Total (C) = (A X B)
Partners or principals of the firm	5	\$	\$
Senior Engineer	25	\$	\$
Intermediate Engineer	35	\$	\$
Intermediate Technician	15	\$	\$
Junior Engineer	10	\$	\$
Junior Technician	5	\$	\$
Administrative Support	5	\$	\$

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Total	100		\$
--------------	-----	--	----

4. COST ESTIMATION SPECIALIST

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

5. MECHANICAL ENGINEER

Category of Personnel	Weight Factor (A)	Fixed Hourly Rate (B)	Total (C) = (A X B)
Partners or principals of the firm	5	\$	\$
Senior Engineer	25	\$	\$
Intermediate Engineer	35	\$	\$
Intermediate Technician	15	\$	\$
Junior Engineer	15	\$	\$
Administrative Support	5	\$	\$
Total	100		\$

6. ELECTRICAL/CONTROLS ENGINEER

Category of Personnel	Weight Factor (A)	Fixed Hourly Rate (B)	Total (C) = (A X B)
Partners or principals of the firm	5	\$	\$
Senior Engineer	25	\$	\$
Intermediate Engineer	35	\$	\$
Intermediate Technician	15	\$	\$
Junior Personnel	15	\$	\$
Administrative Support	5	\$	\$
Total	100		\$

7. SURVEYOR and 3D SCANNING SPECIALIST

Category of Personnel	Weight Factor (A)	Fixed Hourly Rate (B)	Total (C) = (A X B)
Partners or principals of the firm	5	\$	\$

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Ontario Land Surveyor	20	\$	\$
3D Laser Scanning Specialist	20	\$	\$
3D Underwater Scanning Specialist	20	\$	\$
Intermediate Personnel	20	\$	\$
Junior Personnel	10	\$	\$
Administrative Support	5	\$	\$
Total	100		\$

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TOTAL FOR EVALUATION PURPOSES FOR ONTARIO

Discipline	Weight Factor (A)	Sub-Total from tables above (B)	Total (C) = (A X B)
Civil/Structural Engineer	30	\$	\$
Hydrotechnical Engineer	10	\$	\$
Geotechnical/Seismology Engineer	10	\$	\$
Cost Estimation Specialist	10	\$	\$
Mechanical Engineer	20	\$	\$
Electrical/Controls Engineer	15	\$	\$
Surveyor and 3D Scanning Specialist	5	\$	\$
Total for all disciplines (D)	100		\$

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Name and Signature of Consultant or Joint Venture Consultants.

.....
signature

.....
signature

.....
capacity

.....
capacity

.....
signature

.....
signature

.....
capacity

.....
capacity

END OF PRICE PROPOSAL FORM

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APPENDIX C

TEAM IDENTIFICATION

TEAM IDENTIFICATION

INSTRUCTIONS

1. Complete the Consultant Team Identification in the format provided below, including the following information for each identified team member of the Consultant Team; Name, Category of Personnel, Professional Licensing Status, and where pertinent, Years of Specialization in Dams and Water-Retaining Structures.
2. Provide short C.V.s for each identified team member. C.V's should have sufficient detail to explain experience in the respective discipline(s).
3. C.V's provided under Appendix C - Team Identification, will not form part of the evaluation or page limitation identified under the SRE 3.2 Rated Requirements section, and are to appear under the Appendix C section only.

Please note, the SRE 3.2 Rated Requirements section has a separate requirement which includes the provision of C.V's for evaluation purposes (SRE 3.2.5 and 3.2.6).

I. Prime Consultant (Proponent): Civil/Structural Engineer (Dams and Water-Retaining Structures)

Firm:

Name

Key Individuals:

Category of Personnel	Name	Professional Licensing Status <i>(incl. Province / State / Country)</i>	Years of Specialization in Dams and Water-Retaining Structures
Standing Offer Manager			
Principal			
Principal			
Senior Specialist Engineer			
Senior Specialist Engineer			
Alternate Senior Specialist Engineer			
Intermediate Specialist Engineer			
Intermediate Specialist Engineer			
Alternate Intermediate Specialist Engineer			

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Intermediate Technician			
Intermediate Technician			

II. A. Key Sub Consultants/Specialist: Hydrotechnical / Water Hydraulics Engineer

Firm:

Name

Key Individuals:

Category of Personnel	Name	Professional Licensing Status (incl. Province / State / Country)	Years of Specialization in Dams and Water-Retaining Structures
Principal			
Principal			
Senior Specialist Engineer			
Alternate Senior Specialist Engineer			
Intermediate Specialist Engineer			
Alternate Intermediate Specialist Engineer			
Intermediate Technician			

B. Key Sub Consultants/Specialist: Geotechnical/Seismology Engineer

Firm(s):

Name(s)

Key Individuals:

Category of Personnel	Name	Professional Licensing Status (incl. Province / State / Country)
Principal		
Principal		
Senior Specialist Engineer		

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Alternate Senior Specialist Engineer		
Intermediate Specialist Engineer		
Alternate Intermediate Specialist Engineer		
Intermediate Technician		

C. Key Sub Consultants/Specialist: Cost Estimation Specialist**Firm:**

Name

Key Individuals:

Category of Personnel	Name	Professional Licensing Status (incl. Province / State / Country)
Principal		
Principal		
Senior Specialist Engineer		
Alternate Senior Specialist Engineer		
Intermediate Specialist Engineer		
Alternate Intermediate Specialist Engineer		

D. Key Sub Consultants/Specialist: Mechanical Engineer**Firm:**

Name

Key Individuals:

Category of Personnel	Name	Professional Licensing Status (incl. Province / State / Country)	Years of Specialization in Dams and Water-Retaining Structures
Principal			
Principal			

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Senior Specialist Engineer			
Alternate Senior Specialist Engineer			
Intermediate Specialist Engineer			
Alternate Intermediate Specialist Engineer			
Intermediate Technician			

E. Key Sub Consultants/Specialist: Electrical/Controls Engineer**Firm(s):**

Name

Key Individuals:

Category of Personnel	Name	Professional Licensing Status <i>(incl. Province / State / Country)</i>	Years of Specialization in Dams and Water-Retaining Structures
Principal			
Principal			
Senior Specialist Engineer			
Alternate Senior Specialist Engineer			
Intermediate Specialist Engineer			
Alternate Intermediate Specialist Engineer			
Intermediate Technician			

F. Key Sub Consultants/Specialist: Surveyor and 3D Scanning Specialists**Firm(s):**

Name(s)

Key Individuals:

Category of Personnel	Name	Professional Licensing Status <i>(incl. Province / State / Country)</i>

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CCC No./N° CCC - FMS No/ N° VME

Principal		
Principal		
Senior Specialist: Ontario Land Surveyor		
Specialist: 3D Sonar Scanning		
Specialist: 3D Laser Scanning		
Intermediate Specialist		
Intermediate Technician		

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CCC No./N° CCC - FMS No/ N° VME

APPENDIX D

DOING BUSINESS WITH PWGSC

(see attached)

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CCC No./N° CCC - FMS No/ N° VME

APPENDIX E

HERITAGE CANALS AND ENGINEERING WORKS CADD STANDARDS SUPPLEMENT

(see attached)

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Buyer ID - Id de l'acheteur

pw1041

CCC No./N° CCC - FMS No/ N° VME

APPENDIX F

PERFORMANCE EVALUATION

CONSULTANT PERFORMANCE EVALUATION REPORT FROM

(CPERF)

(see attached)

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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

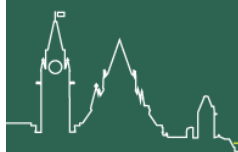
(<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913-1.pdf>), is used to record the performance



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Government Services
Canada

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Services gouvernementaux
Canada

Canada



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GOVERNMENT,
Serving
CANADIANS.

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Last updated: April 8, 2013

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SECTION 5 TIME MANAGEMENT	16

Appendices

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

SECTION 1 INTRODUCTION

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

SECTION 2 PWGSC NATIONAL CADD STANDARD

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

Refer to:

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

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

SECTION 3 GUIDE TO PREPARATION OF CONSTRUCTION DOCUMENTS FOR PWGSC

1 Purpose

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

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

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

2 Principles of PWGSC Contract Documents

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

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

3 Quality Assurance

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

SPECIFICATIONS

1 National Master Specification

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

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

2 Specification Organization

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

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

3 Terminology

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

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

4 Dimensions

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

5 Standards

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

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

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

6 Specifying Materials

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

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

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

Acceptable Materials: set up the paragraph format as follows:

Acceptable Materials:

1. ABC Co. Model [_____].
2. DEF Co. Model [_____].
3. GHI Co. Model [_____].

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

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

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

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

"Designated Contractor

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

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

"Designated Contractor

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

and in Part 2 as "Materials

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

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

"Acceptable materials

.1 The only acceptable materials are [] .”

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

7 Unit Prices

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

Use the following wording:

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

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

Sample of Unit Price Table:

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

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

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

8 Cash Allowances

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

9 Warranties

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

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

Delete all references to manufacturers' guarantees.

10 Scope of Work

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

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

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

12 Related Sections

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

13 Index

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

14 Regional Guide

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

15 Health and Safety

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

16 Designated Substances Report

Include "Section 01 14 25 - Designated Substances Report"

17 Subsurface Investigation Reports

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

Subsurface investigation report(s)

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

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

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

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

18 Experience and Qualifications

Remove experience and qualification requirements from specification sections.

19 Prequalification and Pre-award submissions

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

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

20 Contracting Issues

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

Remove all references within the specifications, to the following:

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

DRAWINGS

1 Title Blocks

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

2 Dimensions

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

3 Trade Names

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

4 Specification Notes

No specification type notes are to appear on any drawing.

5 Terminology

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

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

6 Information to be included

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

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

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

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

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

ADDENDA

1 Format

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

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

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

2 Content

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

DOCUMENTATION

Translation

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

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

Consultant shall provide:

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

PWGSC shall provide:

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

SECTION 4 CLASSES OF CONSTRUCTION COST ESTIMATES USED BY PWGSC

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

Class 'D' (Indicative) Estimate:

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

Submit Class D cost estimates in elemental cost analysis format latest edition issued by the Canadian Institute of Quantity Surveyors with cost per m² for current industry statistical data for the appropriate building type and location. Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.

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

Class 'C' Estimate:

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

Submit Class C cost estimates in elemental cost analysis format latest edition issued by the Canadian Institute of Quantity Surveyors with cost per m² for current industry statistical data for the appropriate building type and location. Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.

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

Class 'B' (Substantive) Estimate:

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

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

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

Class 'A' (Pre-Tender) Estimate:

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

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

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

SECTION 5 TIME MANAGEMENT

1 Time Management, Planning, and Control

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

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

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

1.1 Schedule Design

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

When building a Control System you must consider:

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

1.2 Schedule Development

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

Work Breakdown Structure

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

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

The WBS is as follows:

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

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

Major and Minor Milestones

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

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

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

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

Activities

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

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

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

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

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

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

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

Project Logic

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

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

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

Activity Duration

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

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

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

Activity List

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

Milestone List

A Milestone List identifies all project Major and Minor milestones.

Master Schedule

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

Detailed Project Schedule

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

1.3 Schedule Review and Approval

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

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

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

1.4 Schedule Monitoring and Control

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

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

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

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

Progress Reports

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

The Progress Report includes:

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

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

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

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

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

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

Exception Report

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

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

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

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

1.5 Standard Submissions

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

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

1.6 Schedule Outputs and Reporting Formats

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

Progress Reports

Paper Size: Letter

Paper Format: Portrait

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

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

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

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

Exception Reports

Paper Size: Letter

Paper Format: Portrait

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

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

Paper Size: Letter

Paper Format: Landscape

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

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

Work Breakdown Structure (indent tree):

Paper Size: Letter

Paper Format: Portrait

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

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

Activity Lists

Paper Size: Letter

Paper Format: Portrait

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

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

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

Milestone Lists

Paper Size: Letter

Paper Format: Portrait

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

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

Master Schedule (Bar Chart)

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

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

Detailed Project Schedules (Bar Chart)

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

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

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

Last updated November 21, 2012

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

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

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

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

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

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

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

Consultant's Representative: _____

Firm name: _____

Signature: _____ Date: _____

APPENDIX 'B' - Sample of Addendum

Last updated April 22, 2008

ADDENDUM No. _____

Project Number: _____

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

DRAWINGS

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

- 1 A1 Architectural
- .1

SPECIFICATIONS

SPEC NOTE: indicate section number and title.

- 1 Section 01 00 10 - General Instructions

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

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

APPENDIX 'C' - Sample of Index

Last updated April 22, 2008

Project No: _____

Index
Page 1 of _____

DRAWINGS AND SPECIFICATIONS

DRAWINGS:

SPEC NOTE: List all Drawings by number and title.

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

SPECIFICATIONS:

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

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

APPENDIX 'D'

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

Issued by:

Real Property Contracting Directorate

PWGSC

May 2005

Last Updated: June 3, 2008

Version 1.0

PREFACE

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

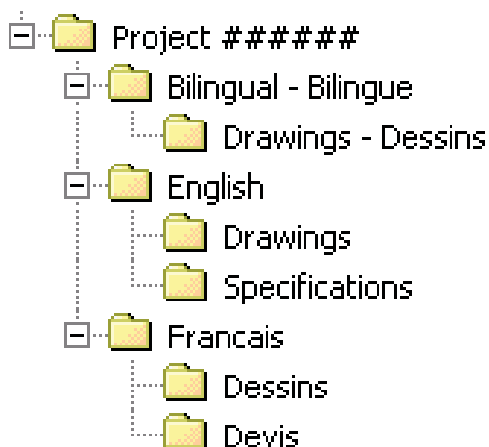
There is therefore a need to adopt a common directory structure and file-naming convention to ensure that the information made available to contractors electronically and in hard (printed) copy is in accordance with the sequence adopted in the real property industries, both for design and construction.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

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

1. DIRECTORY STRUCTURE

1.1 1st, 2nd and 3rd Tier Sub-Folders

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



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

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

IMPORTANT:

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

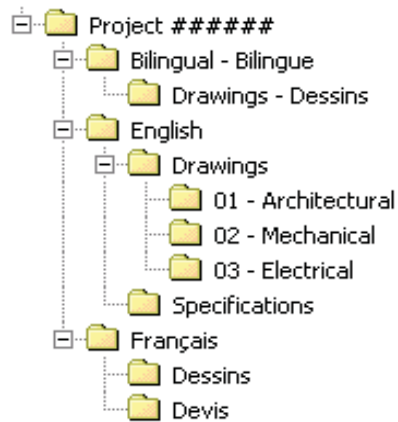
1.2 4th Tier Sub-Folders for Drawings

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

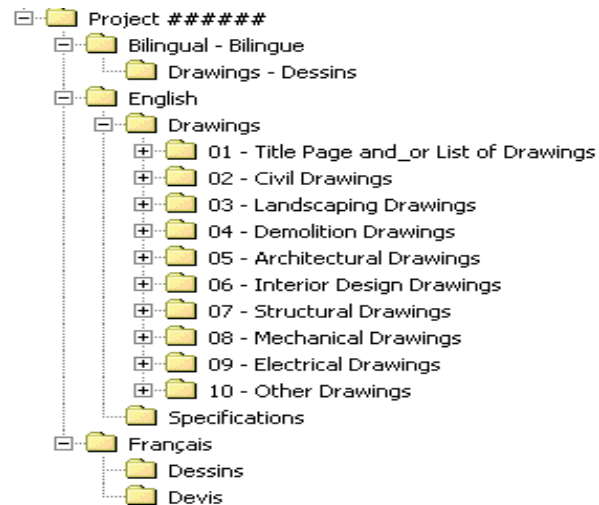
Because the order of appearance of the sub-folders on the screen will also determine the order of printing, it is necessary to start with a number the identification name of the sub-folders in the “Drawings – Dessins”, “Drawings” and “Dessins” folders.

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

Examples of 4th Tier sub-folders for drawings:



or



1.2.1 Naming Convention

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

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

- Y

Where:

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

Y = The title of the folder

Example: 03 – Mechanical

For the “*Drawings - Dessins*” folder:

- Y - Z

Where:

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

Y = The English title of the folder

Z = The French title of the folder

Example: 04 - Electrical - Électricité

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

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

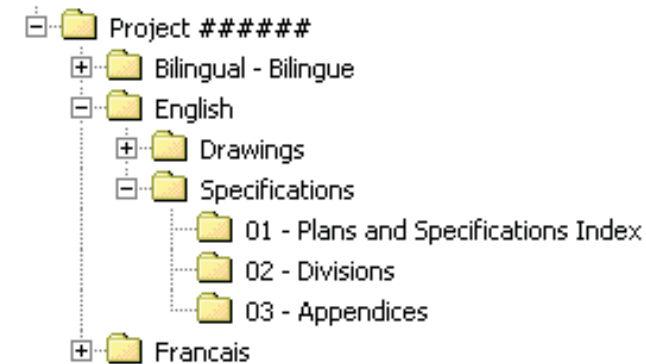
- The alphanumerical sorting is done on an ascending order;
- The alphanumerical order of the sub-folders determines the order of appearance on the screen as well as the order of printing (as an example: all the drawing PDF files in the 01 sub-folder will be printed in alphanumerical order before the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

1.3 4th Tier Sub-Folders for Specifications

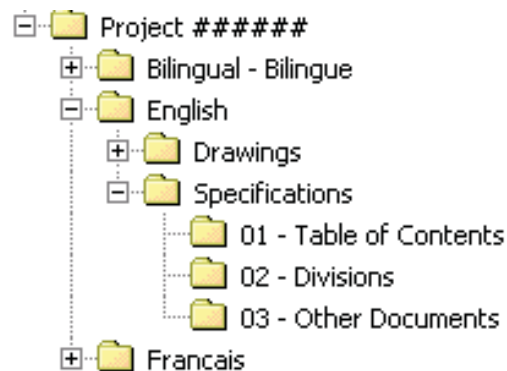
The “*Specifications*” and “*Devis*” folders must have 4th Tier sub-folders created to reflect the various elements of the specifications.

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

Examples of 4th Tier sub-folders for specifications:



or



1.3.1 Naming Convention

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

For the “Specifications” and “Devis” folders:

- Y

Where:

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

Y = The title of the folder

Example: 02 – Divisions

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

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

screen display and printing as per the following rules:

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

2. NAMING CONVENTION FOR PDF FILES

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

2.1 Drawings

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

X### - Y

Where:

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

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

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

Example: A001 - First Floor Details

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

The following important points about drawings are to be noted:

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

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

- Y

Where:

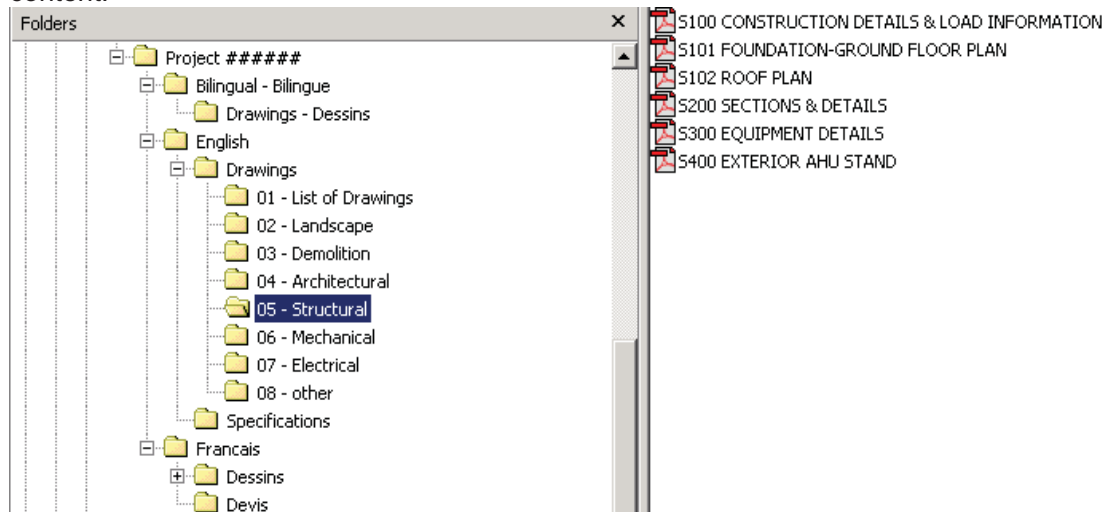
= A two digit number ranging from 01 to 99 (leading zeros must be included)

Y = The name of the drawing

Example: 01 - Title Page
02 - List of Drawings

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

Example of a 4th Tier Drawings sub-folder's content:



2.2. Specifications

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

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

2.2.1 Documents other than Specifications Divisions

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

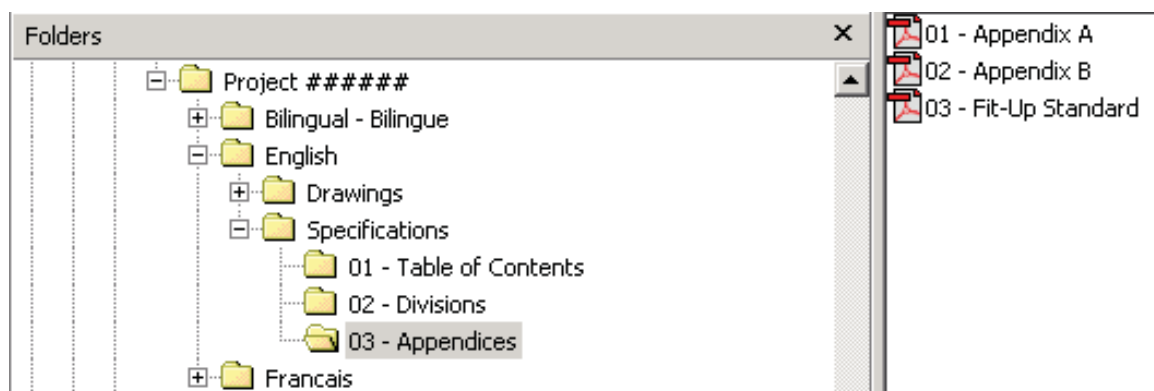
- Y

Where:

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

Example: 01 - Plans and Specifications Index

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



2.2.2 Specifications Divisions

The Specifications Divisions must be named as follows:

Division ## - Y

Where:

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

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

Example: Division 05 – Metals

The following important point about specifications is to be noted:

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

Example of a “Divisions” sub-folder content:



3. CD-ROM LABEL

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

Project *Number* / *Numéro de projet*

Project *Title* / *Titre du projet*

Documents for Tender / Documents pour appel d'offres

CD X of/de X

Example:

Project 123456 / Projet 123456

Repair Alexandra Bridge / Réparation du pont Alexandra

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

APPENDIX 'E'

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

Issued by:
Real Property Contracting Directorate
PWGSC

May 2005 Last Updated: May 3, 2005

Version 1.0

PREFACE

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

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

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

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

1. PRINTER DRIVERS

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

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

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

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

2. PRINTER CONFIGURATION

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

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

3. CREATING PDF FILES

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

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

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

4. PDF FILES SETTINGS

4.1 Security

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

4.2 Drawing Orientation

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

4.3 Font Type

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

4.4 Resolution

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

4.5 Scale

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

5. SCANNING

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

6. FINAL CHECKLIST

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

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

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

7. ADDITIONAL INFORMATION

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



Heritage Canals and Engineering Works CADD Standards

Supplement to:
PWGSC National CADD Standard
and
CADD Guidelines for Consultants,
PWGSC - Ontario Region





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APPENDIX A - ABBREVIATIONS, ACRONYMNS AND TERMS





INTRODUCTION

The Ontario Region, part of Public Works and Government Services Canada, maintain professional and technical services that support service management and service delivery in the areas of operations and maintenance, planning, design, renovation and construction of federal facilities. The Heritage Canals and Engineering Works (HCEW) group, of the Ontario Region, is one such service provider. HCEW provides specialized expertise in project delivery, structural engineering and heritage conservation.

This PWGSC CADD Standard Supplement – Heritage Canals and Engineering Works (HCEW), is to ensure consistent contract drawings, and uniform requirements for design deliverables. These standards must be read in conjunction with the PWGSC National CADD Standard and the CADD Guidelines for Consultants, PWGSC - Ontario Region. These documents can be found online or can be obtained from the contact person listed below

This document is intended as a guide to the creation of drawings associated with structural projects for HCEW only.

For information on this document, please contact:

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1.1 Contract Drawing Frame

A contract-drawing frame is available with the PWGSC National CADD Standards. This frame shall be used on all contract drawing sheets with the exception of the cover page. See Figure 1.

Figure 1

The figure shows a standard contract drawing frame. It consists of a large rectangular area for the drawing, and a vertical title block on the right side. The title block contains the following information:

- Canada** logo and text.
- STATUS** section with a table for project status.
- PROJECT** section with a table for project details.
- DRAWING** section with a table for drawing details.
- REVISIONS** section with a table for revision details.
- APPROVALS** section with a table for approval details.

PROJECT	PROJECT-1	PROJECT-2	PROJECT-3	PROJECT-4
PROJECT-1				
PROJECT-2				
PROJECT-3				
PROJECT-4				

DRAWING	DRAWING-1	DRAWING-2	DRAWING-3	DRAWING-4
DRAWING-1				
DRAWING-2				
DRAWING-3				
DRAWING-4				

REVISIONS	REVISION-1	REVISION-2	REVISION-3	REVISION-4
REVISION-1				
REVISION-2				
REVISION-3				
REVISION-4				

APPROVALS	APPROVAL-1	APPROVAL-2	APPROVAL-3	APPROVAL-4
APPROVAL-1				
APPROVAL-2				
APPROVAL-3				
APPROVAL-4				





1.1.1 Drawing Number

The drawing number is a three digit number used to identify each drawing within the drawing package. The first drawing in the set (typically the cover sheet) will be numbered 000 and all subsequent drawings will be numbered sequentially and increase by one.

In a major multi-disciplinary project the project coordinator may decide to number the drawings sequentially but also give a block of numbers for each discipline such that the roadway drawings would be numbered starting from 100, the structural drawings would start at 200, the electrical starting at 300 etc... Other similar methods may be used providing the drawing set is numbered in a logical fashion.

Do not confuse the drawing number with the sheet number. For information about the sheet number, see Section 1.2.3.

Examples of drawing number in a typical structural drawing set:

000	Cover Sheet
100	General Arrangement
101	Abutment Removals
102	Abutment Repairs
103	Girder Removals and Repairs
104	Deck Removals
105	Deck Repairs
106	Sections and Details I
107	Sections and Details II
108	Standard Details I
109	Standard Details II
200	Electrical Plan
201	Electrical Removals
202	Electrical Details
300	Mechanical Plan
301	Mechanical Removals
302	Mechanical Details

1.1.2 Sheet Number

The sheet number area is broken into two parts (left and right). It's purpose is to define each drawings sequential order in the drawing set and the total number of sheets in the set.

The left side represents the number of the drawing sheet within the set and the right side represents the total number of drawing sheets in the set.

Once a project is nearing completion and you can be relatively assured that no more drawings will be added, you can begin the task of numbering the sheets.

The sheets are numbered beginning with the cover sheet (sheet number 0) and progress sequentially, increasing by one, to the last sheet.





1.1.3 Professional Seal

A professional seal and signature is required on Tender and Construction Issue drawings and any addendums or change orders. An electronic facsimile of a professional seal and signature is not acceptable. Only original printed copies will be accepted with professional stamp and signature.

1.1.4 Revisions

There are several stages a set of contract drawings go through from their inception until they are issued for as-built status. During the design and construction phases the drawings are issued at various stages and the history of the drawings are recorded in the revision area of the drawing frame.

A revision may refer to a type of drawing issue (tender, construction, as-built) or a type of drawing change (addendum or change order). See below for more details on each type of revision.

Each revision is given a number in the revision history beginning at one and incrementing by one for each subsequent revision. The number for each revision does not have to match on every drawing in the package (ie. the tender issue might be revision number three on one drawing and revision five on another).

Revisions shall be made to the digital CADD files only and a new set of drawings distributed as required. Hand drawn modifications are not permitted.

1.1.4.1 Drawing Issue

During the course of any project, the drawings are issued at a series of milestones dictated by the type and scale of the project. The milestones may include but are not limited to the following;

- Issued for Client Review (may also include a percentage of completeness)
- Issued for Approval
- Issued for Tender
- Issued for Construction
- As-Built

It is not necessary to put a triangle around the revision number for drawing issues. The initials that accompany a revision are to identify the project manager that initiated the change.

1.1.4.2 Drawing Change

A drawing change refers to a change to any or all of the contract drawings and is recorded only on the drawing(s) that are affected by the change.

After the tender issue and before the construction issue, any changes to the drawings that may affect the bidding process, are issued as addendums and logged as such in the revision area. If the changes don't affect the bidding process, there is no need to record the changes in the revision history, unless it is a change you want to specifically draw the contractor's attention to once the drawings are issued for construction.

After the construction issue and before the as-built issue, any changes to the drawings are issued as change orders and logged as such in the revision area of each drawing that is affected by the change order.





Drawing changes are identified by an octagon (or triangle) shape around the revision number, dated and briefly described in revision area. Revision octagon and number shall also be placed adjacent to the area on the drawing that was revised.

Should a drawing change be applicable to a large isolated portion of the drawing, a revision cloud can be used to surround the affected area and an octagon placed next to the cloud.

If the revision is general in nature and affects most of the drawing, you can put 'General Revision' in the revision history and, in this case, it is not necessary to put an octagon next to the areas on the drawing that are affected by the change.

Examples:

PLAN AND PROFILE 1

NO.	REVISIONS	BY	DATE
1	ISSUED FOR UTILITY CIRCULATION	S.T.P.	31/04/2007
2	ISSUED FOR MOE APPROVAL	S.T.P.	12/05/2007
3	ISSUED FOR TENDER	S.T.P.	05/08/2007
④	CD #4 REVISED	S.T.P.	26/06/2007
⑤	REVISED INV. MH NO. 3	S.T.P.	27/06/2007
6	ISSUED FOR CONSTRUCTION	S.T.P.	04/07/2007

PLAN AND PROFILE 2

NO.	REVISIONS	BY	DATE
1	ISSUED FOR UTILITY CIRCULATION	S.T.P.	31/04/2007
2	ISSUED FOR MOE APPROVAL	S.T.P.	12/05/2007
3	ISSUED FOR TENDER	S.T.P.	05/08/2007
④	RADIUS ADJUSTMENT - STA. 1+145	S.T.P.	26/06/2007
5	ISSUED FOR CONSTRUCTION	S.T.P.	04/07/2007



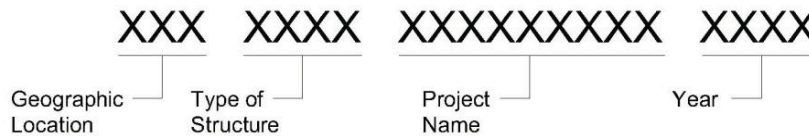


1.1.5 Plotting of Filename, Path, Date, and Time

Filename, path, date, and time are to appear on lower left corner of title block, outside of drawing frame. All submitted drawings shall include up-to-date plot date information.

1.2 Folder Structure

Design files related to a particular project should reside in a unique folder. The folder should consist of four distinct fields as follows.



Geographic Location Field XXX XXXX XXXXXXXXXXXX XXXX

The geographic location field represents the general geographical location of the project (ie. R for Rideau Canal, T for Trent Waterway, SSM for Sault Ste. Marie, etc...). This field can be one to three characters long or, in the case of a fort, may be omitted.

Type of Structure Field xxx XXXX XXXXXXXXXXXX XXXX

The type of structure field describes the type of structure (ie. Lock, Dam, Bridge, Weir, etc..) and typically ranges from three to six characters.

Project Name Field xxx xxxx XXX XXXXX XXXX

The third field consists of the project title.

Year Field xxx xxxx XXXXXXXXXXXX XXXX

The fourth field is the year the project was initiated.

Examples: **R Lock Jones Falls 2010**
 T Dam Swift Rapids 2000
 SSM Lock Repairs 2010

1.2.1 Sub Folders

A copy of the CADD files should be saved, in a separate sub-folder, as a record of each submission. Typical submissions are at the following stages of design; Preliminary Review, Tender, Construction and As-Built issues. Sub-folders should be identified with the corresponding submission type (ie. \Tender).





Example:

```
\\ Lock at Jones Falls 2010\Tender\105063-000-Cov.dgn
                                     \105063-base.dgn
                                     \105063-009-det2.dgn

...\\Construction\105063-000-Cov.dgn
                                     \105063-base.dgn
                                     \105063-009-det2.dgn

...\\As-Builts\105063-000-Cov.dgn
                                     \105063-base.dgn
                                     \105063-009-det2.dgn
```

1.2.2 PDF Files

Although CADD files must be saved in their native file format, HCEW recognizes that there are many advantages to PDF files and as such may also require PDF versions of the contract drawings.

If PDF files are required, then the following guidelines shall be adhered to.

- Plotted to scale.
- On B1 (707x1000mm) sheet.
- Able to be opened with Adobe Acrobat 5.0.
- Line styles and weights same as hard copies.

1.2.3 Drawing Clean Up

Before saving the CADD file for a major milestone, the files shall be purged and all unnecessary data (working lines etc...) shall be deleted. Ideally, only the title block and the data within should remain.

Also, the drawings shall not contain any electronic signatures or hyperlinks.

1.2.4 File Delivery

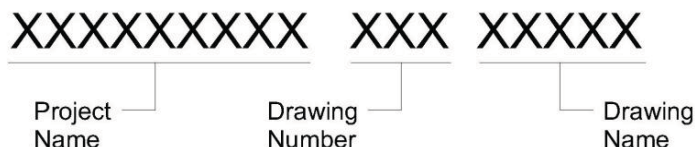
When CADD files are saved for major milestones, the references and all other supporting files, sketches and images shall be placed in the same folder as the contract drawing files. The folder name shall reflect the milestone for which it is being submitted.

1.3 CADD File Naming Conventions

The CADD file name contains distinctive naming fields to easily identify the project name, drawing number and drawing name.

The project manager will supply field one; fields two and three are filled in by the CADD operator that creates the file, using the following procedure :





Project Name Field

XXXXXXXXXX XXX XXXXX

The project name field is populated with the name of the project, shortened or abbreviated, as required.

Drawing Number Field

XXXXXXXXXX XXX XXXXX

The drawing number field is populated with the drawing number as found in the title block in the Dwg. No box. See Section 1.1.1 for a description of the drawing number.

Drawing Name Field

XXXXXXXXXX XXX XXXXX

The drawing name is user-defined information pertaining to area, scope or content of the drawing. See the lists below for some common drawing name abbreviations.

The drawing name may include a number representing the number of drawings in a series of similar drawing types (i.e. **s&d3** where the 3 represents the third sections and details drawing). Where only one drawing of a given type exists, do not include a digit.

Typical drawing name abbreviations for reference files are as follows:

base - Base Information
utility - Utility Information

Typical drawing name abbreviations for contract drawing files are as follows:

Cov - Cover	BmDim - Beam Dimensions
GA - General Arrangement	BmReinf - Beam Reinforcing
Stage - Construction Staging Plan	BmDet - Beam Details
Rem - Removals	DeckDim - Deck Dimensions
Found - Foundation Layout	DeckReinf - Deck Reinforcing
FtgDim - Footing Dimensions	DeckDet - Deck Details
FtgReinf - Footing Reinforcement	S&D - Sections and Details
Abut - Abutment	Jnt - Joint Details
NAbut - North [West] Abutment	BWall - Barrier Wall Details
NWW - North [West] Wingwall	Rail - Railing Details
SEAbut - South [East] Abutment	Appro - Approach Slab Details
SWWall - South [East] Wingwall	Slope - Slope Paving Details
wwall - Wingwalls/Retaining Walls	Stand - Standard Details
PierDim - Pier Dimensions	Elec - Electrical
PierReinf - Pier Reinforcement	Quant - Quantity Sheet
Brg - Bearings	Land - Landscaping





Examples of valid filenames :

Crystal Lake - 107 - NWW.dgn	Crystal Lake, drawing number 107, North West Wingwall drawing
Ft. Henry - 102 - S&D3.dgn	Fort Henry, drawing number 102, Sections and Details, 3 rd drawing of type
Redstone Lake - base.dgn	Redstone Lake, Base drawing, reference file
Maria St. - 101 - GA.dgn	Maria St., drawing number 101, General Arrangement drawing
Jones Falls - 102 - PierDim.dgn	Jones Falls, drawing number 102, Pier Dimensions drawing

1.3.1 Reference Files

Reference files are CADD files that have been externally attached to another file (ie. the data is not part of the contract drawing file but is loaded each time the contract drawing file is opened), do not have title blocks and are not contract drawings on their own but do provide project data to other contract drawings.

Typically, data in a reference file is drawn at a scale of one and there is no limit to the size of the drawing area (ie. there is no title block to constrain the drawing area). The graphic elements are drawn once and then referenced into various contract-drawing files as required.

Depending on the scope of the project, there may be multiple reference files with data separated by discipline and/or by the type of data, such as, base mapping, utilities, removals and proposed construction.

When new milestone folders are created, all files including reference files should be copied into each folder.

References must not conceal other references within them. In other words a nest depth of one is the maximum that shall be permitted.

1.3.1.1 Making Reference Files Portable

When project files are moved or copied to another location (ie. delivered to the HCEW), the folder path will inevitably change and the reference file path will be incorrect, resulting in a reference file that can't be loaded. To avoid this problem, follow these instructions.

Choose the "no path" option in the "path type" box when loading the reference.

1.3.2 Drawing File Layout

Drawing files are the electronic originals of the plotted contract drawings. Paper space layouts can be thought of as virtual sheets of paper, which are printed to produce hard-copy contract drawings. Using paper space to layout the contract drawing is generally recognized as the current industry standard for CADD drawing creation.





Design details are prepared as full size views, thus maintaining the geometric integrity of the design model (no scaling will be permitted). Data from model space is brought into the paper space layout via scaled layout view ports or as external references from other drawing files.

An optional, although less preferred alternative involves the preparation of contract drawings utilizing model space only. However, in either case the geometric integrity of the design model should be maintained (scaling of the design model elements to suit intended plot scale should be avoided).

Regardless of which method is used, it is important that the following guidelines be followed.

Paper space Layouts

- In AutoCAD, insert the full size drawing sheet (including drawing frame and titleblock) at 0,0 in paperspace with zero rotation at a scale of 1:1 or use a prepared template.
- Use custom viewport scales for any views that are to be plotted at a different scale.
- All annotations and dimensioning must be done in the model space, the general notes however, can be placed directly on the paper space layout.
- Although multiple layouts can be created on a single drawing during the design phase, only one layout per Autocad file will be allowed upon final delivery to HCEW.

Model space only

Although it is less desirable, model space only drawings may be accepted at this time provided the following;

- In AutoCAD, insert the full size drawing sheet (including drawing frame and titleblock) at 0,0 in model space at the desired scale with zero rotation or use a prepared template.
- All annotations and dimensioning must be done in model space.

1.4 Layers

Layers are used to sort the data into logical groups based on common properties such as line weight or line type and/or what the entity represents in the real world.

The goal of any layering system is to create a balance between complexity and flexibility. The more complex a layering system is, the less efficient it will be and may actually be counter productive. The more flexible a system is (ie. fewer levels), the less data separation there will be and consequently it may be less intuitive for other users.

A list of typical structural levels can be found below. The levels in the list shall be sufficient for most projects but on occasion additional levels may be required. If additional levels are required, the following standards must be adhered to for the creation of the levels.

1.4.1.1 Layer Management

There are two types of data to be considered when creating levels, primary data and supporting data. The difference between the two is quite significant in the complexity and number of levels required. See below for an explanation of primary and supporting data.

There are also two techniques used to separate data, regardless of whether it is primary or supporting data. The first technique is to have data placed on levels with all property settings set to 'bylevel' and would require additional levels for data requiring different settings. The second technique is to have all





similar data on the same level and allow for data to have different colour (weight) and line style assignments.

Regardless of which technique is used, the separating of data should be done in a logical manner that facilitates the creation of the drawing and the effort of dividing the data must not exceed the benefits gained.

1.4.1.1.1 Primary Data

Primary data is data that is required to be separated by what it represents in the real world and can be identified on the graphic screen without resorting to annotations. Line weights, line styles and colour are not a consideration when determining if data is primary or not.

An example of primary data in a structural drawing may be data in a base plan or data representing various utilities.

1.4.1.1.2 Supporting Data

Supporting data is data that is not required to be separated by what it represents in the real world but rather by its properties such as line weight and line style or based on the requirement to group similar elements to simplify the drafting process (ie. have fewer levels).

Typically, all of the drawing elements contained in the various sections and details that comprise a set of structural drawings can be considered as supporting data and thus be placed on levels to define similar properties only, rather than separate levels to define what the elements represent.

For example, drawing elements such as annotations, dimensions, line work, hatching etc. can be considered supporting data and separated accordingly; There would be a general text level, a general dimension level and a general hatching level etc. (ie. S-GEN-TEXT, S-GEN-DIM, S-GEN-HAT-0.25 etc...).

Similarly, general line work contained in the various sections and details do not need to be tied to a level defining what it represents, but rather viewed simply as general lines that are grouped according to their plotted line weight and/or line style (ie. S-GEN-LINE-0.25, S-GEN-LINE-0.50 etc...).

In some situations however, such as where better visibility control is required (freezing and thawing of levels), a mixed approach to level management may be used such that some elements are separated by what they represent and others grouped by their element properties.





1.4.1.2 Layer Naming Convention

The level structure consists of four fields separated by hyphens.



Discipline Field X-XXXX-XXXX-XXXX

The discipline field identifies the discipline responsible for the data on that level. The discipline designator is a one-character field.

In some cases the data is not applicable to any one discipline, such as a title block or a section marker. In these cases a 'G' for general may be used in the discipline field.

B	Bridge / Dam / Lock
G	General
C	Civil
S	Structural

Group Field x-XXXX-XXXX-XXXX

The group field identifies general groups of data relevant to each discipline.

G-TBLK	General-Titleblock
C-ROAD	Civil -Road
S-CONT	Structural-Contour

Extension Field x-XXXX-XXXX-XXXX

The extension field more precisely identifies the data from that of the group field. G-TBLK-TEXT
General-Titleblock-Text

C-ROAD-CURB	Civil-Road-Curb
S-CONT-MAJR	Structural-Contour-Major

Second Extension Field x-XXXX-XXXX-XXXX

The second extension field is optional and further categorizes the data, if necessary.

G-TBLK-TEXT-LOGO	General-Titleblock-Text-Logo
C-ROAD-CURB-FACE	Civil-Road-Curb-Face
S-CONT-MAJR-TEXT	Structural-Contour-Major-Text

1.4.1.3 Level Colours and Weights

Level colour shall be used to define the line weight. The following is a list of acceptable colours and their corresponding colour number and line weight. Other colours may be used in rare cases when more data





separation by colour is required to aide in the drafting process such as for visual separation on the graphic screen.

Colour	Colour Number	Line Thickness (mm)	Colour Setting
Red	1	0.20mm	Black
Yellow	2	0.35mm	Black
Green	3	0.50mm	Black
Cyan	4	0.70mm	Black
Blue	5	1.0mm	Black
Magenta	6	0.20mm	Black
Dark Grey	8	0.13mm	Black
Light Grey	9 (30% screen)	0.20mm	Black
Grey	250 to 255	0.20mm	Use Object Colour
All Others	Varies	0.20mm	Black

1.5 Annotation Scaling

Annotation scaling is a feature that allows for annotations to be displayed, at the desired size, in a paper space view port, regardless of the scale of the view port.

Annotation scaling shall be used for all dimensions and annotations.

1.6 Dimension Styles

Dimension styles must adhere to the following standards:

- Standard dimension annotations shall be in millimeters and shall use the same unit setting throughout the contract set, with the following exceptions; stations, elevations and site plan dimensions, may be shown in metres.
- Use automatic dimensioning (associative dimensioning) wherever possible. An exception to this rule may be made when using dimensions for reinforcing steel detailing, although it is not preferred.
- All dimensioning shall be done in model space with annotation scaling turned on.
- Use filled arrowhead as the terminator for dimensions and leaders. The arrowhead must keep a length to width ratio of 3:1 (standard size of 3mm long x 1mm wide at a scale of 1:1).





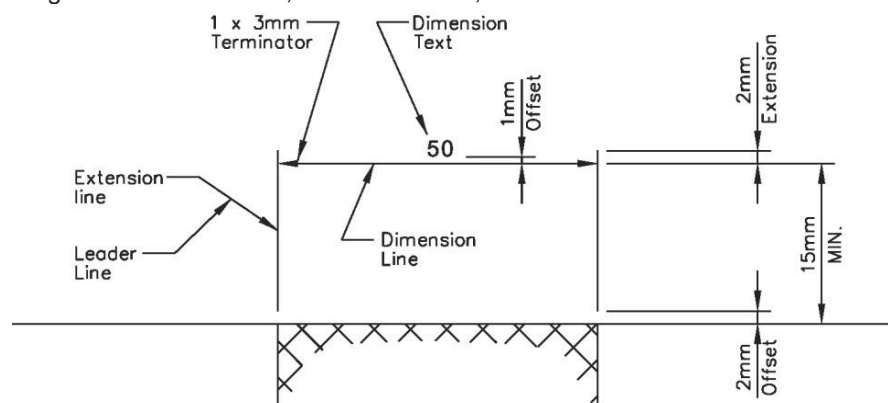
- The name given to additional styles must follow the naming convention outlined in Section 3.5.1 of the PWGSC National CADD Standards.
- All dimensions shall have the same size text as outlined in Section 1.3.6.1.
- Angular dimensions shall be expressed in decimal degrees.
- Line weight for all dimension elements, except annotations, shall be set to 0.20mm or colour red.

1.6.1 Guidelines for Dimensioning

The following are some basic guidelines to consider when dimensioning features for construction contract drawings: (for a more in-depth review, refer to CAN/CSA B78.2-86 – *Dimensioning and Tolerancing of Technical Drawings*.)

Dimension variables (dimension style settings) should be set to provide the following: (see diagram below);

- The primary dimension text should appear above and be aligned with the dimension line. A gap of approximately 1mm should be provided between the dimension line and the text.
- A 2mm gap should be provided between the end of the extension line and its origin.
- The extension line should 2mm beyond the dimension line (extension).
- Standard terminator to be a filled arrowhead with a length to width ratio of 3:1 (arrow head size for scale of 1 to be 3mm long by 1mm wide)
- Line weight of extension lines, dimension lines, leader lines and terminators to be 0.20mm



- Each element or element feature should only be dimensioned once and that dimension should be placed on the view that most clearly shows that element or feature. No more dimensions than are necessary to fabricate a particular element should be provided.
- Extensions that cross other dimension lines should be broken.





- Every effort should be made to avoid crossing dimension lines and is accomplished by placing the shortest dimensions close to the object and the overall dimension more remotely. (When crossing of a dimension line by a object line is unavoidable, neither line should be broken except to avoid interference with an arrowhead.
- As a general rule, dimension lines shall be placed outside a view using extension lines. On occasion however, dimension lines may be placed within a view and referenced to the object outline, in order avoid the use of long extension lines.
- Leader lines should be kept as short as is practical, not cross other lines and terminate with an arrowhead touching the feature (or closed dot when referencing a surface within a feature) and a 3mm long horizontal adjacent to the text.

All leader annotations to be left justified.

1.6.1.1 Dimension Scale

The following table illustrates the dimension scale factor for various standard drawing scales.

Dimension Scale																	
Drawing Scale	1:1	1:5	1:10	1:20	1:25	1:30	1:50	1:75	1:100	1:125	1:150	1:200	1:250	1:300	1:400	1:500	1:750
DIMENSION SCALE	1	5	10	20	25	30	50	75	100	125	150	200	250	300	400	500	750

1.7 Text Style and Size

True Type Arial shall be used for all drawings. Standard text sizes are listed below and the text sizes must be uniformly applied throughout the entire project.

A cell for centerline and plate symbols has been provided in the cell library for your convenience.

1.7.1 Text Sizes (Heights)

The range of standard text heights is available in Section 1.3.6.3. These sizes are based on soft conversions of the standard Leroy® Lettering System used in manual drafting and are cross-referenced in the following table for legacy purposes. The standard text height for typical annotations and dimensions on full size plots shall be 2.5mm. The minimum text height for drawings requiring half-size reproductions shall not be smaller than 2.0mm.

The following are examples of text sizes, as measured on a plotted full size drawing, for various applications:

Major Headings	5.0mm
Sub Headings	3.5mm
Notes and Dimensions	2.5mm





Existing Site Annotations 2.0mm

All text is to be uppercase with the exception of unit abbreviations (i.e. mm, m etc.). Condensed or extended versions of the font shall not be used and no customization of the font will be accepted. This however, does not preclude the application of “fitted text” or a minor adjustment in text width to suit a special requirement.

1.7.2 Text Style Naming Convention

When placing text on a drawing, minor changes to the settings may be required from one text element to the next. One method to make this process easier is to create text styles with preset settings and change to the appropriate style before placing the text.

For example, if text at a plotted height of 2.5mm is required for some text elements but a plotted text height of 3.5mm is required for others, then two separate styles could be created with these preset settings.

The following guidelines shall be used for naming the text style(s) regardless of what method is used in creating the text.

Standard text style designations are used to define the appearance of text and are based on a combination of various text attributes or characteristics. Basic text style attributes for parent text styles include:

- Text font
- Height (product of design model scale factor X plotted height)
- Width factor (Microstation defaults to the same value as height)
- Justification (default to centre left justification)
- Italics

Standard text styles designations will conform to the following naming convention:
Do not leave spaces before or after the hyphen.

XXXXXX - XXX
Field 1 Field 2

Field 1 **XXXXXX – xxx**

Field one is a six character field and is assembled as AAAABB such that :

AAAA	HCEW designation.
BB	Plotted text height for full size drawing (i.e. 25 indicates a text height of 2.5mm on the hard copy)





Field 2 xxxxxx – XXX

Scale factor (This is an optional modifier when, for example, layouts have been used and multiple scales are required or in a single scale environment, the drawing scale can be shown). The optional modifier would not be necessary if Annotation Scaling is utilized.

Examples of valid dimension style names:

HCEW25	Text height of 2.5mm.
HCEW35S	Text height of 3.5mm, sloped text.
HCEW25-100	Text height of 2.5mm, scale of 1:100.
HCEW25S-50	Text height of 2.5mm, scale of 1:50, sloped text.

1.7.3 Text Heights and Text Style Designations

Plotted Text Height (mm)*	Leroy® Lettering Guide No.	Font	Text Style Designation (vertical text)
1.5**	60	TT Arial	HCEW15-xx
2.0	80	TT Arial	HCEW 20- xx
2.5	100	TT Arial	HCEW 25- xx
3.0	120	TT Arial	HCEW 30- xx
3.5	140	TT Arial	HCEW 35- xx
4.5	175	TT Arial	HCEW 45- xx
5.0	200	TT Arial	HCEW 50- xx
6.0	240	TT Arial	HCEW 60- xx

*plotted text height for full size (24x36) plots

**1.5mm text height should only be used when absolutely necessary, as it may not be readable on half size reductions.

This font contains an italics style, which can be activated in Microstation by clicking the italics box under Element – Text Style – General tab.

1.8 Blocks

When blocks are placed, the properties (level, colour, linestyle and weight) of the data can be affected in various ways. How they are affected depends on the properties of the data when the block was created and the system settings when the block was placed.

For consistency, all blocks shall be created using the guidelines outlined in the PWGSC National CADD Standards section 3.3.





1.8.1 Block Library

A structural block library is included with this manual, containing blocks of commonly used elements. The blocks in this library are provided for consistency among all projects and must be used when required.

A drawing file has been created, called **Structural Blocks.dwg**, with all the blocks attached.

1.8.2 Sections and Elevations

Sections and elevations are used to provide more details of an element on a drawing. Section and elevation markers use the same symbol but are designated as one or the other by the label used for the detailed element; see examples below. The symbol and labels blocks are provided in the structural block library.

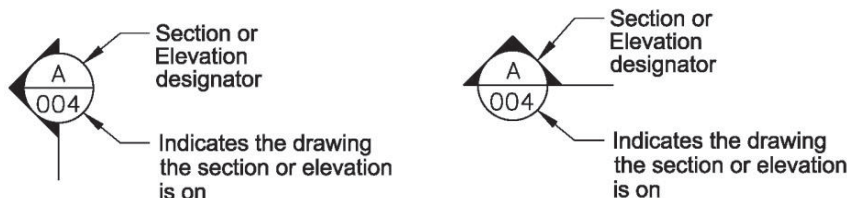
1.8.2.1 Symbol

Sections shall be preferably looking up and to the left or in a direction of increasing chainage. Elevations shall be looking in the direction of the intended elevation.

If the section or elevation is not taken in a continuous straight line from the end of the symbol, then a second symbol shall be placed at the other end of the intended section or elevation. A line shall then be drawn between the two symbols to delineate the path of the section or elevation (the line between the two marks may be cut to show only the area(s) where the section path deviates).

- The top half of the symbol shall be populated using uppercase alpha characters from 'A' to 'Z' (omit letters 'I' and 'O').
- The bottom half of the symbol shall be populated with the drawing number (field three only) of the drawing where the section or elevation is located.

Examples :



1.8.2.2 Label

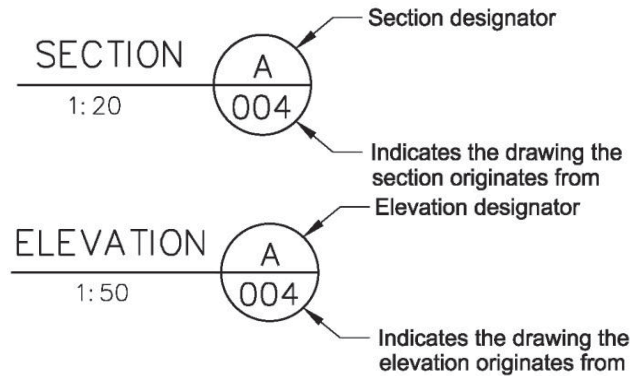
Labels are placed below the section or elevation to cross-reference it with the symbol on the drawing from where the section or elevation was taken.

- The top half of the label shall be populated using uppercase alpha characters from 'A' to 'Z' (omit letters 'I' and 'O').
- The bottom half of the label shall be populated with the drawing number (field three only) of the drawing where the section or elevation is taken from.





Examples :



1.8.3 Details

Details are used to further define an element on the drawing but differ from sections and elevations in that they are shown in the same view as the master element, show more detail and are often shown at a smaller scale.

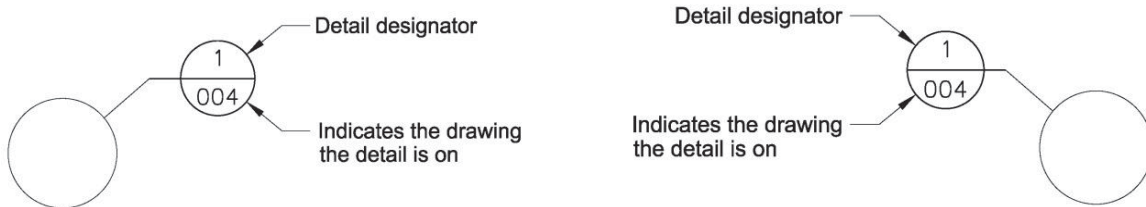
Details are shown using a symbol to delineate where the detail is taken from and a label to designate the actual detail. The symbol and labels are provided in the structural block library.

1.8.3.1 Symbol

Details shall be delineated using a circle to define the area to be detailed and a detail symbol shall be placed close to the circle with a line to draw to connect the two.

- The top half of the detail symbol shall be populated using numeric characters from '1' to '99'.
- The bottom half of the detail symbol shall be populated with the drawing number (field three only) of the drawing where the detail is located.

Examples :

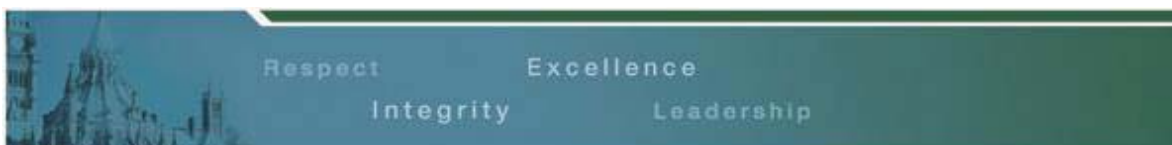


1.8.3.2 Label

Labels are placed below the detail to cross-reference it with the symbol on the drawing from where the detail was taken.

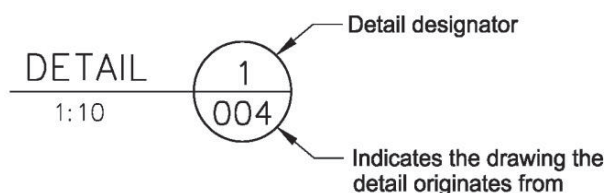
- The top half of the label shall be populated using numeric characters from '1' to '99'.





- The bottom half of the label shall be populated with the drawing number (field three only) where the detail is taken from.

Example :



1.9 Patterns or Hatching

Custom Autocad hatch patterns are not to be used as they could pose a problem with drawing translation or drawing portability.

1.10 Element Offset Distances

All elements of a drawing must be kept a minimum distance away from any other element in order for the plotted drawing to be legible. The following table has minimum distances for elements of various line weights and is included as a guideline only.

STANDARDS			SCALE OF DRAWING																
COLOUR	PEN SIZE	TYPE	1:1	1:5	1:10	1:20	1:25	1:30	1:50	1:75	1:100	1:125	1:150	1:200	1:250	1:300	1:400	1:500	1:750
GREY	.13	LINE - LINE	0.3	1.5	3	6	7.5	9	15	22.5	30	37.5	45	60	75	90	120	150	225
RED	.20	LINE - LINE	0.4	2	4	8	10	12	20	30	40	50	60	80	100	120	160	200	300
YELLOW	.35	LINE - LINE	0.5	2.5	5	10	12.5	15	25	37.5	50	62.5	75	100	125	150	200	250	375
GREEN	.50	LINE - LINE	0.6	3	6	12	15	18	30	45	60	75	90	120	150	180	240	300	450
CYAN	.70	LINE - LINE	0.8	4	8	16	20	24	40	60	80	100	120	160	200	240	320	400	600
		LINE - REINFORCING DOT	1.2	6	12	24	30	36	60	90	120	150	180	240	300	360	480	600	900
		REINFORCING DOT - DOT	1.8	9	18	36	45	54	90	135	180	225	270	360	450	540	720	900	1350
CYAN-GREEN	.70 - .50	LINE - LINE	0.7	3.5	7	14	17.5	21	35	52.5	70	87.5	105	140	175	210	280	350	525
CYAN-YELLOW	.70 - .35	LINE - LINE	0.65	3.25	6.5	13	16.25	19.5	32.5	48.75	65	81.25	97.5	130	162.5	195	260	325	487.5
GREEN-YELLOW	.50 - .35	LINE - LINE	0.55	2.75	5.5	11	13.75	16.5	27.5	41.25	55	68.75	82.5	110	137.5	165	220	275	412.5
YELLOW-RED	.35 - .20	LINE - LINE	0.45	2.25	4.5	9	11.25	13.5	22.5	33.75	45	56.25	67.5	90	112.5	135	180	225	337.5





Examples:

At a scale of 1:10, a red line must be 4 units from any other red line.

At a scale of 1:25, a green line must be 17.5 units away from any other cyan line.

At a scale of 1:50, a yellow line must be 22.5 units away from any other red line.

At a scale of 1:100, a reinforcing dot must be 120 units away from any other cyan line and 180 units from any other reinforcing dot.

AS-BUILT DRAWINGS

Based on definitions in Section 1.4, final drawing revision/submission shall be known as '**As-Built**s' and engineer's seal and signature is not required. By definition 'Record Drawings' require the assertion of accuracy and seal from the project Engineer, which is not the usual process for HCEW.

As-builts should be submitted within six months of completion of contract.

2.0 Definitions

From CSA Draft Seed Document – Mapping of underground utility infrastructure, May 2007

As-Built Drawing

Documentation created by or based solely on information provided by a third party that reflects the installed, constructed, or commissioned conditions of a device, machine, equipment, apparatus, structure, system, or other outcome of an engineering project. Since the engineer has not verified that the information is complete or accurate, as-built drawings must not be sealed.

2.1 Procedure

All construction work, particularly any changes from the proposed work shall be recorded on a print of the contract drawings, by the assigned site supervisor. These marked-up prints are to be submitted to the project manager immediately upon completion of the project.

Within six months of the completion of the project, the following changes shall be made to the CADD files:

- All field changes to be recorded.
- professional seals to be removed.
- As-built marked in the revision list.
- As-built to be stamped on cover sheet.

See Section 1.6 for submission requirements

2.2 Submission

- Fill in revision for As-Built submission.
- Plot mylar hard copy of the full as-built contract set.
- Submit CD (consultant) or path (internal) with complete listing of digital drawings.
- Stamp the cover sheet with as-built in bottom right corner.





APPENDIX A

ABBREVIATIONS, ACRONYMS AND TERMS

The following abbreviations, acronyms and terms are used throughout these standards:

CADD	Computer Aided Design and Drafting
Consultant	Liaison / Representative of Company under contract to the PWGSC
CSA	Canadian Standards Association
.pdf	Adobe Acrobat file
Professional Seal	Stamp designating professional eligibility, applied manually to original printed drawings, with signature and date to be applied.
.xls	MicroSoft Excel file
.zip	PkZip compressed archive file

