



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

Réception des soumissions - TPSGC / Bid Receiving
- PWGSC

1550, Avenue d'Estimauville
1550, D'Estimauville Avenue
Québec
Québec
G1J 0C7

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

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

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

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

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

Comments - Commentaires

Title - Sujet Gérance de construction -Shawinigan	
Solicitation No. - N° de l'invitation EE474-200945/A	Date 2019-09-06
Client Reference No. - N° de référence du client R.082974.300	
GETS Reference No. - N° de référence de SEAG PW-\$QCM-039-17755	
File No. - N° de dossier QCM-9-42096 (039)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-10-23	Time Zone Fuseau horaire Heure Avancée de l'Est HAE
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Jean, Serge	Buyer Id - Id de l'acheteur qcm039
Telephone No. - N° de téléphone (418) 649-2882 ()	FAX No. - N° de FAX (418) 648-2209
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: TPSGC/PWGSC 800 rue la Gauchetière Ouest, 7300 Montréal Québec H5A1L6 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

TPSGC-PWGSC
601-1550, Avenue d'Estimauville
Québec
Québec
G1J 0C7

Delivery Required - Livraison exigée Voir Doc.	Delivery Offered - Livraison proposée
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 PROPOSAL (RFP)

CONSTRUCTION MANAGEMENT SERVICES New Federal Government Building 4695 Shawinigan-Sud Blvd., Shawinigan, Quebec

IMPORTANT NOTICE TO BIDDERS

PROMPT PAYMENT IN THE CONSTRUCTION INDUSTRY

Prompt Payment Principles

Public Services and Procurement Canada advocates that construction-related payments should follow these three principles:

- **Promptness:** The department will review and process invoices promptly. If disputes arise, Public Services and Procurement Canada will pay for items not in dispute, while working to resolve the disputed amount quickly and fairly
- **Transparency:** The department will make construction payment information such as payment dates, company names, contract and project numbers, publicly available; likewise, contractors are expected to share this information with their lower tiers
- **Shared responsibility:** Payers and payees are responsible for fulfilling their contract terms including their obligations to make and receive payment, and to adhere to industry best practices

For more information: <http://www.tpsgc-pwgsc.gc.ca/biens-property/divulgation-disclosure/psdic-ppci-eng.html>

THIS DOCUMENT CONTAINS AN INDUSTRIAL SECURITY REQUIREMENT

For further instructions please consult "Special Instruction to Bidders", SI14, "Industrial Security Related Requirements" and "Supplementary Conditions" SC01 "Industrial Security Related Requirements, Document Safeguarding Location".

PWGSC UPDATE ON ASBESTOS USE

Effective April 1, 2016, all Public Works and Government Services Canada (PWGSC) contracts for new construction and major rehabilitation will prohibit the use of asbestos-containing materials. Further information can be found at <https://www.tpsgc-pwgsc.gc.ca/biens-property/ami-asb/amiante-asbestos-eng.html>

TABLE OF CONTENTS

GENERAL INSTRUCTIONS - CONSTRUCTION SERVICES - BID SECURITY REQUIREMENTS (GI)

- GI01 *Integrity Provisions - Bid*
- GI02 *Completion of Bid*
- GI03 *Identity or Legal Capacity of the Bidder*
- GI04 *Applicable Taxes*
- GI05 *Bid Security Requirements*
- GI06 *Rejection of Bid*
- GI07 *Bid Costs*
- GI08 *Procurement Business Number*
- GI09 *Compliance with Applicable laws*
- GI10 *Performance Evaluation*
- GI11 *Conflict of Interest—Unfair Advantage*
- GI12 *Code of Conduct for Procurement—Bid*

SPECIAL INSTRUCTIONS TO BIDDERS (SI)

- SI01 *Introduction*
- SI02 *Bid Documents*
- SI03 *Enquiries during the Solicitation Period*
- SI04 *Optional Site Visit*
- SI05 *Submission of Bid*
- SI06 *Revision of Bid*
- SI07 *Overview of Opening of Bids / Bid Selection and Evaluation Procedures*
- SI08 *Insufficient Funding*
- SI09 *Bid Validity Period*
- SI10 *Debriefing*
- SI11 *Joint Venture*
- SI12 *Definition of Bidder*
- SI13 *Rights of Canada*
- SI14 *Industrial Security Related Requirements*
- SI15 *Web Sites*
- SI16 *Fairness Monitor*
- SI17 *Financial Capability*
- SI18 *Contract security – obligation to provide contract security certification*

CONTRACT DOCUMENTS (CD)

SUPPLEMENTARY CONDITIONS (SC)

- SC01 *Industrial Security Related Requirements, Document Safeguarding*
- SC02 *Insurance Terms*
- SC03 *Changes to Contract Documents*
- SC04 *Determination of Construction Cost*
- SC05 *Determination of Price for Subcontract Changes*
- SC06 *Replacement of Specific Individuals*
- SC07 *Amendment to R2860D GC6.5.4 Delay and Extension of Time*
- SC08 *Language Requirements*
- SC09 *Optional Services*

SUBMISSION REQUIREMENTS AND EVALUATION (SRE)

- SRE 1 *General Information*
- SRE 2 *Technical Bid Submission Requirements and Evaluation*
- SRE 3 *Financial Bid Evaluation*
- SRE 4 *Basis of Selection*

BID AND ACCEPTANCE FORM (BA)

BA01 *Identification*
BA02 *Business Name and Address of Bidder*
BA03 *The Offer*
BA04 *Bid Validity Period*
BA05 *Acceptance and Contract*
BA06 *Construction Time*
BA07 *Bid Security*
BA08 *Signature*

APPENDICES

APPENDIX 1 - INTEGRITY PROVISIONS

ANNEXES

ANNEX A - TERMS OF REFERENCE
ANNEX A1 APPLICABLE STANDARDS, CODES AND REQUIREMENTS
ANNEX A2 PRELIMINARY BIM MANAGEMENT PLAN
ANNEX A3 NMS - QUEBEC REGION (NOVEMBER 2016)
ANNEX A4 COMMISSIONING STANDARDS
ANNEX B - BASIS OF PAYMENT
ANNEX C - CERTIFICATE OF INSURANCE FORM
ANNEX D - SECURITY REQUIREMENT CHECKLIST (SRCL)

GENERAL INSTRUCTIONS - CONSTRUCTION SERVICES - BID SECURITY REQUIREMENTS (GI)

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GI02	Completion of Bid
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GI04	Applicable Taxes
GI05	Bid Security Requirements
GI06	Rejection of Bid
GI07	Bid Costs
GI08	Procurement Business Number
GI09	Compliance with Applicable laws
GI10	Performance Evaluation
GI11	Conflict of Interest—Unfair Advantage
GI12	Code of Conduct for Procurement—Bid

GI01 INTEGRITY PROVISIONS - BID (2016-04-04)

1. The *Ineligibility and Suspension Policy* (the "Policy") in effect on the date the bid solicitation is issued, and all related Directives in effect on that date, are incorporated by reference into, and form a binding part of the bid solicitation. The Bidder must comply with the Policy and Directives, which can be found at *Ineligibility and Suspension Policy*. <http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>
2. Under the Policy, charges and convictions of certain offences against a Bidder, its affiliates or first tier subcontractors, and other circumstances, will or may result in a determination by Public Works and Government Services Canada (PWGSC) that the Bidder is ineligible to enter, or is suspended from entering 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 bid solicitation, the Bidder 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 subcontractors 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 *Declaration form for procurement*. <http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.htm>
4. Subject to subsection 5, by submitting a bid in response to this bid solicitation, the Bidder certifies that:
 - a. it has read and understands the *Ineligibility and Suspension Policy*; <http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>
 - b. it understands that certain domestic and foreign criminal charges and convictions, and other circumstances, as described in the Policy, will or may result in a determination of ineligibility or suspension under the Policy;
 - c. it is aware that Canada may request additional information, certifications, and validations from the Bidder 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 subcontractors 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 subcontractors; and
 - f. it is not aware of a determination of ineligibility or suspension issued by PWGSC that applies to it.
5. Where a Bidder 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 [Declaration form for procurement. http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.htm](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.htm)
6. Canada will declare non-compliant 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 award of the Contract that the Bidder provided a false or misleading certification or declaration, Canada may terminate the Contract for default. Pursuant to the Policy, Canada may also determine the Bidder to be ineligible for award of a contract for providing a false or misleading certification or declaration.

GI02 COMPLETION OF BID (2014-03-01)

1. The bid shall be (The term "proposal" is also used to refer to the bid):
- a. submitted on the Bid and Acceptance Form provided through the Government Electronic Tendering Service (GETS) or on a clear and legible reproduced copy of such Bid and Acceptance Form that must be identical in content and format to the Bid and Acceptance Form provided through GETS;
 - b. based on the Bid Documents listed in the Special Instructions to Bidders;
 - c. correctly completed in all respects;
 - d. signed by a duly authorized representative of the Bidder; and
 - e. accompanied by
 - i. bid security as specified in GI05; and
 - ii. any other document or documents specified elsewhere in the solicitation where it is stipulated that said documents are to accompany the bid.
2. Subject to paragraph 6) of GI06, any alteration to the pre-printed or pre-typed sections of the Bid and Acceptance Form, or any condition or qualification placed upon the bid may be cause for disqualification. Alterations, corrections, changes or erasures made to statements or figures entered on the Bid and Acceptance Form by the Bidder shall be initialed by the person or persons signing the bid. Alterations, corrections, changes or erasures that are not initialed shall be deemed void and without effect.
3. Unless otherwise noted elsewhere in the Bid Documents, facsimile or email copies of bids are not acceptable.
4. Canada will make available Notices of Proposed Procurement (NPP), bid solicitations 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, bid solicitation or related documentation would be amended, Canada will not be sending notifications. Canada will post all amendments, including significant enquiries received and their replies, using GETS. It is the sole responsibility of the Bidder to regularly consult GETS for the most up-to-date information. Canada will not be liable for any oversight on the Bidder's part nor for notification services offered by a third party.

GI03 IDENTITY OR LEGAL CAPACITY OF THE BIDDER (2015-02-25)

1. In order to confirm the authority of the person or persons signing the bid or to establish the legal capacity under which the Bidder proposes to enter into Contract, any Bidder who carries on business in other than its own personal name shall, if requested by Canada, provide satisfactory proof of

- a. such signing authority; and
- b. the legal capacity under which it carries on business;

prior to contract award. Proof of signing authority may be in the form of a certified copy of a resolution naming the signatory(ies) that is (are) authorized to sign this bid on behalf of the corporation or partnership. Proof of legal capacity may be in the form of a copy of the articles of incorporation or the registration of the business name of a sole proprietor or partnership. This also applies to Bidders submitting a bid as a joint venture.

GI04 APPLICABLE TAXES (2015-02-25)

1. "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.

GI05 BID SECURITY REQUIREMENTS (2018-06-21)

1. The Bidder shall submit bid security with the bid in the form of a bid bond or a security deposit in an amount that is equal to not less than 10 percent of the bid amount. Applicable Taxes shall not be included when calculating the amount of any bid security that may be required. The maximum amount of bid security required with any bid is \$2,000,000.
2. A bid bond (form PWGSC-TPSGC 504) shall be in an approved form, properly completed, with original signatures and sealed by the approved bonding company whose bonds are acceptable to Canada either at the time of solicitation closing or as identified in Treasury Board Appendix L, Acceptable Bonding Companies.
3. A security deposit shall be an original, properly completed, signed where required and be either
 - a. a bill of exchange, bank draft or money order made payable to the Receiver General for Canada and certified by an approved financial institution or drawn by an approved financial institution on itself; or
 - b. bonds of, or unconditionally guaranteed as to principal and interest by, the Government of Canada.
4. For the purposes of subparagraph 3. a. of GI05
 - a. a bill of exchange is an unconditional order in writing signed by the Bidder and addressed to an approved financial institution, requiring the said institution to pay, on demand, at a fixed or determinable future time a sum certain of money to, or to the order of, the Receiver General for Canada;
 - b. if a bill of exchange, bank draft or money order is certified by or drawn on an institution or corporation other than a chartered bank, it must be accompanied by proof that the said institution or corporation meets at least one of the criteria described in subparagraph 4.c. of GI05, either by letter or by a stamped certification on the bill of exchange, bank draft or money; and
 - c. An approved financial institution is
 - i. a corporation or institution that is a member of the Canadian Payments Association (Payments Canada) as defined in the Canadian Payments Act;
 - ii. a corporation that accepts deposits that are insured, to the maximum permitted by law, by the Canada Deposit Insurance Corporation or the "Autorité des marchés financiers";

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- iii. a corporation that accepts deposits from the public if repayment of the deposit is guaranteed by Her Majesty the Queen in right of a province;
 - iv. a corporation, association or federation incorporated or organized as a credit union or co-operative credit society that conforms to the requirements of a credit union which are more particularly described in paragraph 137(6) of the *Income Tax Act*; or
 - v. Canada Post Corporation.
 5. Bonds referred to in subparagraph 3. b. of GI05 shall be provided on the basis of their market value current at the date of solicitation closing, and shall be
 - a. payable to bearer;
 - b. accompanied by a duly executed instrument of transfer of the bonds to the Receiver General for Canada in the form prescribed by the Domestic Bonds of Canada Regulations; or
 - c. registered as to principal or as to principal and interest in the name of the Receiver General for Canada pursuant to the Domestic Bonds of Canada Regulations.
 6. As an alternative to a security deposit an irrevocable standby letter of credit is acceptable to Canada and the amount shall be determined in the same manner as a security deposit referred to above.
 7. An irrevocable standby letter of credit referred to in paragraph 6) of GI05 shall
 - a. be an arrangement, however named or described, whereby a financial institution (the "Issuer") acting at the request and on the instructions of a customer (the "Applicant") or on its own behalf,
 - i. is to make a payment to, or to the order of, the Receiver General for Canada as the beneficiary;
 - ii. is to accept and pay bills of exchange drawn by the Receiver General for Canada;
 - iii. authorizes another financial institution to effect such payment or accept and pay such bills of exchange; or
 - iv. authorizes another financial institution to negotiate against written demand(s) for payment provided that the terms and conditions of the letter of credit are complied with;
 - b. state the face amount which may be drawn against it;
 - c. state its expiry date;
 - d. provide for sight payment to the Receiver General for Canada by way of the financial institution's draft against presentation of a written demand for payment signed by the Departmental Representative identified in the letter of credit by his/her office;
 - e. provide that more than one written demand for payment may be presented subject to the sum of those demands not exceeding the face value of the letter of credit;
 - f. provide that it is subject to the International Chamber of Commerce (ICC) *Uniform Customs and Practice (UCP) for Documentary Credits, 2007 Revision*, ICC Publication No. 600, Pursuant to the ICCUCP, a credit is irrevocable even if there is no indication to that effect; and
 - g. be issued or confirmed, in either official language, by a financial institution which is a member of the Canadian Payments Association (Payments Canada) and is on the letterhead of the Issuer or Confirmer. The format is left to the discretion of the Issuer or Confirmer.
 8. Bid security shall lapse or be returned as soon as practical following
 - a. the solicitation closing date, for those Bidders submitting non-compliant bids; and

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- b. the administrative bid review, for those Bidders submitting compliant bids ranked fourth to last on the schedule of bids; and
 - c. the award of contract, for those Bidders submitting the second and third ranked bids; and
 - d. the receipt of contract security, for the successful Bidder; or
 - e. the cancellation of the solicitation, for all Bidders.
9. Notwithstanding the provisions of paragraph 8 of GI05 and provided more than three compliant bids have been received, if one or more of the bids ranked third to first is withdrawn or rejected for whatever reason then Canada reserves the right to hold the security of the next highest ranked compliant bid in order to retain the bid security of at least three valid and compliant bids.

GI06 REJECTION OF BID (2014-09-25)

1. Canada may accept any bid, whether it is the lowest or not, or may reject any or all bids.
2. Without limiting the generality of paragraph 1., Canada may reject a bid if any of the following circumstances is present:
 - a. the Bidder's bidding privileges are suspended or are in the process of being suspended;
 - b. the bidding privileges of any employee or subcontractor included as part of the bid are suspended or are in the process of being suspended, which suspension or pending suspension would render that employee or subcontractor ineligible to bid on the Work, or the portion of the Work the employee or subcontractor is to perform;
 - c. the Bidder 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 Bidder, any of its employees or any subcontractor included as part of its bid;
 - e. evidence satisfactory to Canada that based on past conduct or behavior, the Bidder, a subcontractor or a person who is to perform the Work is unsuitable or has conducted himself/herself improperly;
 - f. with respect to current or prior transactions with Canada
 - i. Canada has exercised, or intends to exercise, the contractual remedy of taking the work out of the contractor's hands with respect to a contract with the Bidder, any of its employees or any subcontractor included as part of its bid; or
 - ii. Canada determines that the Bidder's performance on other contracts is sufficiently poor to jeopardize the successful completion of the requirement being bid on.
3. In assessing the Bidder's performance on other contracts pursuant to subparagraph 2. f. ii., Canada may consider, but not be limited to, such matters as:
 - a. the quality of workmanship in performing the Work;
 - b. the timeliness of completion of the Work;

- c. the overall management of the Work and its effect on the level of effort demanded of the department and its representative; and
 - d. the completeness and effectiveness of the Contractor's safety program during the performance of the Work.
4. Without limiting the generality of paragraphs 1., 2. and 3., Canada may reject any bid based on an unfavourable assessment of the
 - a. adequacy of the bid price to permit the work to be carried out and, in the case of a bid providing prices per unit, whether each such price reasonably reflects the cost of performing the part of the work to which that price applies;
 - b. Bidder's ability to provide the necessary management structure, skilled personnel, experience and equipment to perform competently the work under the Contract; and
 - c. Bidder's performance on other contracts.
5. Where Canada intends to reject a bid pursuant to a provision of paragraphs 1., 2., 3. or 4., other than subparagraph 2. a., the contracting Authority will inform the Bidder and provide the Bidder ten (10) days within which to make representations, before making a final decision on the bid rejection.
6. Canada may waive informalities and minor irregularities in bids received if Canada determines that the variation of the bid from the exact requirements set out in the Bid Documents can be corrected or waived without being prejudicial to other Bidders.

GI07 BID COSTS (2015-02-25)

1. No payment will be made for costs incurred in the preparation and submission of a bid in response to the bid solicitation. Costs associated with preparing and submitting a bid, as well as any costs incurred by the Bidder associated with the evaluation of the bid, are the sole responsibility of the Bidder.

GI08 PROCUREMENT BUSINESS NUMBER (2019-05-30)

1. Suppliers are required to have a Procurement Business Number (PBN) before contract award. Suppliers may register for a PBN online at: <https://buyandsell.gc.ca/for-businesses/selling-to-the-government-of-canada/register-as-a-supplier>. For non-Internet registration, suppliers may contact the InfoLine at 1-800-811-1148 to obtain the telephone number of the nearest Supplier Registration Agent.

GI09 COMPLIANCE WITH APPLICABLE LAWS (2013-04-25)

1. By submission of a bid, the Bidder certifies that the Bidder has the legal capacity to enter into a contract and is in possession of all valid licences, permits, registrations, certificates, declarations, filings, or other authorizations necessary to comply with all federal, provincial and municipal laws and regulations applicable to the submission of the bid and entry into any ensuing contract for the performance of the work.
2. For the purpose of validating the certification in paragraph 1., a Bidder shall, if requested, provide a copy of every valid licence, permit, registration, certificate, declaration, filing or other authorization listed in the request, and shall provide such documentation within the time limit(s) set out in the request.
3. Failure to comply with the requirements of paragraph 2. shall result in disqualification of the bid.

GI10 PERFORMANCE EVALUATION (2010-01-11)

1. Bidders shall take note that the performance of the Contractor during and upon completion of the work shall be evaluated by Canada. The evaluation shall be based on the quality of workmanship; timeliness of completion of the work; project management, contract management and management of health and safety. Should the Contractor's performance be considered unsatisfactory, the Contractor's bidding privileges on future work may be suspended indefinitely.
2. The form *PWGSC-TPSGC 2913*, <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/2913-eng.html> SELECT - Contractor Performance Evaluation Report Form, is used to record the performance.

GI11 CONFLICT OF INTEREST—UNFAIR ADVANTAGE (2011-05-16)

1. In order to protect the integrity of the procurement process, bidders are advised that Canada may reject a bid in the following circumstances:
 - a. if the Bidder, any of its subcontractors, 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 Bidder, any of its subcontractors, any of their respective employees or former employees had access to information related to the bid solicitation that was not available to other bidders and that would, in Canada's opinion, give or appear to give the Bidder an unfair advantage.
2. The experience acquired by a bidder 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 bidder remains however subject to the criteria established above.
3. Where Canada intends to reject a bid under this section, the Contracting Authority will inform the Bidder and provide the Bidder an opportunity to make representations before making a final decision. Bidders who are in doubt about a particular situation should contact the Contracting Authority before bid closing. By submitting a bid, the Bidder represents that it does not consider itself to be in conflict of interest nor to have an unfair advantage. The Bidder 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.

GI12 CODE OF CONDUCT FOR PROCUREMENT—BID (2016-04-04)

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

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SI01 INTRODUCTION

1. Public Works and Government Services Canada (PWGSC) intends to retain a Contractor to provide Construction Management Services for the project as set out in this Request for Proposal (RFP).
2. Bidders responding to this RFP are requested to submit a full and complete submission, refer to SI05. The submission may cover not only the qualifications, experience and organization of the Bidder, but also the detailed approach to the work and the pricing and terms offered. A combination of the technical and financial services submission will constitute the Bid.

SI02 BID DOCUMENTS

1. The following are the Bid Documents:
 - a) Request for Proposal (RFP);
 - b) General Instructions - Construction Services - Bid Security Requirements (GI);
 - c) Special Instructions to Bidders (SI);
 - d) Contract Documents (CD);
 - e) Supplementary Conditions (SC);
 - f) Submission Requirements and Evaluation (SRE);
 - g) Bid and Acceptance Form (BA);
 - h) Terms of Reference;
 - i) Basis of Payment;
 - j) All related Annexes and Appendices and any amendment issued prior to solicitation closing.
2. Submission of a bid constitutes acknowledgement that the Bidder has read and agrees to be bound by these documents.

SI03 ENQUIRIES DURING THE SOLICITATION PERIOD

1. Enquiries regarding this RFP must be submitted in writing to the Contracting Authority identified in the Solicitation Documents at e-mail address Serge.Jean@tpsgc-pwgsc.gc.ca as early as possible within the solicitation period. Enquiries should be received no later than seven (7) working days prior to the date set for closing of the solicitation to allow sufficient time to provide a response. Enquiries received after that time may result in an answer NOT being provided.

2. To ensure consistency and quality of the information provided to Bidders, the Contracting Authority will examine the content of the enquiry and will decide whether or not to issue an amendment.
3. All enquiries and other communications related to this RFP sent throughout the solicitation period must be directed **ONLY** to the Contracting Authority named in paragraph 1. above. Failure to comply with this requirement may result in the bid being declared non-compliant.

SI04 OPTIONAL SITE VISIT

1. There will be a site visit on September 26, 2019, at 10:00. Interested bidders are to meet at 4695, boul. Shawinigan-Sud, Shawinigan, Québec.
2. Safety Attire: Safety boots are required.
3. Bidders are requested to communicate with the Contracting Authority two (2) days before the scheduled visit date to confirm attendance and provide the names of the persons who will attend. Bidders who have not confirmed their presence may be denied access. Bidders will have to sign an attendance sheet and will have to present a photo identification card. Bidders who do not attend or send a representative will not be given an alternative appointment but they will not be precluded from submitting a bid. Any clarifications or changes to the bid solicitation resulting from the site visit will be included as an amendment to the bid solicitation.

SI05 SUBMISSION OF BID

1. The bid should be submitted following a "two-envelope" procedure of which is to include a technical and financial bid. Both envelopes should be enclosed and sealed together in a third envelope, the "Bid Envelope". All envelopes are to be provided by the Bidder.
2. The Bid Envelope should be addressed and submitted to the office designated on the Front Page of the Request for Proposal. The bid must be received on or before the date and time set for solicitation closing. The Bidder should ensure that the following information is clearly printed or typed on the face of the envelope:
 - a. Solicitation Number;
 - b. Name of Bidder;
 - c. Bidder's return address; and
 - d. Closing Date and Time.
3. The Technical Bid, and any associated document(s), should be enclosed and sealed in an envelope with the following information clearly printed or typed on the face of the envelope:
 - a. Envelope 1 - Technical Bid;
 - b. Solicitation Number;
 - c. Name of Bidder.
4. The Bid and Acceptance Form (BA), Bid Security and associated document(s), the Financial Bid (Annex B – Basis of payment), should be enclosed and sealed in an envelope with the following information clearly printed or typed on the face of the envelope:
 - a. Envelope 2 - Financial Bid (Annex B – Basis of payment);
 - b. Solicitation Number; and
 - c. Name of Bidder.
 - d. Certificates
5. Timely and correct delivery of bids is the sole responsibility of the Bidder.

6. Unless otherwise specified in the Special Instructions to Bidders.
 - a. the bid will be in Canadian currency;
 - b. the requirement does not offer exchange rate fluctuation risk mitigation. Requests for exchange rate fluctuation risk mitigation will not be considered. All bids including such provision will render the bid non-compliant.

SI06 REVISION OF BID

A bid submitted may be amended by letter or facsimile provided the revision is received at the office designated for the receipt of the bids, on or before the date and time set for the receipt of bids. The facsimile number for receipt of revisions is (418) 648-2209. The revision must be on the Bidder's letterhead or bear a signature that identifies the Bidder, and must clearly identify the change(s) to be applied to the original bid. The revision must also include the information identified in SI05 - Submission of Bid.

SI07 OVERVIEW OF OPENING OF BIDS / BID SELECTION AND EVALUATION PROCEDURES

The following is an overview of the opening of the bids and the selection and evaluation procedures.

1. There will be no Public opening.
2. Bid Opening, Selection and Evaluation Procedure;
 - a. Envelope 1 "Technical Bid" will be opened first and will be reviewed and/or evaluated against the mandatory requirements set out elsewhere in the RFP. Technical Bids meeting all the minimum requirements are further considered. Failure to meet any or all of the mandatory requirement(s) will render the bid non-compliant. Non-compliant bids will be given no further consideration and the Financial Bid envelope will be returned to the bidder unopened.
 - b. Envelope 2 - "Financial Bid" will be opened after the Technical Bid has been deemed compliant. The Financial Bid will be evaluated against the mandatory requirements set out elsewhere in the RFP, failure to comply with any or all of the mandatory requirement(s) will render the bid non-compliant and no other consideration will be given to the bid. The compliant bid carrying the *lowest price per point* as set out elsewhere in the RFP will be recommended for contract award.
3. PWGSC normally expects to advise in writing unsuccessful Bidders within one week after PWGSC has entered into a contractual arrangement with the successful Bidder.
4. Bid results may be obtained from the Contracting Authority named on the cover page of the RFP following completion of the bid evaluation.

SI08 INSUFFICIENT FUNDING

1. In the event that the lowest compliant bid exceeds the amount of funding allocated for the Work, Canada in its sole discretion may
 - a. cancel the solicitation; or
 - b. obtain additional funding and award the Contract to the Bidder submitting the lowest compliant bid.

SI09 BID VALIDITY PERIOD

1. Canada reserves the right to seek an extension to the bid validity period prescribed in BA04 of the Bid and Acceptance Form. Upon notification in writing from Canada, Bidders will have the option to either accept or reject the proposed extension.
2. If the extension referred to in paragraph 1. above is accepted, in writing, by all those who submitted bids, then Canada will continue immediately with the evaluation of the bids and its approvals processes.

3. If the extension referred to in paragraph 1. above is not accepted in writing by all those who submitted bids then Canada will, at its sole discretion, either
 - a. continue to evaluate the bids of those who have accepted the proposed extension and seek the necessary approvals; or
 - b. cancel the solicitation.
4. The provisions expressed herein do not in any manner limit Canada's rights in law or under GI06 Rejection of Bid.

SI10 DEBRIEFINGS

1. After contract award, bidders may request a debriefing on their results of the bid solicitation process. Bidders should make the request to the Contracting Authority within fifteen (15) working days of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

SI11 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 Working enterprise, sometimes referred as a consortium, in order to submit together a bid. Bidders who submit a 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 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 bid, the Bidder must provide the information on request from the Contracting Authority.
3. The bid 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 bid solicitation and any resulting contract.
4. All of the members of the joint venture are jointly and severally responsible for the obligations entered into by the Bidder in accordance with the Contract Documents.

SI12 DEFINITION OF BIDDERS

1. "Bidder" means the person or entity (or, in the case of a joint venture, the persons or entities) submitting a bid to perform the works. It does not include the parent, subsidiaries or other affiliates of the Bidder, or its subcontractors. The term "Proponent" is also used to refer to the Bidder.

SI13 RIGHTS OF CANADA

1. Canada reserves the right to:
 - a. Reject any or all bids received in response to the bid solicitation;
 - b. Enter into negotiations with bidders on any or all aspects of their bids;
 - c. Accept any bid in whole or in part without negotiations;
 - d. Cancel the bid solicitation at any time;
 - e. Reissue the bid solicitation;
 - f. If no compliant bids are received and the requirement is not substantially modified, reissue the bid solicitation by inviting only the bidders who bid to resubmit bids within a period designated by Canada; and
 - g. Negotiate with the sole compliant Bidder to ensure best value to Canada.

SI14 INDUSTRIAL SECURITY RELATED REQUIREMENTS

1. **At bid closing, the Bidder must hold a valid Security Clearance** as indicated in section SC01 of the Supplementary Conditions. Failure to comply with this requirement will render the Bid non-compliant and no further consideration will be given to the Bid.
2. The successful Bidder's personnel, as well as any subcontractor and its personnel, who are required to perform any part of the work pursuant to the subsequent contract must meet the mandatory security requirement as indicated in section SC01 of the Supplementary Conditions. **Individuals who do not have the required level of security will not be allowed on site.** It is the responsibility of the successful Bidder to ensure that the security requirements are met throughout the performance of the contract. Canada will not be held liable or accountable for any delays or additional costs associated with the successful Bidder's non-compliance with the mandatory security requirement.
3. For additional information on security requirements, bidders should consult the "Security Requirements for PWGSC Bid Solicitations - Instructions for Bidders" on the Standard Procurement Documents Web site Industrial Security Program <http://www.tpsgc-pwgsc.gc.ca/esc-src/index-eng.html>

SI15 WEB SITES

1. The following is a list to some of the Web sites in the solicitation documents:
 - Buy and Sell: <https://www.achatsetventes-buyandsell.gc.ca>
 - Canadian economic sanctions: https://www.international.gc.ca/world-monde/international_relations-relations_internationales/sanctions/index.aspx?lang=eng
 - Contractor Performance Evaluation Report (Form PWGSC-TPSGC 2913): <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913.pdf>
 - Bid Bond (form PWGSC-TPSGC 504): <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/504.pdf>
 - Performance Bond (form PWGSC-TPSGC 505): http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/505_eng.pdf
 - Labour and Material Payment Bond (form PWGSC-TPSGC 506): <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/506.pdf>
 - Standard Acquisition Clauses and Conditions (SACC) Manual: <http://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>
 - PWGSC, Industrial Security Services: <http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>

- PWGSC, Code of Conduct and Certifications: <http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>
- Construction and Consultant Services Contract Administration Forms Real Property Contracting: <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>
- Declaration Form: <http://www.tpsgc-pwgsc.gc.ca/ci-if/formulaire-form-eng.html>
- Trade agreements; <https://buyandsell.gc.ca/policy-and-guidelines/Policy-and-Legal-Framework/Trade-Agreements>

SI16 FAIRNESS MONITOR

Canada has engaged Raymond Chabot Grant Thornton Consulting Inc. as the Fairness Monitor to monitor this Request for Proposal.

SI17 FINANCIAL CAPABILITY (A90033T 2012-07-16)

1. **Financial Capability Requirement:** The Bidder must have the financial capability to fulfill this requirement. To determine the Bidder's financial capability, the Contracting Authority may, by written notice to the Bidder, require the submission of some or all of the financial information detailed below during the evaluation of bids. The Bidder 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 Bidder's outside accounting firm, if available, or prepared in-house if no external statements have been prepared) for the Bidder's last three fiscal years, or for the years that the Bidder 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).
 2. 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 Bidder 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.
 3. If the Bidder 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
 2. 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.
 4. A certification from the Chief Financial Officer or an authorized signing officer of the Bidder that the financial information provided is complete and accurate.
 5. A confirmation letter from all of the financial institution(s) that have provided short-term financing to the Bidder outlining the total of lines of credit granted to the Bidder 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.
 6. A detailed monthly Cash Flow Statement covering all the Bidder's activities (including the requirement) for the first two years of the requirement that is the subject of the bid solicitation, unless this is prohibited by legislation. This statement must detail the Bidder's major sources and amounts of cash and the major items

of cash expenditures on a monthly basis, for all the Bidder's activities. All assumptions made should be explained as well as details of how cash shortfalls will be financed.

7. A detailed monthly Project Cash Flow Statement covering the first two years of the requirement that is the subject of the bid solicitation, unless this is prohibited by legislation. This statement must detail the Bidder's major sources and amounts of cash and the major items of cash expenditures, for the requirement, on a monthly basis. All assumptions made should be explained as well as details of how cash shortfalls will be financed.
2. If the Bidder 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 Bidder is a subsidiary of another company, then any financial information in 1. (a) to (f) 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 Bidder, and the financial capability of a parent cannot be substituted for the financial capability of the Bidder 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 Bidder 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 Bidder identifies to the Contracting Authority in writing the specific information that is on file and the requirement for which this information was provided; and
 2. the Bidder authorizes the use of the information for this requirement.

It is the Bidder'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 Bidder any other information that Canada requires to conduct a complete financial capability assessment of the Bidder.
6. **Confidentiality:** If the Bidder 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 Bidder's financial capability to fulfill this requirement, Canada may consider any security the Bidder is capable of providing, at the Bidder'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).

IP 18 CONTRACT SÉCURITÉ – OBLIGATION TO PROVIDE CONTRACT SECURITY CERTIFICATION

1. At the time and date of the request for proposal closing or upon request from the Contracting Authority, the Contractor shall deliver to Canada a certificate demonstrating its ability to obtain a contract security as prescribed in GC9.2, "Types and amounts of contract security". The certification shall be issued by a bonding or surety company (see Treasury Board Appendix L, Acceptable Bonding Companies) that is approved by Canada.
2. The certificate may be in the form chosen by the bonding or surety company and include, at a minimum, the following: the period for which the bond may be offered, the conditions, the name of the bonding or surety company, the name of the contractor and the value of the cover.
3. Canada will have the right to declare a bid non-responsive if the Bidder cannot provide such certification at least three (3) days after the request from the Contracting Authority.

CONTRACT DOCUMENTS (CD)

1. The following are the contract documents:
 - a. Contract Page when signed by Canada;
 - b. Duly completed Bid and Acceptance Form and any Appendices attached thereto;
 - c. Request for Proposal all Annexes, Appendices and Amendments thereto;
 - d. Terms of Reference;
 - e. Basis of Payment;
 - f. General Conditions and clauses:

GC1 General Provisions - Construction Services	R2810D (2017-11-28);
GC2 Administration of the Contract - Construction Services	R2820D (2016-01-28);
GC3 Execution and Control of the Work	R2830D (2018-06-21);
GC4 Protective Measures	R2840D (2008-05-12);
GC5 Terms of Payment	R2850D (2016-01-28);
GC6 Delays and Changes in the Work	R2860D (2019-05-30);
GC7 Default, Suspension or Termination of Contract	R2870D (2018-06-28);
GC8 Dispute Resolution ->5M – Construction Services	R2882D (2016-01-28);
GC9 Contract Security	R2890D (2018-06-21);
GC10 Insurance	R2900D (2008-05-12);
 - g. Supplementary Conditions (SC)
 - h. Any amendment issued or any allowable bid revision received before the date and time set for solicitation closing;
 - i. Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and acceptance of the bid; and
 - j. Any amendment or variation of the contract documents that is made in accordance with the General Conditions; and
 - k. The Contractor's bid. (Technical Bid and Financial Bid)
2. The documents identified by title, number and date above are incorporated by reference and are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>
3. The language of the contract documents is the language of the Bid and Acceptance Form submitted.

SUPPLEMENTARY CONDITIONS (SC)

- SC01 Industrial Security Related Requirements, *Document Safeguarding*
 - SC02 Insurance Terms
 - SC03 Changes to Contract Documents
 - SC04 Determination of Construction Cost
 - SC05 Determination of Price for Subcontract Changes
 - SC06 Replacement of Specific Individuals
 - SC08 Language Requirements
 - SC09 Optional Services
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SC01 INDUSTRIAL SECURITY RELATED REQUIREMENTS

1. The Contractor/Offeror must, at all times during the performance of the Contract/Standing Offer, hold a valid Designated Organization Screening (DOS), issued by the Contract Security Program (CSP) of the Industrial Security Sector (ISS), Public Works and Government Services (PWGSC).
2. The Contractor/Offeror personnel requiring access to **PROTECTED** information, assets or sensitive work site(s) must EACH hold a valid RELIABILITY STATUS, granted or approved by the CSP/ISS/**PWGSC**. Until the security screening of the Contractor personnel required by this Contract has been completed satisfactorily by the CSP/ISS/PWGSC, the Contractor/ personnel **MAY NOT HAVE ACCESS** to **PROTECTED** information or assets, and **MAY NOT ENTER** sites where such information or assets are kept, without an escort.
3. The Contractor/Offeror **MUST NOT** remove any **PROTECTED** information or assets from the identified work site(s), and the Contractor/Offeror must ensure that its personnel are made aware of and comply with this restriction.
4. Subcontracts which contain security requirements are NOT to be awarded without the prior written permission of the CSP/ISS/**PWGSC**.
5. The Contractor/Offeror must comply with the provisions of the:
 - a) Security Requirements Check List and security guide (if applicable), attached at Annex D;
 - b) Industrial Security Manual (Latest Edition).

SC02 INSURANCE TERMS

1. Insurance policies
 - a. The Contractor must, at the Contractor's expense, obtain and maintain insurance policies in accordance with the requirements of the Certificate of Insurance. Coverage must be placed with an Insurer licensed to carry out business in Canada.
 - b. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract. The Contractor is responsible for deciding whether additional insurance is necessary to fulfill its obligations under the contract and to conform to the applicable laws. Any additional insurance obtained is payable by the Contractor as well as being for the Contractor's benefit and protection.
2. Period of Insurance
 - a. The policies required in the Certificate of Insurance must be in force from the date of contract award and be maintained throughout the duration of the Contract.

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- b. The Contractor must be responsible to provide and maintain coverage for Products/Completed Operations hazards on its Commercial General Liability insurance policy, for a period of six (6) years beyond the date of the Certificate of Substantial Performance.
3. Proof of insurance
- a. Before commencement of the Work, and no later than thirty (30) days after acceptance of its bid, the Contractor must deposit with Canada a Certificate of Insurance on the form attached herein.
- b. Upon request by Canada, the Contractor must provide originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the Certificate of Insurance.
- c. The Contractor is responsible for providing and maintaining coverage for Products/Completed Operations hazards on its Commercial General Liability insurance policy, for a period of six (6) years beyond the date of the Certificate.
4. Insurance Proceeds
In the event of a claim, the Contractor must, without delay, do such things and execute such documents as are necessary to effect payment of the proceeds.
5. Deductible
The payment of monies up to the deductible amount made in satisfaction of a claim must be borne by the Contractor.

SC03 CHANGES TO CONTRACT DOCUMENTS

1. R2810D (2017-11-28) General Condition (GC) 1 - General Provisions - Construction Services is amended as follows:
- a. Subsection GC1.1.2 Terminology is amended as follows:
Delete the term "Contractor" from GC1.1.2 in its entirety and replace with the following:
- "Contractor" and "Construction Manager"*
means the person contracting with Canada to provide or furnish all labour, Material and Plant and Construction Management Services for the execution of the Work under the Contract and includes the Contractor's superintendent as designated in writing to Canada.
- b. Subsection GC1.2.2 Order of precedence is amended as follows:
- i. Delete sub-paragraph 1. f. drawings and specifications in its entirety and replace with the following:
f. Terms of Reference & Basis of Payment.
- ii. Delete sub-paragraph 2. in its entirety.
- c. Section GC1.6 Indemnification by the Contractor is amended as follows:
- Delete Section GC1.6 Indemnification by the Contractor in its entirety and replace with the following:
GC1.6 Indemnification by the Contractor
1. *The Contractor will indemnify and save Canada harmless from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by Canada or in respect of claims by any third party, brought or prosecuted and in any manner based upon, arising out of, related to, occasioned by, or attributable to the activities of the Contractor in performing the Work, provided such claims are caused by the negligent or deliberate acts or omissions of the Contractor, or those for whom it is responsible at law.*
2. *The Contractor's obligation to indemnify Canada for losses related to first party liability will be limited to:*

- a. *In respect to each loss for which insurance is to be provided pursuant to the insurance requirements of the Contract, the Commercial General Liability insurance limit for one occurrence as referred to in the insurance requirements of the Contract.*
 - b. *In respect to losses for which insurance is not required to be provided in accordance with the insurance requirements of the Contract, the greater of the Contract Amount or \$5,000,000, but in no event will the sum be greater than \$20,000,000.*
 3. *The limitation of this obligation will be exclusive of interest and all legal costs and will not apply to any infringement of intellectual property rights or any breach of warranty obligations.*
 4. *The Contractor's obligation to indemnify Canada for losses related to third party liability will have no limitation and will include the complete costs of defending any legal action by a third party. If requested by Canada, the Contractor will defend Canada against any third-party claims.*
 5. *The Contractor will pay all royalties and patent fees required for the performance of the Contract and, at the Contractor's expense, will defend all claims, actions or proceedings against Canada charging or claiming that the Work or any part thereof provided or furnished by the Contractor to Canada infringes any patent, industrial design, copyright trademark, trade secret or other proprietary right enforceable in Canada.*
 6. *Notice in writing of a claim will be given within a reasonable time after the facts, upon which such claim is based, became known.*
2. R2830D (2018-06-21) General Condition (GC) 3 - Execution and Control of the Work is amended as follows:

Delete Section GC3.7- Construction by Other Contractors or Workers in its entirety and replace with the following:
GC3.7 - Separate Contracts with other Contractors

1. *Canada reserves the right to award separate contracts for work. Where in the opinion of Canada, it is necessary for Canada to award separate contracts to other contractors, the Contractor will:*
 - a. *coordinate and cooperate with the work of other contractors;*
 - b. *coordinate and schedule the Work with the work of other contractors and connect as specified or shown;*
 - c. *participate with other contractors and the Departmental Representative in reviewing their construction schedules when directed to do so;*
 - d. *coordinate and perform the Work with care and diligence so as to ensure that Canada and other contractors will be in a position to proceed according to schedule with the delivery, installation and testing of their work; and*
 - e. *allow other contractors or workers, together with their plant, equipment and Material, access to the Site and the opportunity to use their plant and equipment.*
2. *When separate contracts are awarded for other parts of the Project, Canada will:*
 - a. *Ensure that insurance coverage is provided to the same requirements to the extent applicable. Such insurance will be coordinated with the insurance coverage of the Contractor as it affects the Work; and*
 - b. *Take all precautions reasonably possible to avoid labour or other disputes.*
 - c. *Ensure the separate contractors are required to adhere to the Contractor's Health & Safety policies and procedures when performing work at the location of the project under the Contractor's control as Constructor on the project.*
3. *The Contractor will give the Departmental Representative prompt written notice of any defect in, or any conflict occasioned by, the work of other contractors and prior to proceeding with any Work that is affected by or depends upon for its proper execution such work of other contractors. In the absence of such written report, the Contractor will have no claim against Canada by reason of the conflict or defective work of the other contractors.*
4. *Notwithstanding the foregoing, it is understood and agreed that the Contractor will be the "constructor" for the Project within the meaning of the applicable Health and Safety legislation, and will perform or have performed,*

in addition to any other obligations it may have pursuant to the application legislation, all of the obligations of a "constructor" set out in the legislation for the Work. It is further understood and agreed that Canada appoints and the Contractor agrees to be appointed as the constructor to fully control, coordinate, oversee and be responsible for all other contractors.

5. *If the Contractor has caused damage, delay, impact, or interference to the work of other contractors, the Contractor agrees upon due notice to settle with the other contractors in accordance with GC5.8 item 6. of R2850D - General Condition (GC) 5 - Terms of Payment. If one or more of the other contractors makes a claim against Canada on account of damage, delay, impact, or interference alleged to have been so sustained, Canada will notify the Contractor and may require the Contractor to defend the action at the Contractor's expense and not as a Cost of the Work and without an adjustment in the Contract Fee. The Contractor will satisfy a final order or judgment against Canada and pay the costs incurred by Canada arising from such action and not as a Cost of the Work and without an adjustment in the Contract Fee.*

3. R2850D (2016-01-28) General Condition (GC) 5 Terms of Payment > 100K - Construction Services is amended as follows:

a. Section GC5.4 Progress Payment is amended as follow:
Add the following sub-section to CG5.4 Progress Payments

6. *The portion of the Work done under the Fixed Fee will be invoiced in equal monthly installments over the duration of the Contract.*

b. R2850D - Section GC5.5 Substantial Performance of the Work is amended as follows: Add the following sub-section to CG5.5 Substantial Performance

5. *If, at any time before the issuance of a Certificate of Completion, Canada determines that a Work Package has reached Substantial Performance as described in subparagraph 1. b. of GC 1.1.4, "Substantial Performance", paragraphs 1. through 4. of GC 5.5 may be applied with respect to the specific Work Package.*

4. R2860D (2019-05-30) General Condition (GC) 6 - Delays and Changes in the Work – Construction Services is amended as follows:

Section GC6.4 Determination of Price is amended as follows:

Delete Section GC6.4 Determination of Price in its entirety and replace with the following:

GC6.4 Determination of Price

1. *Any adjustment to the Estimated Construction Costs resulting from a change in the Work pursuant to GC6.1 will represent all reasonable and proper costs including delay incurred by or savings accruing to the Contractor in respect of the labour, Plant and Material that are payable as Construction Costs.*

2. *If the final cost of the Construction Work, excluding the Contractor' fees, is not within 75 and 125 percent of the total Estimated Construction Cost either party to the Contract may request to negotiate a change in the Contractor' Percentage Fee for the Work outside of these thresholds if:*

a. *there is a demonstrable difference between the cost to the Contractor of performing the Work for the Estimated Construction Cost and the cost to the Contractor of performing the Work for the actual Construction Cost;*

3. *For the purposes of the negotiation referred to in paragraph 2.*

a. *The onus of establishing, justifying and quantifying a proposed change lies with the party making the request for negotiation.*

b. *If the actual Construction cost is less than 75 percent of the Estimated Construction, in no event will the total amount paid as the Contractor' Percentage Fee, amended as a result of a reduction in the*

cost of the Work, exceed the amount that would have been payable to the Contractor had the price of the Work actually accounted for 75 percent of the Estimated Construction Cost.

4. *The amount of the Contract will be the final sum of the Fixed Monthly Fees, the actual Construction Cost, the Percentage Fee and any adjustments that are made in accordance with the Contract.*

5. R2890D (2018-06-21) - General Condition (GC) 9 - Contract Security, is amended as follows:

Article GC 9.1 Obligation to post contract security is amended as follows:

Delete sub-paragraph 1 in its entirety and replace it with the following:

1. *The Contractor must, at the Contractor's expense: within fourteen (14) days after the date the Contractor receives notice that Stage B has been exercised by the Contracting Authority, obtain and deliver Contract Security to Canada for the amended Contract Amount being the total amount for Stage A and Stage B;*

SC04 DETERMINATION OF CONSTRUCTION COST

1. The Construction Cost, as defined in that **BASIS OF PAYMENT Annex B**, initially will be determined based on the Estimated Construction Cost specified in the Request for Proposal. The Estimated Construction Cost will be adjusted periodically throughout the term of the contract to reflect the actual Construction Cost.
2. Any adjustment to the amount of a subcontract will require Canada's approval in writing. The Contractor will not be entitled to any additional fees other than the Percentage Fee.
3. Any request for adjusting the amount of a subcontract must be substantiated with a cost estimate breakdown identifying, as a minimum, all Labour, Material, and Plant costs and the amount of the allowance for the subcontractor's undertaking of the work within the stipulated amount. The Contractor will ensure that all prices included in the breakdown are fair and reasonable and in conformance with the following:
 - a. Labour rates will be established in accordance with applicable trade union agreements. Non-union labour rates will be established in accordance with industry standards. All labour rates will require approval by Canada in writing.
 - b. The costs of all Material and Plant must represent the actual amount paid to suppliers and said costs are to include all applicable discounts.
 - c. Allowances for the subcontractor's profit, supervision, coordination, administration, overhead and the risk of undertaking the work will be negotiated by the Contractor for each change, and will represent a reasonable amount for the nature and complexity of each change. However, in no circumstance will the subcontractor's allowance exceed 15%.
4. The price of any portion of the Work that is not subcontracted or paid for as a Fixed Fee will be equal to the actual cost of that portion of the Work plus the applicable Contractor's Percentage Fee.

SC05 DETERMINATION OF PRICE FOR SUBCONTRACT CHANGES

1. Price Determination Prior to Undertaking Changes
 - a. If a Lump Sum Arrangement applies to the subcontract between the Contractor and the subcontractor or a part thereof, the price of any subcontractor's change will be the aggregate estimated cost of labour, Plant and Material that is required for the change as agreed on in writing by the Contractor and Canada plus an allowance in accordance with SC04 3. c.
 - b. If a Unit Price Arrangement applies to the subcontract between the Contractor and the subcontractor or a part thereof, the Contractor and Canada may, by agreement in writing, add items, units of measurement, estimated quantities and prices per unit to the Unit Price Table.
 - c. A price per unit referred to paragraph b., will be determined on the basis of the aggregate estimated cost of labour, Plant and Material that is required for the additional item as agreed on by the Contractor and Canada, plus an allowance determined in accordance with SC04 3. c.
 - d. To facilitate approval of the price of the change or the additional price per unit as applicable, the subcontractor will submit a cost estimate breakdown identifying, as a minimum, the estimated cost of labour, Plant, Material, each subcontract amount, and the amount of the allowance.
 - e. If no agreement is reached as contemplated in paragraph 1. the price will be determined in accordance with paragraph 3. "Price Determination Following Completion of Changes".
2. Allowable Costs under paragraph 1. "Price Determination Prior to Undertaking Changes".
 - a. General
 - i. The subcontractor will submit a cost estimate breakdown for each contemplated change, in accordance with paragraph 1. d. "Price Determination Prior to Undertaking Changes". The breakdown will itemize all labour, Material, Plant and equipment costs estimated by the subcontractor, and the amount of the subcontractor allowance;
 - ii. It is the responsibility of the Contractor to ensure that all prices included in the subcontractor's breakdown, including those subcontractors' cost, are fair and reasonable in view of the terms expressed herein;
 - iii. The labour hours required for the contemplated change will be based on the estimated number of hours to perform the work;
 - iv. Time spent by a working foreman may be included in the number of labour hours, at a rate agreed to in writing by the Contractor and Canada;
 - v. Time attributable to material handling, productivity factors and approved rest periods is to be included in the number of hours required by the contemplated change and will not be paid as a separate item under hourly rates;
 - vi. Allowances referred to in paragraph 2. d.- "Allowance to the subcontractor" below are not to be included in the hourly labour rates;
 - vii. Credit for work deleted will only be for the work directly associated with the change;
 - viii. When a change deletes work which has not yet been performed, Canada is entitled to an adjustment in the Contract Amount equal to the cost the Subcontractor would have incurred had the work not been deleted;

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- ix. Allowances referred to in paragraph 2. d. "Allowance to the subcontractor" below will not be applied to any credit amounts for deleted work;
- x. In those cases where the change involves additions and deletions to the work, the allowances referred to in paragraph 2. d. "Allowance to the subcontractor" below will apply only when the cost of the additions minus the cost of the deletions would result in an increase in the Contract Amount. The allowance will only be applied to that portion of the costs of the additions that is in excess of the cost of the deletions;
- xi. If the contemplated change in the work necessitates a change in the Contract completion date, or has an impact on the work, the Contractor will identify and include the resulting cost in the breakdown.

b. Hourly Labour Rates

- i. The hourly labour rates listed in the subcontractor's breakdown will be determined in accordance with the collective agreements that are applicable at the site of the work and will include:
- (a) the base rate of pay;
 - (b) vacation pay;
 - (c) benefits which includes:
 - Welfare contributions;
 - Pension contributions;
 - Union dues;
 - Training and industry funds contributions; and
 - Other applicable benefits, if any that can be substantiated by the subcontractor;
 - (d) statutory and legislated requirements, assessed and payable under statutory authority, which includes:
 - Employment Insurance contributions;
 - Canada Pension Plan or Quebec Pension Plan contributions;
 - Worker's Compensation Board or " Commission des normes, de l'équité, de la santé et de la sécurité du travail " premiums;
 - Public Liability and Property Damage insurance premiums; and
 - Health tax premiums.
- ii. In the case of non-union labour, all rates claimed will be in accordance with industry standards and the subcontractor will provide satisfactory proof of the rates actually paid

c. Material, Plant and Equipment Costs

- i. The costs of all purchases and rentals will be based on the actual amount paid to the suppliers by the subcontractor and said costs are to include all applicable discounts.

d. Allowance to the subcontractor

- i. The allowances provided will be considered as full compensation for:
- (a) supervision, coordination, administration, overhead, margin and the risk of undertaking the work within the stipulated amount; and
 - (b) miscellaneous additional costs related to
 - The purchase or rental of material, plant and equipment;
 - The purchase of small tools and supplies;
 - Safety and protection measures; and
 - Permits, bonds, insurance, engineering, as built drawings, commissioning, and site office.

3. Price Determination Following Completion of Changes

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- a. If it is not possible to predetermine, or if there is failure to agree on the price of a change in the Work, the price of the change will be equal to the aggregate of:
- i. all reasonable and proper amounts actually expended or legally payable by the subcontractor for labour, Plant and Material that fall within one of the classes of expenditure described in paragraph b. that are directly attributable to the performance of the Contract;
 - ii. an allowance for profit and all other expenditures or costs, including overhead, general administration costs, financing and interest charges, in an amount that is determined in accordance with SC04 3. c.; and
 - iii. interest on the amounts determined under subparagraphs a. i. and a. ii. of paragraph 3. calculated in accordance with GC5.11, "Interest on Settled Claims";
- b. The cost of labour, Plant and Material referred to in subparagraph a. i. and a. ii. of paragraph 3 will be limited to the following categories of expenditure:
- i. payments to subcontractors and suppliers;
 - ii. wages, salaries bonuses and, if applicable, travel and lodging expenses of employees of the subcontractors located at the site of the Work and that portion of wages, salaries, bonuses and, if applicable, travel and lodging expenses of personnel of the subcontractor generally employed at the head office or at a general office of the subcontractor provided they are actually and properly engaged on the Work under the Contract;
 - iii. assessments payable under any statutory authority relating to workers' compensation, employment insurance, pension plan or holidays with pay, provincial health or insurance plans, environmental reviews, and Applicable Taxes collection costs;
 - iv. rent that is paid for Plant, or an amount equivalent to the said rent if the Plant is owned by the subcontractor, that is necessary for and used in the performance of the Work, if the rent or the equivalent amount is reasonable and use of that Plant has been approved by Canada;
 - v. payments for maintaining and operating Plant necessary for and used in the performance of the Work, and payments for effecting repairs thereto that, in the opinion of Canada, are necessary for the proper performance of the Contract, other than payments for any repairs to the Plant arising out of defects existing before its allocation to the Work;
 - vi. payments for Material that is necessary for and incorporated in the Work, or that is necessary for and consumed in the performance of the subcontract;
 - vii. payments for preparation, delivery, handling, erection, installation, inspection, protection and removal of the Plant and Material necessary for and used in the performance of the subcontract; and
 - viii. any other payments made by the subcontractor with the approval of Canada that are necessary for the performance of the subcontract.

4. Price Determination - Variations in Tendered Quantities

- a. Except as provided in subparagraphs b., c., d. and e., if it appears that the final quantity of labour, Plant and Material under a price per unit item will exceed or be less than the estimated tendered quantity, the subcontractor will perform the Work or supply the Plant and Material required to complete the item and payment will be made for the actual Work performed or Plant and Material supplied at the price per unit set out in the subcontract.
- b. If the final quantity of the price per unit item exceeds the estimated tendered quantity by more than 15 percent, either party to the subcontract may make a written request to the other party to negotiate an amended price per unit for that portion of the item which exceeds 115 percent of the estimated tendered

quantity, and to facilitate approval of any amended price per unit, the subcontractor will, on request, provide Canada with:

- i. detailed records of the actual cost to the subcontractor performing or supplying the tendered quantity for the price per unit item up to the time the negotiation was requested; and
 - ii. the estimated unit cost of labour, Plant and Material required for the portion of the item that is in excess of 115 percent of the tendered quantity.
- c. If agreement is not reached as contemplated in subparagraph b., the price per unit will be determined in accordance with paragraph 3. "Price Determination Following Completion of Changes"
- d. If it appears that the final quantity of labour, Plant and Material under a price per unit item will be less than 85 percent of the estimated tendered quantity, either party to the subcontract may make a written request to the other party to negotiate a change to the price per unit for the item if:
- i. there is a demonstrable difference between the unit cost to the subcontractor of performing or supplying the estimated tendered quantity and the unit cost of the subcontractor for performing or supplying the final quantity; and
 - ii. the difference in unit cost is due solely to the decrease in quantity and not to any other cause.
- e. For the purposes of the negotiation referred to in subparagraph d.
- i. the onus of establishing, justifying and quantifying a proposed change lies with the party making the request for negotiation; and
 - ii. in no event will the total price for an item that has been amended as a result of a reduction in quantity under subparagraph d., exceed the amount that would have been payable to the subcontractor had 85 percent of the tendered quantity actually been performed or supplied.

SC06 REPLACEMENT OF SPECIFIC INDIVIDUALS

1. If specific individuals are identified in the Contract to perform the Work, the Contractor must provide the services of those individuals unless the Contractor is unable to do so for reasons beyond its control.
2. If the Contractor is unable to provide the services of any specific individual identified in the Contract, it must provide a replacement with the same level of qualifications and experience as the individual who is being replaced. The replacement must meet the criteria used in the selection of the Contractor and be acceptable to Canada. The Contractor must, as soon as possible, give notice to the Contracting Authority of the reason for replacing the individual and provide:
 - a. the name, qualifications and experience of the proposed replacement; and
 - b. proof that the proposed replacement has the required security clearance granted by Canada, if applicable.
3. The Contractor must not, in any event, allow performance of the Work by unauthorized replacement persons. The Departmental Representative may order that a replacement stop performing the Work. In such a case, the Contractor must immediately comply with the order and secure a further replacement in accordance with paragraph 2. The fact that the Departmental Representative does not order that a replacement stop performing the Work does not relieve the Contractor from its responsibility to meet the requirements of the Contract.

SC07 AMENDMENT TO R2860D GC6.5.4 DELAY AND CHANGES IN THE WORK

Note that General Condition 6.5.4 is replaced by the following;

If the Contractor incurs or sustains any extra expense or any loss or damage that is directly attributable to any neglect or delay that occurs after the date of the Contract on the part of Canada in providing any information or any act that the Contract either expressly requires Canada to do or that would ordinarily be done by an owner in accordance with the practice of the trade, the Contractor shall give Canada written notice of intention to claim for that extra expense or loss or damage within 10 working days of the date the neglect or delay occurred.

SC08 LANGUAGE REQUIREMENTS

1. Communication between Canada and the Contractor shall be in the language of choice of the Contractor Team, which shall be deemed to be the language of the Contractor's proposal.
2. The Contractor's services during construction tender calls (such as document preparation, bid request, participation to meetings with bidders, answers to questions by bidders) shall be provided expeditiously in both official languages of Canada, according the terms of reference (Annex A).
3. The Contractor's services during construction shall be provided in the language of choice of the Contractor. The successful Contractor will be asked to commit to one or other of Canada's official languages upon award of the Construction Contract and, thereafter construction and contract administration services will be conducted in the language chosen by the Contractor.
4. Direct communications with other stakeholders and partners should be in the official language of choice of these stakeholders. Meetings including the contractor, other stakeholders and partners will be conducted in French.
5. The Contractor shall ensure that the services being provided in either language shall be to a professional standard.

SC09 OPTIONAL SERVICES

1. The Contractor grants to Canada the irrevocable option to acquire the Stage B Work in accordance with the terms and conditions set forth in this RFP and corresponding Terms of Reference documents. Exercise of the optional services and construction by Canada is contingent upon receipt of the necessary Government of Canada approvals and at the sole discretion of Canada. The Contractor agrees to carry out this work under the conditions and fees specified in the Contract.
2. The Stage B Optional Services may be exercised only by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment. The option comes into force immediately after the Contracting Authority has given notice.
3. The Contracting Authority may exercise the option to add Stage B Optional Services at any time before the expiry of the Contract by sending a written notice to the Contractor.
4. Stage B Optional Services must be performed and completed within the period indicated in the BA06.

SUBMISSION REQUIREMENTS AND EVALUATION (SRE)

SRE 1 General Information

SRE 2 Technical Proposal Submission Requirements and Evaluation

SRE 3 Price Evaluation

SRE 4 Basis of Selection

SRE 1 GENERAL INFORMATION

1.1 Reference to the Selection Procedure

1.1.1 An Overview of the bid opening and selection procedure can be found in the Special Instructions to Bidders (SI).

1.2 Submission of Bids

1.2.1 Bidders must submit their bid in "two envelopes": the technical aspect of their proposal in one envelope and the financial aspect (price proposal) and the bid security in another envelope.

1.2.2 Submit one (1) signed original and three (3) copies of the Technical Bid (envelope one).

1.2.3 Submit one (1) signed original of the price bid and bid security in a sealed envelope (envelope two).

1.3 Format of Bids

1.3.1 Technical Bids

In their technical bids, bidders should demonstrate their understanding of the requirements contained herein and explain how they meet these requirements. Bidders should demonstrate their capability in a thorough, clear and concise manner for carrying out the work.

The Technical Bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, bidders may refer to different sections of their proposals by identifying the specific paragraph and page number where the subject topic has already been addressed.

The following format should be used when preparing the proposal:

- Paper size should be - 216mm x 279mm (8.5" x 11");
- Minimum font size - 11 point Times or equal;
- Margins should be 12 mm left, right, top, and bottom;
- Double-sided submissions are preferred;
- One (1) 'page' means one side of a 216mm x 279mm (8.5" x 11") sheet of paper.
- 279mm x 432 mm (11" x 17") fold-out sheets for spreadsheets, organization charts, etc. will be counted as two pages.

The order of the technical bid should follow the order established in the Submission Requirements Section of the RFP. The maximum number of pages (including text and graphics) to be submitted is 30. The following are not part of this page limitation:

- Covering Letter;
- Front page of RFP;
- First page of RFP amendment(s)
- Certificate forms
- Price Bid;

- Résumés (limit 2 pages each, with the exception of those of the project leader and project manager which could be four 4 pages);

Bidders should clearly identify resumes and include them in an appendix to avoid counting them in the technical bid page count.

The consequence of exceeding the maximum 30-page limitation is that all pages that extend beyond the page limitation, and any attachments that are not identified as acceptable, will be removed from the technical proposal submission and will not be forwarded to the PWGSC Evaluation Committee for evaluation. The same rule applies to the page limit per resume.

Proposed Resources: The same individual must not be proposed for more than one resource category. The Technical bid should demonstrate that each proposed individual meets the qualification requirements described (including any educational requirements, work experience requirements, and professional designation or membership requirements). With respect to résumés and resources:

- A. Proposed resources may be employees of the Bidder or employees of a subcontractor, or these individuals may be independent contractors to whom the Bidder would subcontract a portion of the Work.
- B. For educational requirements for a particular degree, designation or certificate, PWGSC will only consider educational programmes that were successfully completed by the resource by the time of bid closing.
- C. For requirements relating to professional designation or membership, the resource must have the required designation or membership by the time of bid closing and must continue, where applicable, to be a member in good standing of the profession or membership throughout the evaluation period and Contract Period. Designation or memberships should be demonstrated by providing a copy of the certification, diploma or degree, such document must be current, valid and issued by the entity specified in this solicitation. If a Bidder claims to have a certain professional designation or membership but does not provide a copy of the designation or membership as evidence, Canada may provide a timeframe by which it must be provided. Failure to provide the requested information within the requested time frame will result in no evaluation of the proposed personnel and be disregarded. If the entity is not specified, the issuer must have been an accredited or otherwise recognized body, institution or entity at the time the document was issued.
- D. For work experience, PWGSC will not consider experience gained as part of an educational programme, except for experience gained through a formal co-operative program at a post-secondary institution or apprenticeship.
- E. For any requirements that specify a particular time period (e.g., 2 years) of work experience, PWGSC will disregard any information about experience if the Technical bid does not include the relevant dates (month and year) for the experience claimed (i.e., the start date and end date). PWGSC will evaluate only the duration that the resource actually worked on a project or projects (from his or her start date to end date), instead of the overall start and end date of a project or a combination of projects in which a resource has participated.
- F. For work experience to be considered by PWGSC, the Technical bid should not simply indicate the title of the individual's position but should demonstrate that the resource has the required work experience by explaining the responsibilities and work performed by the individual while in that position. In situations in which a proposed resource worked at the same time on more than one project, the duration of any overlapping time period will be counted only once toward any requirements that relate to the individual's length of experience.

1.3.2 Price Bid

Bidders must submit their bid in accordance with SI05.

1.4 Evaluation of the bid

1.4.1 An eligible proposal must:

- Comply with all of the requirements of the bid solicitation, including the security requirements at the time of closing the RFP;
- Meet all the mandatory evaluation criteria;
- The price bid (Annex B – Basis of payment) must be completed

1.4.2 Bidders who do not meet the requirements set out in 1.4.1 will be declared non-responsive. Eligible proposals will be evaluated and scored according to the criteria described in the SRE 2.

SRE 2 TECHNICAL PROPOSAL SUBMISSION REQUIREMENTS AND EVALUATION

2.1 TECHNICAL CRITERION 1 - Experience of the Bidder (Maximum points: 200)

Unless otherwise stated, the experience indicated in the Bid must be that of the Bidder itself (which includes the experience of all the companies that have formed the merging bidder but does not include the experience gained by purchasing property or by the sale of a contract). The experience of affiliated companies (i.e. parent company, subsidiaries or sister companies), subcontractors or bidder suppliers will not be considered.

Information to be provided :

1) General experience of the Bidder

The bidder should demonstrate that they have at least ten (10) years of experience in building construction and renovation. The bidder should also demonstrate that they have at least ten (10) years of experience in carrying out construction management projects.

2) Projects

Bidder should provide a maximum of two (2) representative reference projects successfully completed by the Bidder and/or joint venture partner within the last ten (10) years relevant to the scope of services required, and the scale and scope of the Project described in this RFP. A similar project is defined as construction of a new office building, with a sustainable development component, 20,000 m² or greater, where the value of construction was no less than \$75,000,000 and the project was delivered through Construction Management. Only the first two (2) projects listed in sequence will receive consideration and any others will receive none as though not included.

Bidder should :

- Provide a brief project description and intention of the project including total construction value and contracts managed, start date and substantial completion. Clearly indicate how and why each referenced is comparable to the subject of this RFP (example: Nature of work, Resource management, Complexity, Constraints and Expectations).
- Describe how budget is controlled and managed (i.e. initial contract price & final construction cost with explanation to address variances)
- Provide information on Schedule control and management (i.e. initial schedule and revised schedule with explanation to address variances).
- Describe how the scope, quality and risk were managed by the firm to achieve client's expectations (Give examples applicable to present project).
- Provide names of key personnel responsible for project delivery
- Provide contact information (name, address, phone numbers and emails) for client references knowledgeable in the representative project and the Bidder' role. The references will only be contacted by the Contract authority to confirm submitted material. If no reference is provided, project could be rejected.

2.2 TECHNICAL CRITERION 2 - Experience of Key Personnel of the Bidder (Maximum points: 200)

The Bidder should provide the first and last name of the following Key Personnel identified in 1 to 9 below to provide the services for the project as presented in the Terms of Reference :

1. Project Leader

The Project Leader shall have a minimum of fifteen (15) years of progressive experience in the construction industry, including the last five (5) years in management positions as Project Leader on projects of similar size, complexity and scope with a minimum construction value of \$75,000,000. Provide academic qualifications and certifications including professional designations and degrees such as P. Eng., Architect, Gold Seal, Occupational Health and Safety Certifications, etc.

2. Project Manager

The Project Manager shall have a minimum of fifteen (15) years of progressive experience in the construction industry, having managed projects of similar size, complexity and scope within the last five (5) years at a minimum construction value of \$75,000,000. Provide academic qualifications and certifications including professional designations and degrees such as P. Eng., Architect, PMP, etc.

3. Superintendent

The Site Superintendent shall have a minimum of fifteen (15) years of progressive experience in the construction industry, including the last five (5) years as Site Superintendent on projects of similar size, complexity and scope with a minimum construction value of \$75,000,000. Provide academic qualifications and certifications including professional designations and degrees such as P. Eng., Architect, Gold Seal, Occupational Health and Safety Certifications, etc.

4. Scheduler

The Scheduler shall have a minimum of ten (10) years of progressive experience in the construction industry, including the last three (3) years of experience in construction scheduling and experience using Microsoft Project scheduling software on projects of similar size, complexity and scope with a minimum construction value of \$50,000,000. Provide academic qualifications and certifications including professional designations and degrees such as P. Eng., Architect, PMP, etc.

5. Cost Estimator

The Cost Estimator shall have a minimum of ten (10) years of progressive experience in the construction industry, having produced estimates in the past three (3) years on projects of similar size, complexity and scope with a minimum construction value of \$50,000,000. Provide academic qualifications and certifications including professional designations and degrees such as P. Eng., Architect, Quantity Surveyor (PQS), Gold Seal, etc.

6. LEED AP Resource

The LEED accredited professional (LEED AP) shall have a minimum of ten (10) years of progressive experience in the construction industry, including the last three (3) years as a LEED AP on projects of similar size, complexity and scope with a minimum construction value of \$50,000,000. Demonstrate that the resource holds a LEED AP certificate.

7. BIM Construction Manager

The BIM Construction Manager shall have a minimum of ten (5) years of progressive experience in the construction industry, including the last three (3) years as a BIM Construction Manager on projects of similar size, complexity and scope with a minimum construction value of \$50,000,000. Provide academic qualifications and certifications including professional designations and degrees.

8. Commissioning Agent

The Commissioning Agent shall have a minimum of ten (10) years of progressive experience in the construction industry, including the last three (3) years as a commissioning agent on projects of similar size, complexity and scope with a minimum construction value of \$50,000,000.

9. Site Safety Officer

Demonstrate the Site Safety Officer has a minimum of ten (10) years of progressive experience in the construction industry, including the last three (3) years as a site safety officer on projects of similar size, complexity and scope with a minimum construction value of \$50,000,000. Provide academic qualifications and certifications including professional designations and degrees such as Gold Seal, CIH, JHSC Certification, etc.

For each member of the Key Personnel identified in 1 to 9 above:

- o Describe the experience and performance of the key personnel to be assigned to this project regardless of their past association with the current Bidder
- o Emphasize the strengths of the individuals on the team, to recognize their past responsibilities, commitments and achievements
- o Limit resumés to four (4) pages for the Construction Manager and Project Manager. Limit resumés to two (2) pages for other staff.
- o Indicate experience in the proposed position and number of years of experience in both the proposed position and the construction industry (if not with Bidder firm, specify name of firm).
- o Describe role, responsibility and degree of involvement of individual in past projects (especially those identified as reference projects in Criterion 1).

2.3 TECHNICAL CRITERION 3 - Understanding of the Project (Maximum points: 100)

The Bidder is to demonstrate sound understanding of the goals of the project, the functional/technical requirements, the constraints and issues that will shape the project, including as a minimum:

- A description of the main project goals, including the Client User's functional and technical requirements;
- A description of the Construction Management philosophy and methodology to meet the intent of the project and PWGSC's expectations;
- A description of approach to deal with significant issues, risks, benefits, challenges and constraints during the project;
- The interest of both internal and external stakeholders;
- The expectations of the Client.

2.4 TECHNICAL CRITERION 4 - Management of Services (Maximum points: 200)

The Bidder should demonstrate their firm's capability to manage the services to meet project challenges and ensure consistent control throughout the project. The Bidder should also demonstrate how the team will be organized and managed. The following information must be provided as a minimum:

Provide the project Team's organizational chart with all proposed personnel as required in the terms of reference, including at least the key personnel described in technical criterion 2, to deliver the project in the most cost and time efficient manner. The organizational chart should identify and show:

- o Proposed team member names and backup as well as their proposed positions for both pre-construction and construction stages of the work;
- o Contractual and reporting relationships with PWGSC, the consultant, the Client, and major external stakeholders.

Provide a description of the Team's organizational chart including:

- o Reporting relationships within the firm, with PWGSC, the consultant and the other stakeholders;
- o Internal and external communication strategies, including meetings, communication tools, reporting tools and format;

- o How advice will be provided during the design and tender and construction phases;
- o Schedule, cost, scope, quality and risk management control and methodology to be applied throughout the delivery of the project;
- o Tendering methodology;
- o Commissioning methodology;
- o Health and Safety philosophy, policy, process and procedural documentation and how it is aligned with the requirements of the project.

2.5 TECHNICAL CRITERION 5 - Work Plan and Methodologies: (Maximum points: 300)

The Bidder is to describe work methods and control procedures that he plans to apply to achieve the project objectives through a high-level work plan identifying major tasks and application of his proven methodology. The Bidder is to provide the following as a minimum:

- A. Cost Management
 - i. Construction Manager's Costs
A description of procedures to be put in place to manage the cost of the services to be provided under this assignment.
 - ii. Project costs
A description of cost control and methodology to be applied throughout the delivery of the project.
A description of the estimating process the Bidder will use to document the cost of each bid package, and explain how costs will be compared to market conditions.
- B. Time Management (Schedule)
 - i. A description of the schedule control and methodology to be applied throughout the delivery of the project.
- C. Quality Management
 - i. A description of the quality control and quality assurance methodology to be applied throughout the delivery of the project to ensure deliverable meets expectations.
- D. Scope Management (Change Management)
 - i. A description of the scope change control and methodology to be applied throughout the delivery of the project.
- E. Risk Management
 - i. A description of how the Bidder will support and contribute to the design and construction phases with respect to risk management.
- F. Communications Management
 - i. Provide a description of the internal and external communication strategies, including meetings, communication tools, reporting tools and format.
 - ii. Describe the communication relationships within the Bidders organization, PWGSC, and the Client.
- G. Resource Management
 - i. Project Team
Detail how the Bidder will maintain the key team personnel available to the project for the duration of the work.
 - ii. Site Health and Safety
Provide a description of the Health and Safety philosophy, policy, process and procedural documentation and how it is aligned with the requirements of the project.
Provide a narrative describing how the Bidder will implement a Site Specific Health & Safety Plan for this project.
- H. Procurement Management
 - i. Trade contracts (tendering strategy)
Provide a description of the proposed tendering methodology including a discussion as to how the Bidder would ensure cost-effective contracts through competitive tendering.
Detail how the Bidder will ensure that qualified contractors will be available to tender and undertake the necessary work compliance with design requirements.
 - ii. Long Lead Items

Provide a description of the mechanism to identify and acquire any long-term or limited-delivery components necessary for the work.

In addition to the above, the Bidder should provide:

- A. A breakdown of work tasks and deliverables. Provide details of hours by activity and over time in tabular format.
- B. An initial construction schedule in bar chart format with commentary based on the Terms of Reference, the information disclosed in the RFP and additional reasonable assumptions that anticipate the various issues that may be faced by the Bidder in undertaking the Work. The schedule should outline activities, sequencing and interdependence of construction activities and work packages backed up with a narrative report.
- C. Its work methodologies during the design phase, including in particular:
 - i. A description as to how the Bidder will coordinate with the design consultant and contribute to the process of aligning the design to meet both cost and schedule constraints.
 - ii. A cost estimating strategy describing the process the Bidder will employ to determine construction costs at each stage of the work as the design progresses. Detail the estimating process the Bidder will use to document the cost of each bid package prior to tender, and explain how costs will be compared to market conditions.
 - iii. A description as to how the Bidder will perform design and construction document reviews and communicate assumptions, risks and constructability review comments to the consultant team and PWGSC on an ongoing basis and at set review intervals.
- iv. A description of how advisory services will be provided during the design stages.
 - v. A description of the proposed commissioning methodology.

2.6 Evaluation of Rated Requirements

Firstly, price envelopes will remain sealed and only the Rated Requirements (Technical Submission) of the proposals which are responsive will be reviewed, evaluated and rated by a PWGSC Evaluation Board in accordance with the following to establish Technical Ratings:

SRE 2 TECHNICAL PROPOSAL SUBMISSION REQUIREMENTS AND EVALUATION			
Criterion	Weight Factor	Rating	Weighted Rating
2.1 Technical criterion 1 – Experience of Bidders (200 points)			
<u>Project 1</u>			
Representative project relevance	0 - 10	5	50
Management of representative projects	0 - 10	3	30
Representative project reporting	0 - 10	2	20
<u>Project 2</u>			
Representative project relevance	0 - 10	5	50
Management of representative projects	0 - 10	3	30
Representative project reporting	0 - 10	2	20
Total			200
2.2 Technical criterion 2 – Experience of key personnel (200 points)			
1- Project leader	0 - 10	5	50
2- Project manager	0 - 10	3	30
3- Superintendent	0 - 10	5	50
4- Scheduler	0 - 10	0.5	5
5- Cost estimator	0 - 10	0.5	5
6 - PA LEED resource	0 - 10	2.5	25
7- BIM Construction Manager	0 - 10	2.5	25
8- Commissioning Agent	0 - 10	0.5	5
9-Site safety officer	0 - 10	0.5	5
Total			200
2.3 Technical criterion 3 – Project understanding (100 points)			
Description of main project objectives	0 - 10	3	30
Description of construction management philosophy and methodology	0 - 10	3	30
Description of the approach used to address issues, risks, benefits, constraints and significant challenges	0 - 10	2	20
Description of interest on the part of both internal and external interlocutors	0 - 10	1	10
Description of customer expectations	0 - 10	1	10
Total			100
2.4 Technical criterion 4 – Management of services (200 points)			
Organization Chart	0 - 10	5	50
Team description	0 - 10	15	150
Total			200
2.5 Technical criterion 5 – Work Plan and Methodologies (300 points)			
Work plan	0 - 10	15	150
Task and breakdown and deliverables	0 - 10	5	50
Baseline schedule	0 - 10	5	50
Methodologie for consulting services	0 - 10	5	50
Total			300
			Maximum rating
			1 000

In order for their bid to be further evaluated, bidders must obtain at least six hundred (600) points out of a possible 1000 as a total technical score. No further consideration will be given to bidders not achieving this criterion.

2.6.1 Generic Evaluation Table

The members of the PWGSC Evaluation Committee will assess the strengths and weaknesses of the bid according to the evaluation criteria and will assign a score of 0, 2, 4, 6, 8 or 10 points for each evaluation criterion from the following generic evaluation table:

	INADEQUATE	WEAK	ADEQUATE	FULLY SATISFACTORY	STRONG
0 point	2 points	4 points	6 points	8 points	10 points
Did not submit information that could be evaluated	Has little or no 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 does not have 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
	Proposed team is likely unable 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
	Previous projects unrelated to this requirement	Previous projects generally unrelated to this requirement	Previous projects generally related to this requirement	Previous projects directly related to this requirement	Leads in previous projects directly related to this requirement
	Extremely poor; insufficient to meet performance requirements	Little likelihood of meeting performance requirements	Acceptable capability; should ensure adequate results	Satisfactory capability; should ensure effective results	Superior capability; should ensure very effective results

SRE 3 PRICE EVALUATION

Total maximum points for the sum of SRE 2.1 through SRE 2.5 (Technical Criteria) is 1,000 points. A minimum score of 600 points must be achieved to proceed to the opening of the price proposal, and any proposal being assessed a score of less than 600 points will be considered non-responsive.

All price bid envelopes corresponding to responsive proposals that have received a score of 600 points are opened following the technical evaluation.

The price submitted by the Bidder will be divided by the Technical Score to establish the Price per Point of the Proposal.

$$\frac{\text{"Total Bid Amount"}}{\text{"Technical Rating"}} = \text{Price-Per-Point.}$$

SRE 4 BASIS OF SELECTION

The points provided for in the requirements SRE 2.1 to SRE 2.5 (Technical Criteria) total a maximum of 1,000 points. A technical bid must obtain a score of at least 600 points to proceed to the evaluation of the price proposal. Bids that receive less than 600 points will be considered non-compliant. The Bidder whose responsive proposal achieves the lowest Price per Point (ratio) is the first entity that the Evaluation Board will recommend be approached. In the case of a tie, the Bidder submitting the lowest Total Proposed Amount will be selected. For a breakdown of the assessment and rating of each technical criterion, please refer to the table below.

	Bidder 1	Bidder 2	Bidder 3	Bidder 4
Technical Rating	750	680	430	810
Minimum Rating	600	600	600	600
Pass/Fail	Pass	Pass	Fail	Pass
Total Bid Amount	\$150 000 000.00	\$120 020 000.00	-	\$139 968 000.00
Price per point	\$200 000.00	\$176 500.00	-	\$172 800.00
Ranking	3	2	Disqualified	1

BID AND ACCEPTANCE FORM (BA) (2 pages)

BA01 PROJECT IDENTIFICATION: Construction Management Services,
New Federal Government Building
4695 Shawinigan-Sud Blvd., Shawinigan, Quebec

BA02 BUSINESS NAME AND ADDRESS OF BIDDER

Legal name: _____

Operating Name (if any): _____

Address: _____

Phone: _____ Fax: _____

Procurement Business Number

E-mail address: _____

Industrial Security Program Organization Number (ISP ORG #) _____

BA03 THE OFFER

1. The Bidder offers to Canada to perform the work of the above-mentioned project in accordance with the bid documents for the TOTAL BID AMOUNT INDICATED IN ANNEX B - BASIS OF PAYMENT

BA04 BID VALIDITY PERIOD

1. The bid shall not be withdrawn for a period of (150) days following the date of solicitation closing.

BA05 ACCEPTANCE AND CONTRACT

1. Upon acceptance of the Contractor's proposal by Canada, a binding Contract will be formed between Canada and the Contractor. The documents constituting the contract are those mentioned in the Documents section of the contract.

BA06 CONSTRUCTION TIME

1. The Contractor must perform and complete the work of Stage A - Basic Services of the Construction Manager - in nine (9) months from the notice of acceptance of the offer.
2. In the event that the Contracting Authority exercises the optional services of Stage B - Advisory Services and Construction Services required to complete the project - by the Contracting Authority, the contractor must perform and complete the work within 58 months following the notice of the exercise of the option of stage B.

BA07 BID SECURITY

1. The Bidder shall enclose bid security with its bid in accordance with GI05 Bid Security Requirements.

BA08 SIGNATURE

Name and title of person authorized to sign on behalf of the Bidder

Signature

Date

APPENDIX 1
INTEGRITY PROVISIONS - LIST OF NAMES

In accordance with **GI01 INTEGRITY PROVISIONS - BID** provide a complete list of each individual who are currently Directors and or Owner of the Bidder.

Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently Directors of the Bidder. Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the Owner(s).

<u>Board of Directors / Owner (Use format - first name last name)</u>		
<u>First Name</u>	<u>Last Name</u>	<u>Position (if applicable)</u>

ANNEX A

TERMS OF REFERENCE

SECTION 1	PROJECT DESCRIPTION	44
PD1	PROJECT INFORMATION	44
PD2	PROJECT IDENTIFICATION	44
2.1	Description	44
2.2	Context of the interventions	44
2.3	Description of the existing building and site	45
2.4	Users of the building	48
2.5	Cost	49
2.6	Project Schedule	50
PD3	PROJECT BACKGROUND	50
PD4	PROJECT OBJECTIVES	51
4.1	Quality Management	51
4.2	Sustainable Development	51
4.3	Waste Management	53
4.4	Code Compliance	53
4.5	Risk Management	54
4.6	Cost Management	54
4.7	Schedule Management	54
4.8	Scope Management	54
4.9	Security	54
PD5	IMPLEMENTATION STRATEGY	54
5.1	Phased Design Method	55
5.2	Integrated Design Process (IDP)	55
5.3	Construction Management	55
5.4	Building Information Modelling (BIM)	56
PD6	PROGRAM	56
6.1	Objectives	56
6.2	Functional and Technical Program (FTP)	56
6.3	Work in progress during occupation	56
6.4	Building Components and Connectivity (BCC)	56
6.5	Brief Description of the Project	58
PD 7	ISSUES	62
DP8	DOCUMENTS AVAILABLE	64
8.1	Documentation - available for all proponents	64
8.2	Available Documentation – To be provided to Successful Proponent	64
8.3	Available Documentation – Provided to Successful Proponent on request	65
PD 9	PROJECT DELIVERY APPROACH	65
9.1	General	65
9.2	Summary of Personnel and Qualifications	65
9.3	Project Delivery Objectives and Requisite	66
9.4	Phase 1 – Design	66
9.5	Phase 2 – Tender and Construction	67
9.6	Tentative Work / Tender Packages	67
9.7	Project Stages	67
SECTION 2	DESCRIPTION OF REQUIRED SERVICES AND WORK	68
PA 1	PROJECT ADMINISTRATION	68

1.1	<i>PWGSC Project Management</i>	68
1.2	<i>Reviews and approvals related to the design process</i>	68
1.3	<i>Project Management Support Services (PMSS)</i>	69
1.4	<i>Cost Specialist</i>	69
1.5	<i>Official Languages</i>	69
1.6	<i>Project Team Organization</i>	69
GR 1	GENERAL REQUIREMENTS	71
1.1	<i>General</i>	71
1.2	<i>Summary of Services</i>	71
1.3	<i>Required Services (RS)</i>	72
RS 1	GENERAL ADMINISTRATION SERVICES	73
RS 1.1	<i>General Project Deliverables</i>	73
RS 1.2	<i>Electronic Communications</i>	73
RS 1.3	<i>Correspondence</i>	73
RS 1.4	<i>Media Relations</i>	73
RS 1.5	<i>Project Response Time</i>	74
RS 1.6	<i>Acceptance of Construction Manager Deliverables</i>	74
RS 2	PROJECT MEETINGS	74
RS2.1	<i>Design Meetings</i>	74
RS2.2	<i>Construction Meetings</i>	74
RS2.3	<i>Commissioning Meetings</i>	75
RS2.4	<i>Project core team Meetings</i>	75
RS2.5	<i>Workshops</i>	76
RS 3	ADVICE THROUGHOUT THE PROJECT	77
RS 3.1	<i>Construction Management Plan</i>	77
RS 3.2	<i>BIM Project execution plan (PxP)</i>	78
RS 3.3	<i>Human Resources Management Plan</i>	79
RS 3.4	<i>Design and Construction Document Review</i>	79
RS 4	SCHEDULING SERVICES	81
SR 5	COSTING SERVICES	83
RS 6	RISK MANAGEMENT	86
RS 7	SCOPE OF WORK CONTROL	86
RS 8	REPORTING AND PROJECT SITE DOCUMENTS	86
RS 8.1	<i>Weekly Reporting</i>	86
RS 8.2	<i>Monthly Reporting</i>	87
RS 8.3	<i>Project Site Documents</i>	87
RS 8.4	<i>Project Procedures Manual</i>	87
RS 8.5	<i>Decision Log</i>	88
RS 9	HEALTH AND SAFETY PLANNING AND IMPLEMENTATION	88
RS 9.1	<i>Not applicable</i>	91
RS 9.2	<i>Construction Traffic Management</i>	91
RS 10	ONGOING PWGSC PROJECTS AND OPERATIONS	91
RS 10.1	<i>PWGSC Operations</i>	91
RS 11	QUALITY CONTROL	91
RS 12	COMMISSIONING	93
RS 12.1	<i>Commissioning Plan</i>	94
RS 12.2	<i>Enhanced Commissioning</i>	95
RS 13	TENDERING THE WORK	95
RS 13.1	<i>Negotiation</i>	98
RS 14	CONSTRUCTION MONITORING	98
RS 15	CHANGES (NOTICES AND ORDERS)	98
RS 16	CONSTRUCTION GENERAL INSTRUCTIONS	99
RS 16.1	<i>Minimum Standards</i>	99
RS 16.2	<i>Shop Drawings</i>	99

<i>RS 16.3 – Not applicable</i>	99
<i>RS 16.4 – Not applicable</i>	99
<i>RS 16.5 – Not applicable</i>	100
<i>RS 16.6 - Fees, Permits and Certificates</i>	100
<i>RS 16.7 - Fire Safety Requirements</i>	100
<i>RS 16.8 - Field Quality Control</i>	100
<i>RS 16.9 - Hazardous Materials</i>	101
<i>RS 16.10 - Temporary Utilities</i>	101
<i>RS 16.11 – Not applicable</i>	101
<i>RS 16.12 - Protection</i>	101
<i>RS 16.13 - Use of Site and Facilities</i>	102
<i>RS 16.14 - Site Storage</i>	102
<i>RS 16.15 - Not applicable</i>	102
<i>RS 16.16 - Not applicable</i>	102
<i>RS 16.17 - Not applicable</i>	102
<i>RS 16.18 - Signs</i>	102
<i>RS 16.19 - Access and Egress</i>	102
<i>RS 16.20 - Scaffolds and Work Platforms</i>	102
<i>RS 16.21 - Public Way Protection</i>	102
<i>RS 16.22 - Waste Management</i>	103
<i>RS 16.23 - Operations and Maintenance Manuals</i>	103
<i>RS 16.24 - Files</i>	104
<i>RS 16.25 - Guarantees</i>	104
<i>RS 16.26 - Cleaning</i>	104
<i>RS 16.27 - Security Clearances</i>	105
<i>RS 16.28 - Site Security</i>	105
<i>RS 16.29 - Not applicable</i>	105
<i>RS 16.30 - Not applicable</i>	105
<i>RS 16.31 - Testing/Laboratory Services</i>	105
<i>RS 16.32 - Not applicable</i>	106
<i>RS 16.33 - Not applicable</i>	106
<i>RS 16.34 - Surveying</i>	106
<i>RS 16.35 - Snow removal</i>	106
<i>RS 16.36 - LEED Certification</i>	106
RS 17 - POST CONSTRUCTION SERVICES	107

Annex A1 Applicable Standards, Codes and Requirements
Annex A2 Preliminary BIM Management Plan
Annex A3 NMS – Quebec Region (November 2016)
Annex A4 Commissioning Standards

SECTION 1 PROJECT DESCRIPTION

PD1 PROJECT INFORMATION

Public Works and Government Services Canada (PWGSC) intends to retain a Construction Manager for the provision of the services required for this project.

1.1 PWGSC Project Title:	New Federal Government Building in Shawinigan
1.2 Project Address:	4695 Shawinigan-Sud Blvd., Shawinigan, Quebec
1.3 PWGSC Project Number:	R.082974
1.4 Customer:	PWGSC
1.5 Principal Users:	Canada Revenue Agency (CRA); Employment and Social Development Canada (ESDC); Health Canada (HC); Shared Services Canada (SSC).
1.6 PWGSC Senior Project Manager:	To be provided at contract award
1.7 PWGSC Project Manager:	To be provided at contract award

PD2 PROJECT IDENTIFICATION

2.1 Description

Public Works and Government Services Canada (PWGSC), requires the Required Services (RS) from a Construction manager for the construction of a new building that will house, among other things, the National Verification and Collections Centre (NVCC) for the Canada Revenue Agency (CRA).

The objective of this project is therefore to construct a new building with a gross area of approximately 25,700 m², owned by the Crown, to provide new space in support of Canada Revenue Agency (CRA), Employment and Social Development Canada (ESDC), Health Canada (HC) and Shared Services Canada (SSC) programs. This new building will be built on the site of the existing NVCC.

The work covered by this Request for Proposal includes, but is not limited to:

1. Construction of a new building: The new building must be deployed on the site of the current National Verification and Collections Centre (NVCC):
 - a. A gross area of approximately 25,700 m²
 - b. A usable area of approximately 20,230 m²The existing building will be maintained in operation throughout the work in order to ensure the continuity of the operations of customers and users until they move into the new building.
2. Complete development of the new building.
Decontamination and deconstruction of the existing building.
3. Deconstruction of the existing parking lot and access roads and decontamination of the site: To be carried out in phases (total of about 1,200 parking spaces).
4. Construction of a new parking lot and access roads (in phases).
5. Complete development of the site (in phases).

2.2 Context of the interventions

The Construction Manager must take into consideration that:

- The project will be carried out in construction management mode via a Construction Manager hired by PWGSC.

- Construction management is a form of project management characterized by collaboration between the client, the Consultant and the Construction Manager, who work as a team to gain efficiency in terms of time, cost and constructability, particularly in the pre-construction phase of a project, and allows construction to begin earlier, without having to wait until the design work is completed.
- The Construction Manager is the entity responsible for delivering the construction services provided for in the construction management contract.
- The construction of the new building will be deployed on the site of the existing fully occupied and operational building, which must remain so at all times, throughout the duration of the project. The implementation strategy should, among other things, encourage the retention of as many operational parking spaces as possible (minimum 500 spaces for users) throughout the duration of the project.
- Access constraints to the existing building will have to be taken into consideration at all stages of the project. In particular, access to the existing building will not be possible without the assistance of a security guard. The detailed access procedure will be provided to the successful proponent.
- The current building is operated by a property manager, hired on behalf of PWGSC.
- The project will receive high media scrutiny. This feature should be taken into account at all stages of the project.

2.3 Description of the existing building and site

The following is provided for information only.

Building

Built between 1976 and 1978, the existing two-storey building (to be decontaminated and deconstructed as part of this project) consists of a ground floor, a second floor and a shed roof, where the mechanical equipment is housed. A basement housing the boiler room, among other things, occupies a small part of the building.

The ground floor and partial basement are built on a concrete slab-on-grade. The structure of the floor and roof are made of structural steel (steel beams and columns and concrete topping, on steel deck). The columns of the building are supported by piles.

The building's exterior walls are mainly made of insulated precast concrete panels with fiberglass exterior cladding. Curtain walls are located at both ends of the building, serving the dining room, among other things. The existing roof system is of a conventional type (steel and concrete slab deck, vapour barrier, insulation, two-ply modified bitumen membrane with granular surface) and includes several levels and basins, some of which are equipped with skylights. Various elements are installed on the roof, including some antennas and a flag.

Overview of the mechanical components of the existing building

The building is equipped with a passenger elevator, a freight elevator and two escalators. Elevators serve the ground floor and second floor of the building.

The building's domestic water system is supplied by an incoming municipal water pipe. Drinking water booster pumps maintain the pressure required for the domestic cold water system towards the various areas of the building.

The domestic hot water system is heated by natural gas condensing boilers.

The sanitary system consists of a network of sanitary piping, floor drains, auxiliary drains, water return valves and vents. The building's underground wastewater disposal pipe connects to the city's sanitary waste main pipe.

The building is equipped with plumbing fixtures such as toilets, urinals, showers, and drinking fountains. The rainwater drainage system consists of roof drains, rainwater pipes, underground pipes and collecting basins.

The heat generation system includes natural gas hot water boilers. This hot water supplies the heating networks of peripheral convectors, HVAC coils and terminal heating coils. An electric hot water boiler is present in the boiler room.

Air conditioning is provided by a chilled water network with terminal coils inserted in the main air handling units. This network is cooled by a centrifugal chiller and chillers served by water towers.

The building is equipped with a set of insulated pipes, heat exchangers and accessories that supply hot water to the various heating appliances. In addition, air conditioning and dehumidification are provided by a chilled water network with terminal coils inserted in each of the main air handling units.

The air distribution system consists of a network of metal ducts, variable air volume control boxes, ceiling diffusers, fire dampers and accessories.

A combination direct digital control (DDC) / pneumatic control system controls the main air handling equipment.

The building is equipped with air handling units with cooling and heating coils, supply fans and return fans.

The building is fully protected by an automatic sprinkler system. Liquid chemical agent systems are also available to protect kitchen hoods. Fire suppression includes fusible links, manual pull stations, tanks and control panels.

Overview of the electrical components of the existing building

Power Distribution:

The building is supplied from an adjoining room located on the ground floor and reserved for Hydro-Québec employees. From this room, busways are connected to the main circuit breaker of the main switchgear. The switching device mainly supplies motor control centres (MCCs), distribution panels, transformers and various mechanical loads.

Note the presence of an underground tank for used oil from Hydro-Québec's transformer.

Interior lighting:

The interior lighting comes mainly from T12 fluorescent lamps. T8 fluorescent lamps, halogen lamps, compact fluorescent lamps are also present.

Emergency exit lighting consists of bilingual indicators.

The building's emergency lighting system includes mostly two-headed lights, which operate on a battery pack or emergency batteries in the event of a power outage. Some indoor lighting fixtures act as emergency lighting when powered by the emergency generator.

Emergency Power:

The building is equipped with a generator, a daily diesel tank, four other tanks and an automatic transfer switch.

Fire alarm system:

The building is equipped with a fire alarm system that includes manual stations, speakers, annunciator panels, smoke and heat detectors, a fire alarm, strobe chimes, etc.

Other Systems:

Telephone system that includes analog phones for the most part and few IP phones. Most of the telephone equipment is located in the Telecommunications Room on the ground floor of the building. Prepaid public telephones are also present in the building.

Access control and intrusion alarm systems.

Television system. The television audiovisual content comes from the Internet.

Centralized automatic clock system. There are digital clocks and face clocks. About 80% of the clocks are central and 20% are battery powered.

Music system and sound system for public announcements and those related to fire alarms.

Server rooms, local area network (LAN) system, UPS, punching system with stations distributed throughout the building.

Existing site development (parking, access roads and others)

Located on a relatively flat site of approximately 107,000 square metres, the site (crossed by a bicycle path) is accessible by Shawinigan-Sud Boulevard, where a service road leads to the parking lots and the main entrance to the building.

The exterior layout of the site includes approximately 1,200 parking spaces, parking spaces at the back of the building for delivery and maintenance personnel, storage sheds, grassed areas, trees and shrubs, parking lots (asphalt and gravel), traffic areas and access roads, concrete paved pedestrian paths, curbs and sidewalks, retaining walls, an open pavilion, an exterior courtyard laid out and surrounded by a wall that limits access to it via the inside of the building. The pedestrian walkway leading to the main entrance to the building is covered with fiberglass arches supported by steel columns.

Asphalt parking lots are drained by means of a drainage system consisting of sumps, manholes and pipes.

Parking lots and pedestrian walkways are mainly lit by high-pressure sodium (HPS) streetlights.

It should be noted that the power supply for the site's exterior lighting comes from the building's electrical chamber via a connection box installed outside the building and that no charging system for electric cars (with electrical charging stations) is currently in place.

A network of cameras dedicated to parking belongs to the CRA and is installed directly on the poles of the streetlights via an independent network of conduits.

Signage includes primary (road and departmental signage), secondary (identification signs - motorcycle, managers, sticker holders, etc.), and horizontal (road markings), delimiting access roads and parking spaces (including special markings - motorcycles, disabled, no parking in traffic areas, etc.).

Environmental constraints (building and site)

The analysis of environmental constraints and issues identified certain issues on or near the site, mainly:

- Presence of an daycare in the south of the lot.
- Hazardous materials and/or substances in the existing building.
- Potentially contaminated soils
 - A Phase I Environmental Site Assessment (ESA) was conducted to identify potential sources of contamination related to current and past activities on the site. Potential sources of contamination were identified during this study, in particular, two former areas that hosted underground tanks, the presence of a catchment basin, the former presence of a cottage and the presence of a service station with tanks adjacent to the site.
 - A Phase II ESA combined with a geotechnical study is underway. This will aim to delimit the contamination. It will be provided to the successful proponent.
- A wetland on the southern edge of the lot.
- Wooded patches with a certain value.
 - A study on the value of the trees is being carried out to determine the potential of the trees on the site. It will be provided to the successful proponent.
- The archaeological potential was considered low at the site.

An Environmental Effects Assessment (EEA) under the *Canadian Environmental Assessment Act 2012 (CEAA)* was conducted to determine the potential environmental impacts of the project and identify mitigation measures.



General view of the existing site

2.4 Users of the building

In addition to meeting the requirements of PWGSC and the property manager operating the building on behalf of PWGSC, the new building will have to meet the needs of the following occupant departments.

Canada Revenue Agency (CRA)

As the main occupant of the existing building and the new building to be built, the CRA administers tax laws for the Government of Canada and most provinces and territories. It also administers various social and economic benefits and incentives programs through the tax system and ensures tax compliance to contribute to the ongoing economic and social well-being of Canadians.

Employment and Social Development Canada (ESDC)

The ESDC Regional Call Centre (RCC) occupies the existing building and will occupy the new building to be built. The primary role of the call centre is to respond by telephone to inquiries from Canadians about services provided to citizens on behalf of various government departments and agencies. Service Canada is a one-stop shop for government information and services.

Health Canada (HC)

As the third occupant of the existing building and the new building to be built, Health Canada occupies office space.

Shared Services Canada (SSC)

In addition to the information technology (server room) and telecommunications rooms, for which SSC is responsible, a few SSC employees are currently housed at the NVCC.

SSC provides digital services to Government of Canada organizations to enable them to deliver digital programs and services that meet the needs of Canadians.

SSC will also be involved in the project as a key player in the field of information technology deliverables at all stages of the project.

Other users

In addition to meeting the needs of the occupant departments identified above, the new building will also have to meet the needs of the following users:

Property management

Acting as the building operator on behalf of PWGSC, property management occupies the existing building and will occupy the new NVCC to be built.

Canadian Corps of Commissionaires

Acting as building security officers, the Canadian Corps of Commissionaires occupies the 24/7 operational Security Operations Centre (SOC) at the entrance to the existing building and will occupy the new NVCC to be built.

Food service provider

Acting as the cafeteria operator, a food service company occupies the existing building and will occupy the new NVCC to be built.

Housekeeping

Responsible for housekeeping of the building, employees of a private company working day and evening shifts occupy the current building and will occupy the new NVCC to be built.

Others

Additional users may be added depending on the findings of the Functional and Technical Program (FTP).

2.5 Cost

For information, the construction cost is estimated at approximately \$106 million (excluding taxes), or:

- Construction of a new Government of Canada building and customer layout: approximately \$92.6 million excluding taxes
- Decontamination/deconstruction of the existing building: approximately \$6.2 million excluding taxes
- Deconstruction of the existing parking lot, construction of the new parking lot and site development: approximately \$7.2 million excluding taxes

2.6 Project Schedule

The main stages of the project are as follows:

- Proposal Validity Period: mid-August to early October 2019
- Granting of the management contract: March 2020
- Preliminary design (RS1 to RS3): March 2020 to early September 2020
- Final design and tender (RS4 - RS5) (Batched) September 2020 to mid-May 2023
- New building construction and Commissioning (RS6 & RS8): early November 2021 to late July 2024 (Batched)
- Moving to new building: August - September 2024 (in phases)
- Decontamination and deconstruction of the existing building: October 2024 to mid-March 2025 (Building and Parking)
- Construction of new parking lot: mid-March to October 2025 (including site development - in phases)

It should be noted that Activity durations are preliminary, and the CM is responsible for verifying and confirming the feasibility of the schedule as part of its scheduling mandate. The Project schedule is driven by the need to move the users to the new building as soon as possible.

The Construction Manager must work closely with the DR, the Consultant and the Users to maintain or reduce the durations set out in this schedule. The warranty period is not included in the above schedule.

PD3 PROJECT BACKGROUND

In the late 1970s, the CRA Tax Centre (Government of Canada building) was established in Shawinigan at 4695 Shawinigan-Sud Boulevard.

Over time, the CRA's services to Canadians have changed with the advent of new technologies and the ability to file tax returns electronically. The Tax Centre (Income Tax Processing Centre) has therefore evolved into its current structure called the National Verification and Collections Centre (NVCC). Although the building's layout has been densified over the years, the building itself has undergone very little major work.

There is currently no heritage designation for the building. As it was built some 40 years ago, a heritage assessment process is currently underway by the Federal Heritage Buildings Review Office (FHBRO). The objective of the latter is to determine whether or not the building has heritage value and to assess its value if so. At this time, the building does not have a specific designation, but we cannot rule out the possibility of a potential designation (for example, recognition of the building, the lower of the two levels of heritage designation). Given the uncertainty associated with the current evaluation process, no heritage architecture services are included in this mandate.

Considering that the current building is at full capacity, that it does not meet the targeted expansion needs and that it would require major work to meet operational, functional and financial performance, the Government of Canada announced on February 4, 2019, the construction of a new building on the site of the current NVCC, which will replace the existing building. The latter will then be deconstructed in order to build a new parking lot. The current users (approximately 1,600) will remain in the existing building for the duration of the work on the new building, which will include achieving LEED-NC Gold level energy efficiency certification and providing modern, state-of-the-art workspaces that are fully adapted to the services provided by the CRA and other occupying departments.

PD4 PROJECT OBJECTIVES

Several objectives have been developed to ensure the success of the Project.

- 4.1 Quality Management;
- 4.2 Sustainable Development;
- 4.3 Waste Management;
- 4.4 Code Compliance;
- 4.5 Risk management;
- 4.6 Cost Management;
- 4.7 Schedule Management;
- 4.8 Scope Management;
- 4.9 Security.

4.1 Quality Management

The Department expects the Consultant to maintain a high standard of architectural and engineering design, based upon recognized contemporary design principles. All design elements, planning, architecture and engineering must be fully coordinated among the disciplines and be consistent with good design principles.

The level of quality is to be consistent with other Government of Canada buildings.

Quality of materials and construction methods shall be commensurate with the type of building, the quality sought and the budget. Avoid experimental materials. Take into account the total life cycle of the building.

The quality management process that will be applied to the project shall be respected and applied throughout all of the Consultant's departments and by all its Sub-Consultants.

The coordination process for drawings and specifications among all disciplines shall be carried out by the Consultant and all its Sub-Consultants. The expected deliverable is that all drawings and specifications be fully coordinated among all disciplines and that their content respect the Client's needs. The Consultant is responsible for ensuring that the documents sent are coordinated.

Operating costs must be kept to a minimum. This is to be achieved by compliance with the Energy Budget, selection of equipment requiring the minimum of operating personnel and building finishes for easy maintenance, etc.

The character, overall configuration, scale and materials of this project must be compatible with its surrounding context.

Design for maximum flexibility in immediate and future use of space.

It is important to understand that needs must be met within available budgets and in compliance with the Project Schedule in a creative and proactive manner.

4.2 Sustainable Development

The project shall be implemented so as to comply with environmental standards and sustainable development principles. The new building will require LEED-NC Gold level accreditation. Specific services required for project delivery are outlined in Required Services (RS).

Sustainability can be defined in broad terms as the capacity to endure, to sustain now and in the future. It's about building lasting social and cultural equity, economic prosperity and protecting and restoring ecological integrity.

Sustainable development is an integral part of the Government of Canada's objectives. Compared to other projects of the same size, PWGSC aims to obtain more extensive environmental services during the design phase. PWGSC wants the end result for this building to be a model of sustainable development. Several policies and strategies have been put in place to guide the Government's property management practices. Thus, new construction and deconstruction projects for the existing building in Shawinigan will have to comply with the guidelines of:

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- The *Greening Government Strategy* by the Treasury Board of Canada Secretariat
 - The *PSPC 2017-2020 Departmental Sustainable Development Strategy*, 2015
 - The *PSPC Real Property Sustainable Development and Environmental Strategy*, 2018
 - The *PWGSC Real Property Sustainability Framework*, 2015

For the purposes of this project, the following are the main lines of this strategic plan that will have to be taken into account at all stages of the project's implementation.

4.2.1 New building, new parking and site development

The elements that must be considered throughout the design and construction phases of the new building, parking lot and site development include, but are not limited to, the following:

Reduce energy consumption and GHG emissions / carbon footprint

- Design a building to achieve a zero carbon footprint.
- Use building materials with a lower carbon footprint than traditional products and containing fewer hazardous substances (using a life cycle analysis (LCA) approach).
- A life cycle analysis of the materials is currently being prepared and will be provided to the successful proponent. This should be taken into account in the development of the project.
- Use intelligent systems to reduce energy consumption.
- Use only building automation systems (Building Control System or Energy Management System (EMS) and building components compatible with an open protocol (BACnet)).
- Have enhanced energy performance targeting cost savings of 22% over NECB 2011. An energy study was conducted to validate feasibility and will be made available to the successful proponent.
- Energy efficiency measures will be selected while taking into account the life cycle analysis of the costs over 25 years.
- Aim to produce a design with a Thermal Energy Demand Intensity (TEDI) that complies with CAGBC best practices, if financially justified.

Climate change adaptation

- Design and build new infrastructure to be resilient to climate change.
- A study on the vulnerability of infrastructure to potential climate and weather impacts is currently being prepared and will be provided to the successful proponent.
- This study aims to assess the vulnerability of the NVCC site by identifying elements that may be defective, damaged and/or deteriorated by climatic events (temperature, precipitation, wind, ice, lightning, etc.), and thus to formulate recommendations for the new building and its exterior installations.
- This study should be taken into account in the development of the project.
- Reduce heat islands.

Water management (drinking water, domestic wastewater and stormwater) / landscaping

- Use best practices in water use to reduce water consumption.
- Reduce outdoor water consumption (irrigation), stormwater runoff and the use of toxic products through proper landscaping. Provide infrastructure to support the environmentally sound management of stormwater runoff in outdoor traffic areas and parking lots. Encourage the development of low-water landscaping and low-maintenance lawns composed of drought-resistant species.
- Design new infrastructure to effectively manage erosion, stormwater and sediment issues.

Building and sustainable transport

- Achieve an environmental performance level that meets the LEED Canada v4 C+CB Gold level rating.
- Anticipate and consider that Real Property Management will aim to achieve a level of environmental performance corresponding to the BomaBest v3 - Office Buildings, Level 2 rating.

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- Install fast-charging electric vehicle charging stations with the objective of supporting the conversion of fleet and private vehicles from gas to electricity.
 - Achieve better management of domestic waste (and construction, renovation and demolition waste - CRD). See section 4.3 b below.

Workplace, employee well-being and surrounding community

- Integrate controlled design elements for occupants;
- Provide spaces that include natural aesthetic elements;
- Provide showers and lockers for employees who commute to work by bike, on foot or who go jogging, and for those who have a membership at a local fitness centre.
- Implement air filtration systems and management strategies to reduce contaminant levels and manage CO2 levels in office spaces.
- Identify quiet and collaborative areas for employees to use.
- Incorporate materials and lighting that minimize light entering the building and site, reduce sky-glow to increase night sky access, improve nighttime visibility through glare reduction and reduce development impact from lighting on nocturnal environments.
- Identify public spaces and amenities that could benefit the surrounding community

4.2.2-Deconstruction of existing infrastructure (building and parking)

When deconstructing existing infrastructure, the following elements must be taken into account throughout the design and construction phases.

- Runoff management: Develop sediment, erosion and rainwater management plans.
- Construction, renovation and demolition waste management - CRD: Develop, among other things, a multi-material waste management program, which will include waste from construction, demolition and operation. See section 4.3 b below.

4.3 Waste Management

PWGSC's Sustainable Development and Environment Strategy for Real Property establishes a diversion target to be achieved for construction and deconstruction projects. For this project, the target to be achieved is the diversion of at least 90% by mass of all construction and demolition waste. The diversion percentage will be estimated based on the total waste/construction residue generated.

An initial diagnosis will therefore have to be established and will have to include the evaluation of the different types of residues and the quantification of the construction residues of the new building and the demolition residues of the existing building and parking lot.

Marking of potential social construction projects (Example: School) will have to be carried out, so that certain deconstruction materials from the old CRA building can be donated back to construction projects (if possible regional), also corresponding to our project schedule.

In addition, potential waste recovery channels should also be identified in the diagnosis, thus confirming the objective of recovery of 90% by mass of construction and demolition waste.

The *Construction-Demolition Waste Management and Disposal* section in the National Master Specification (NMS) is a reference to be consulted and used.

4.4 Code Compliance

The Construction Manager is responsible for observing standards, codes, legislation and regulations, including municipal by-laws and decisions made by authorities having jurisdiction in carrying out the projects. In case of overlap, the most stringent requirements must be applied and take precedence. The Consultant shall identify other jurisdictions appropriate to the project.

For information, see Annex A1 for applicable standards, codes and requirements.

4.5 Risk Management

A risk management strategy is essential in managing PWGSC projects. All project stakeholders are an integral part of the risk management strategy, culminating in an integrated production team. Specific services required for project delivery are outlined in Required Services (RS).

4.6 Cost Management

Effective cost estimation and control are critical activities at all stages of the project. One of the key objectives is to carry out the project while respecting the authorized financing, justifying, among other things, the viability and profitability of the design choices. Specific services required for project delivery are outlined in Required Services (RS).

4.7 Schedule Management

Establishing a schedule that allows full control of project completion time and effective control of the schedule are crucial activities at all stages of the project.

The Construction Manager shall create a planning and control system for planning, scheduling and monitoring project activities and progress reporting. Specific services required for project delivery are outlined in Required Services (RS).

4.8 Scope Management

The definition, development, verification and control of the project scope are critical activities at all stages of the project. One of the key objectives is to carry out the project within the defined scope of the project.

The Construction Manager must immediately advise the DR, in writing, of any potential increase or decrease in the scope of work that could compromise the capacity to achieve the project's objectives, before it affects project cost, schedule or quality.

4.9 Security

4.9.1 Health and Safety

PWGSC recognizes that it is required to safeguard the health and safety of all persons working on government construction projects. It also recognizes that federal government employees and private sector employees are entitled to receive the full protection afforded by OHS regulations.

In keeping with the responsibility and in order to enhance health and safety protection for all individuals on federal construction sites, PWGSC will voluntarily comply with the applicable provincial/territorial construction health and safety acts and regulations, in addition to the related Canada Occupational Safety and Health Regulations.

4.9.2 Physical security

At all stages of the project, the various physical security elements will have to be integrated into the project.

Specific services required for project delivery are outlined in Required Services (RS).

4.9.3 Industrial security

This project has specific security requirements, as outlined in sections SI14 and SC1. These must be respected by all parties involved in the project at all stages.

PD5 IMPLEMENTATION STRATEGY

The project implementation strategy must facilitate important decision making in order to prioritize the design and interim approvals, allowing construction to start early and in an optimized sequence.

5.1 Phased Design Method

Given the method of implementation chosen (construction management), a batch design method is required. While the Design Development is taking place, certain aspects of the base building design could be accelerated so that construction tender documents can be issued for those areas that do not require the design to be fully completed, such as the building envelope, excavation and backfill.

During the preparation of the construction documents, the consultant shall sequentially submit the bidding documents to the Construction Manager so that the latter can issue them with a view to optimizing the construction schedule.

During the design phase, the CM must work closely and in a cooperative manner on design with the Consultant. The Construction Manager must ensure that it has all information necessary to provide accurate and complete advice on construction activities, such as, but not limited to, the following:

- Construction costs;
- Material delivery and construction schedules;
- Constructability;
- Suitability and availability of materials and components;
- Sustainable and integrated design, construction, commissioning and operation principles and practices.

5.2 Integrated Design Process (IDP)

In collaboration with the DR and CM, the Consultant must adopt and lead a holistic and integrated approach to the design of this Project. In so doing, the Consultant Team must provide an efficient, cost-effective and environmentally responsible approach, by implementing strategies that can facilitate future changes in use and occupancy, while meeting user needs and project requirements.

It is a methodology for the delivery of a collaborative strategy that must, in particular:

- Consider the design, construction, operation and occupancy of the building over its complete life-cycle;
- Engage the users and other stakeholders, early in the Project, to develop and realize a common vision, performance priorities and clearly defined functional, environmental and economic goals and objectives;
- Proceed from whole building system strategies to gradually integrate the details that permit optimally integrated solutions;
- Organize and lead team workshops / partnering sessions as key decision-making tools to initiate and stimulate discussions, evaluate options and build consensus.

5.3 Construction Management

A construction management approach will be used for this project.

The role of the Construction Manager will consist of managing the construction work by participating in Project team meetings and workshops, providing advice on the constructability and sequencing of tenders, defining construction phasing, establishing and managing the Project construction schedule as well as the construction budget.

The CM will provide advice throughout the Project.

The CM will provide a multidisciplinary team for the entire duration of the Project. The CM and the Consultant's team must have the capacity to immediately respond to evolving situations, daily (especially during the work site stage), by coordinating and integrating ongoing construction operations with design.

The Project will be implemented based on a prioritized design approach using multiple, simultaneous construction tender packages prepared by the Consultant and tendered by the Construction Manager. The Construction Manager will define the requirements and sequencing of construction tender packages and will inform the DR and Consultant, so that the latter

can plan their tasks and activities accordingly. The Project Team must work collaboratively to coordinate and integrate all the required work.

5.4 Building Information Modelling (BIM)

Building Information Modelling (BIM) (referred to as the "Model") is an object-based digital representation of the physical and functional configuration, characteristics and attributes of a project, and will be used for the Project.

BIM allows an integrated design process (IDP) built around coordinated, reliable digital information about a project from design through construction. The BIM, facilitated by a common data environment, will be used in this project to visualize, analyze and communicate project information to all stakeholders (project management team, consultant team, Construction Manager, etc.). It is a common data source that will facilitate decision-making and approval processes, and increase the productivity, efficiency and quality of the final product delivered.

The project implementation method is part of a construction management type implementation method. Consequently, the BIM approach will have to take into account the aspects related to this mode of implementation and be properly planned and managed in order to support the achievement of the project objectives. In collaboration with the DR and CM, the Consultant must work in a collaborative manner to foster the monitoring and coordination of design and completion of the work.

PD6 PROGRAM

6.1 Objectives

Refer to PD2 section.

6.2 Functional and Technical Program (FTP)

The functional and technical requirements program, which will represent the basic reference document for design and construction, is being prepared and will be provided to the successful proponent. This FTP will provide the user requirements and parameters that will need to be considered when designing the project. Specific services required for project delivery are outlined in Required Services (RS).

6.3 Work in progress during occupation

The new building will be deployed on the site of the existing National Verification and Collections Centre (NVCC), which must remain fully operational throughout the duration of the project. The implementation strategy will have to take into consideration, among other things, preserving as many parking spaces as possible for users during occupation.

Considering that the work will be carried out during the occupation, all necessary measures must be put in place to maintain an accessible and safe site at all times (firefighter access, use of the passenger drop-off and sidewalks, visitor access, access to the daycare located near the main entrance of the site, to the bike path, to the shuttle service at the main entrance of the building, etc.).

Ensure a minimum of 500 operational and safe parking spaces for federal employees at all stages of the project.

6.4 Building Components and Connectivity (BCC)

Building Components and Connectivity (BCC) include, but are not limited to:

- Information technology and telecommunication systems (IT-Telecom)
 - Computers;
 - Wireless Connection;
 - Telephony;
 - Telecommunications;
 - Video Conferencing;
 - Multi-media;

- Photocopiers;
- Faxes.
- The Integrated Security Systems (ISS)
 - Electronic and physical access control;
 - Electronic monitoring systems;
 - Cameras (indoor and outdoor);
 - Intercommunications and computer system;
 - Electrified hardware;
 - Fire Alarm Monitoring System.

BCCs are essential to meet functional and operational requirements as well as user safety requirements. Occupancy will not occur without successful design and sensitive integration of these elements into the various aspects of the project. The objective of the BEC program is to fully meet the operational requirements of users in order to allow the new building to be occupied as quickly as possible.

The consultant's team should be able to provide the services of specialists in information technology and telecommunications systems and integrated security systems.

Within each phase of the project, the consultant will plan and organize BEC meetings on a regular basis with PWGSC, Shared Services Canada (SSC), clients and other required stakeholders to ensure progressive, timely and effective project progress. The various BEC specialists will have to take part in these meetings.

Information technology and telecommunication components (IT-Telecom)

As the federal government's digital services specialist, Shared Services Canada (SSC), will be responsible for the design, purchase and installation of IT and telecom equipment, as well as the design and installation of cabling.

At all stages of the project, the Consultant and the Consultant's IT-telecom specialists will work closely with SSC, PWGSC, occupant departments, the Construction Manager, etc., to ensure the full integration of physical information technology and telecommunications infrastructure into the design documents and to ensure the overall coordination of IT-telecom requirements.

The design of the server rooms (primary and secondary) will be the responsibility of the Consultant. The Consultant will also be responsible for integrating the physical IT and telecom infrastructures into the design documents.

However, the design of the network architecture and the various computer components and equipment inside the server rooms will be the responsibility of SSC.

Wiring is SSC's responsibility.

Integrated security systems (ISS) components

An integrated security system specialist will be hired by PWGSC to design and install ISS components.

The Consultant must coordinate with this specialist to integrate the physical infrastructure into the design documents.

At every step of the project, the Consultant must work closely with the ISS specialist, PWGSC, the occupant departments, the Construction Manager, and so on, to ensure that the physical infrastructure of various systems (for the basic building and all occupants) is fully integrated into the design documents and to ensure the general coordination of requirements for ISS.

6.5 Brief Description of the Project

6.5.1 Construction of a new building

The new National Verification and Collections Centre (NVCC) will consist of approximately 20,230 m² of usable space (a gross area of approximately 25,700 m²), on several floors (number to be defined), for general office use, support spaces (security, IT/telecom, property management, food service, cafeteria, etc.), and special purpose spaces (SPS).

The new building will aim to provide healthy, safe, high-performance premises that comply with current codes and standards and provide a modern, efficient and productive work environment in support of the programs of the main occupants.

The new building to be deployed on the site of the current NVCC will have to include all the typical construction elements required, including infrastructure, superstructure, building envelope, architecture, interior design, mechanical and electrical services, IT/telecommunications infrastructure (equipment rooms, cable trays, columns, roof antennas, etc.), security infrastructure and systems (physical and electronic access control, intrusion alarm, video surveillance system, etc.).

The needs of clients are essentially administrative office space with all related spaces (such as meeting spaces, rest rooms, etc.) and all special purpose spaces - SPS (such as mailroom, storage, training rooms, etc.).

Clients do not have direct services with external clients in their programs. None of the services are dedicated to on-site customer service.

All the spaces of the building are in support of the administrative function of the occupying clients

All spaces and equipment will be required to meet the building's operating needs or to support building services for clients (e.g.: Generator set, specific load-bearing capacity (according to use) e.g. file storage, elevators, housekeeping rooms, waste storage, waiting area, IM repair shop, spare parts storage, telecommunications rooms, etc.). These will be indicated in the FTP.

Other spaces or equipment may be required to meet federal or departmental objectives for employee support (e.g. bicycle storage, showers, sports lockers, others, etc.). These will be indicated in the FTP.

External visitors sometimes have access to the building for training or other services. At certain annual periods, the CRA client sometimes requires activities performed in shifts due to the increase in requests related to its activities.

The new building will have to integrate the various sustainable development elements identified in section PD 4.2 and in the Required Services (RS).

For information purposes only (to be validated in the FTP), below is a summary of the number of full-time equivalents (FTEs) and the areas:

	Current number of FTEs	Anticipated number of FTEs	Current area (usable square metres)	Anticipated future area (usable square metres)	Anticipated future area (gross square metres), building total
CRA	1,395	1,568	15,250	17,097	
ESDC	210	210	1,807	1,806	
Health Canada	5	5	41	41	
SSC	5	2	173	173	
Other occupants and shared use areas (cafeteria, concession, property manager's offices), excluding the Canadian Corps of Commissionaires and maintenance.	N/A	N/A	1,076	1,113	
TOTAL:	1,615	1,785	18,347	20,230	25,700

Usable area: Area required for users' operational needs.

Gross area: Total area of the building.

6.5.2 Complete fit-up of the new building

The new building will have to include all the typical interior design elements required, including equipment and furniture (screens, built-in and mobile furniture, etc.), signage, accessories (whiteboards, bulletin boards, window covers - plastic security film, blinds, etc.), security elements (hardware, access control and communications video surveillance systems), etc.

The new layout will have to integrate the various sustainable development elements identified in section PD 4.2 and in the Required Services (RS).

Accessories, furniture, equipment and moving

The new building will be furnished with new furniture and equipment. In addition to completing blockage plans and detailed complete layout plans, the Consultant will be responsible for organizing, managing and completing the entire furniture procurement process using PWGSC tools. The Consultant will also be responsible for the coordination and complete supervision of the installation of the furniture in phases. Specific services required for project delivery are outlined in Required Services (RS).

Although the coordination of the move of users to the new building will be handled by PWGSC through an independent firm, the Consultant will have to prepare the move plans and specifications to allow the Construction Manager to issue the call for tenders. Specific services are outlined in Required Services (RS).

6.5.3 Decontamination and deconstruction of the existing building

Following the users' move to the new fully operational NVCC, the existing building will have to be decontaminated and then deconstructed.

The main purpose of deconstruction is to remove components and materials from a structure independently in order to maximize their conservation for reuse or recovery. Deconstruction may take longer than traditional demolition, due to the sorting and segregation of materials.

Deconstruction work must take into account in particular that the existing building contains hazardous materials and/or substances such as, but not limited to:

- Asbestos
- Lead (paint)
- Silica (cementitious materials)
- Mercury (fluorescent tubes)
- PCB (ballast, transformer)
- Halocarbons (refrigerators - CFC 134A and cooling equipment R-22, R-408 and R-409)
- Mould
- Heavy metals (emergency lighting unit batteries)
- Portable fire extinguishers type ABC
- Glycol and diesel tanks
- Generator
- Gas boilers
- Compressor
- Various barrels containing acids, cleaning products, sanitary products, disinfectants, etc.

To carry out the decontamination, the services of an industrial hygiene expert will be required, in particular for the preparation of plans and specifications, monitoring, quality control, etc.

The identification of the hazardous materials and/or substances identified above comes from the report of the inventory of designated substances and hazardous materials prepared in June 2019. This report will be provided to the successful proponent.

The deconstruction of the various components of the building will have to be coordinated with the environmental component at all stages of the project.

The new building will be equipped with new equipment, accessories and furniture. The ecological disposition of these elements is an integral part of these Terms of Reference.

The deconstruction of the Building Components and Connectivity (BCC) is an integral part of these Terms of Reference.

Deconstruction should include the decommissioning of the various components (e.g. mechanical).

6.5.4 Deconstruction of the existing parking lot and access roads (in phases)

As with the deconstruction of the existing building, the deconstruction of the parking lot and related elements will have to meet the different environmental objectives (e.g. sustainable development - effective management of construction waste and recovery), in order to achieve maximum recovery of construction waste.

Based on preliminary environmental studies, there is a possibility of contaminated soils (to be confirmed in the geotechnical report being prepared and provided to the successful proponent).

In the event of contaminated soils, the services of an industrial hygiene expert will be required, in particular for the preparation of plans and specifications, monitoring, quality control, etc.

Parking deconstruction includes all related elements (underground infrastructure, lighting, signage, cameras, landscaping, etc.).

In particular, the deconstruction phase of the parking lot should take into consideration keeping as many operational spaces as possible for users (minimum 500 spaces).

6.5.5 Construction of a new parking lot and access roads (in phases)

Following the construction of the new building and the deconstruction of the existing one, the external areas will have to be completely redesigned and refurbished with a functional and ecological overview.

The existing parking lot with approximately 1200 parking spaces has reached its useful life and will have to be completely deconstructed, reconfigured, redesigned and rebuilt according to the location of the new building. The same applies to all traffic lanes on the site. The planning and execution of this work will have to be done in phases, according to the different activities on the site, while ensuring that the site remains fully operational at all times.

Outdoor traffic areas and the new parking lot will have to meet functional, aesthetic and environmental criteria. The design of traffic and parking areas should consider, in particular, the inclusion of the principles of heat island reduction, effective rainwater management, safety of people and property, limiting polluting travel, promoting ecological balance and biodiversity conservation, as well as ensuring efficiency and reducing energy consumption.

Outdoor traffic should be prioritized by mode of transportation at the building, site and community level. In the event that the junction with the provincial road must be reconfigured, it will be required to comply with the standards in effect at the Ministère des Transports du Québec. The development of access roads should promote smooth and speed-limiting vehicular traffic. Emergency vehicle movements will have to be integrated into the traffic plan, as well as service access for the operation and maintenance of the building. The use of public transit and active transportation will be promoted by giving an important place to the facilities that support them. For example, by setting up comfortable bus shelters connected to the building by welcoming traffic lanes. The organization of spaces should promote the prioritization and safety of active transport travel. It will be necessary to identify potential traffic conflicts and propose innovative development solutions. At major intersections, including the one linked to the early childhood centre, the installation of wide and clearly visible pedestrian and bicycle crossings should be encouraged.

Although the exact number of parking spaces remains to be confirmed in the upcoming Functional and Technical Program (FTP), it is necessary to anticipate an order of magnitude similar to the number of current spaces. The prioritization and positioning of the spaces by zones and vehicle categories will have to be optimized in order to create incentives for carpooling and the use of less polluting vehicles. The positioning of reserved spaces, near the building, for small electric vehicles and carpooling will be evaluated (including charging stations). With regard to the drainage of paved surfaces, the

installation of bio-retention basins and drainage valleys promoting the natural infiltration of water into the ground will also be implemented. The use of flooring materials with a high solar reflectance index should be preferred to limit the presence of heat islands. Also, the development of the parking lot will have to provide for the strategic location of snow disposal sites in order to limit the breakage of layouts and peripheral plants. Finally, the lighting concepts that will be used to light the site and parking lot must consider the use of low-energy appliances and comply with starry sky protection standards.

6.5.6 Complete development of the site

Site development includes, in particular, outside parking, vehicle, pedestrian and cycling traffic lanes, outside courtyards, fencing, signage, civil engineering works, landscaping, and so on.

The refit of the site should be carried out in such a way that the facilities are adapted to the urban and natural environment of the area. The building will be positioned on the property in such a way as to optimize the function of the spaces and the environmental performance criteria. An evaluation of the trees is currently underway and the results of this study will be provided to the successful proponent. The conservation of trees in good health and whose lifespan will be judged as good to excellent will be given priority in the choice of the location of the new building. The trees and woodlands to be conserved will be protected during the work and compensation measures will have to be adopted for the trees to be felled.

The treatment of building access will have to be integrated into the external installations. For example, the establishment of a reception area to encourage meetings and exchanges between employees when they enter and leave work. With regard to signage, the installation of building identification signs, traffic signs and flagpoles should be provided for during site development. The proposed developments will also have to consider the positioning of a passenger drop-off for an inter-city bus that will shuttle with neighbouring urban centres. In addition, unloading areas for the delivery of goods, temporary reception of taxis and stops of less than ten minutes must be integrated into the reception areas surrounding the building. The creation of a sheltered and safe outdoor space for bicycle storage located near an entrance with access to showers and lockers should be considered. The installation of an access for fire vehicles is also to be planned in the treatment of the peripheral installations of the building.

Functional and spatial interactions will have to be taken into consideration, such as the positioning of indoor living areas in relation to the external environment. This includes promoting the penetration of natural light and providing views and perspectives from inside the building of the site's attractions: terraces, landscaped pedestrian walkways, gardens and woodlands. Outdoor facilities should be versatile in order to allow for various activities: meeting and relaxation areas during coffee breaks, areas with lunchtime furniture and outdoor collaboration areas. The establishment of extensible surfaces for outdoor gatherings or the organization of training sessions, yoga, etc. will also be considered. Considerations of minimum maintenance and durability should be given priority in the choice of surface coatings.

Plant selection should limit maintenance and the use of water and chemicals. The use of native or naturalized plants will be preferred and the possibility of creating wildlife habitats for local populations of insects, small mammals, amphibians and reptiles will be evaluated. The establishment of permeable surfaces that promote the percolation of water into the ground and the aquifer recharge of the site should be integrated into the management of runoff water.

PD 7 ISSUES

While the cost, quality and timing of the project are of great importance and will need to be considered at all stages of the project, the following issues are considered to be of critical importance in the implementation of this project.

Elements of sustainable development

The creation of the current National Verification and Collections Centre in Shawinigan (NVCC) has made it possible to better meet the needs of Canadians. With the government's decision to build a new NVCC, this confirms the intention to maintain the NVCC in the long term and provide NVCC employees with a modern workplace that better meets the CRA's new needs and will meet the government's new sustainable development requirements. The quality objectives are therefore aimed at building a new, modern, environmentally friendly and state-of-the-art building for federal employees working in Shawinigan, in order to contribute to their productivity.

According to the Federal Sustainable Development Strategy, the new building will therefore have to be built to LEED-Gold energy efficiency standards, have a lower carbon footprint than the current building and incorporate modern building construction and maintenance technologies.

Achieving the government's sustainable development objectives is therefore a major issue for this project.

Major time issues

The construction of a new NVCC is an important commitment by the Government of Canada to ensure that Canadians have access to the best possible service when they contact the Canada Revenue Agency.

The current building is at the end of its useful life and at full capacity and no longer meets the needs of the occupants. Delays in the construction of a new facility would lead to an increased deterioration in the condition of the existing building, additional maintenance and operating costs, and impact on the service delivery of occupant departments and the well-being of users.

As a result, it is critical that the schedule developed be respected so that the users can be moved into the new building as quickly as possible, while still conforming to the policies of PWGSC. Any methods to improve the schedule must be discussed and, if approved, implemented.

Accessibility elements (barrier-free design and universal and safe access)

All Canadians deserve to be able to participate fully in their communities and workplaces and to have an equal opportunity to succeed. The Government of Canada has developed the Canadian Accessibility Act to remove the barriers to inclusion that people with disabilities continue to face on a daily basis in society.

PWGSC must meet the accessibility requirements in providing access to and use of its buildings. These requirements include building components such as entrances, passenger elevators, public areas and federal work areas. These are minimum requirements.

The objective of this project is to go beyond the minimum requirements set out in the Treasury Board Secretariat's Accessibility Standard for Real Property by improving the full and equal participation in society of all persons, particularly those with disabilities, including the removal and prevention of barriers.

Achieving the government's accessibility objectives is therefore a major issue for this project.

Media attention

The construction of a new NVCC is of critical importance both to the CRA and to the economic development of the region, where the Government of Canada is a very important employer. The project will therefore receive high media scrutiny.

Consultants will therefore have to respect official communication channels throughout the project.

DP8 DOCUMENTS AVAILABLE

8.1 Documentation - available for all proponents

The following drawings for the existing building (Project 029457), in PDF:

ARCHITECTURE

1. SHEET A01/72 - PLOT PLAN
2. SHEET A02/72 - GROUND FLOOR PLAN
3. SHEET A03/72 - UPPER FLOOR PLAN
4. SHEET A04/72 - ROOF PLAN
5. SHEET A05/72 - LONGITUDINAL SECTIONS
6. SHEET A06/72 - TRANSVERSALE SECTIONS
7. SHEET A15/72 - PENTHOUSE PLAN
8. SHEET A16/72 - REFLECTED CEILING – GROUND FLOOR
9. SHEET A17/72 - REFLECTED CEILING – UPPER FLOOR
10. SHEET A18/72 - SPECIAL CEILINGS DETAILS
11. SHEET A20/72 - GROUND FLOOR – FLOOR FINISHES
12. SHEET A21/72 - UPPER FLOOR – FLOOR FINISHES
13. SHEET A24/72 - FACADES
14. SHEET A25/72 - FACADES
15. SHEET A26/72 - FACADES
16. SHEET A27/72 - FACADES
17. SHEET A28/72 - EXTERIOR WALL DETAILS
18. SHEET A29/72 - EXTERIOR WALL DETAILS
19. SHEET A30/72 - EXTERIOR WALL DETAILS
20. SHEET A31/72 - EXTERIOR WALL CLADDING DETAILS
21. SHEET A32/72 - EXTERIOR WALL CLADDING DETAILS
22. SHEET A33/72 - MISCELLANEOUS DETAILS
23. SHEET A34/72 - WINDOWS & MAIN ENTRANCE
24. SHEET A35/72 - CURTAINWALL DETAILS
25. SHEET A36/72 - ROOF & SKYLIGHT DETAILS
26. SHEET A39/72 - ELEVATORS & ESCALATORS
27. SHEET A40/72 - STAIRCASES DETAILS
28. SHEET A43/72 - INTERIOR PARTITIONS DETAILS

8.2 Available Documentation – To be provided to Successful Proponent

The following documents will be made available to the successful proponent in the language in which they were prepared.

Environment

- Environmental Site Assessment - Phase I - By Akifer, February 22, 2019
- Environmental Site Assessment - Phase II (including preliminary geotechnical study - Ongoing study
- Sustainable Development Feasibility Study for the Construction of a Government of Canada Building (energy study and development of GHG reduction options, including LEED, WELL, zero carbon benchmarking) - Under development by Fabrik;
- Total Cost of Ownership Analysis Study - Under development by PWGSC;
- Environmental Effects Assessment - CEAA 2012 - By CIMA+, under development.
- Study of the health status of trees - By CIMA+, under development
- Inventory of controlled substances and hazardous materials, by WSP - June 2019
- Life Cycle Assessment of low carbon footprint materials (structure and envelope) - under development
- Study on the vulnerability of infrastructure to possible climate and weather impacts, by CIMA+ - Under development

Existing Building

- Building Condition Report (BCR), PWGSC, October 10, 2017
- Original plans of the existing building digitized in PDF format
- Topographic Map – Under development
- Study of the scope of the work to repair parking lots (including a televised rainwater drainage survey report), by BPR, March 25, 2013

New Building

- Functional and Technical Program (FTP)
- Tenant Guide - Property Management and Project Delivery Services Provided by Real Property-1 (RP-1) Contracts, by BGIS, August 28, 2018
- Work Permit - Health and Safety, by BGIS
- Study of archaeological potential - By Patrimoine experts, May 7, 2019
- Workspaces Supply Arrangement (furniture WSA)

8.3 Available Documentation – Provided to Successful Proponent on request

The following documents will be made available to the successful proponent in the language in which they were prepared.

- Study for preventive maintenance of roofs, roof drains and skylights - by Cimaise, December 14, 2015
- Study of cafeteria equipment - CFSS, Report on the obsolescence of food service equipment - Bouthillette Parizeau - December 3, 2015

PD 9 PROJECT DELIVERY APPROACH

9.1 General

1. The Construction Manager, in consultation with the Departmental Representative shall:
 - a. Perform the role of CM for the Project respecting the approved scope, quality, budget and schedule;
 - b. Develop partnership and communication between all members of the project delivery team and stakeholders throughout all phases of the project life.
2. All services and duties listed and allocated to the CM throughout the Required Services section:
 - a. Are the full responsibility of the CM;
 - b. Are not exhaustive and do not preclude alternative or supplementary approaches as may be suggested by the CM for consideration by the Departmental Representative and vice versa.

9.2 Summary of Personnel and Qualifications

The CM shall provide a Construction Management team with the following specialists / subject matter experts:

- a. Project Leader
- b. Project Manager
- c. Cost Estimator
- d. Scheduler
- e. Superintendent
- f. LEED AP Resource
- g. BIM Construction Manager
- h. Commissioning Agent
- i. Site Safety Officer

9.3 Project Delivery Objectives and Requisite

1. Under this project delivery approach, responsibility of the CM shall include Advisory and Support services (CMA) and General Contractor (GC/CMc) required services.
 - a. The primary reason for this approach is that a Construction Manager (CM) will provide PWGSC with valuable construction advice and the flexibility to implement and coordinate multiple projects and sub-projects and phases and expedite the schedule of completion of the work.
 - b. Having one Construction Manager to oversee all sub-projects on this project provides advantages of coordination, quality assurance, efficiency and economies of scale.
2. The Construction Manager must:
 - a. Provide Construction Management services, Advisory (CMA) and General Contractor (CMc) Required Services, throughout the project life cycle.
 - i. Services and duties listed and allocated to the CM throughout the Required Services sections are not exhaustive and do not preclude alternative or supplementary approaches as may be suggested by the CM for consideration by the Departmental Representative and vice versa.
 - b. Deliver project according to the Project Milestones, within approved scope, quality, budget and construction cost estimate and schedule. The project milestones are:
 - i. Phase 1 – Design
 - Pre-Project
 - Contract Documents
 - a. Work Package Submissions at 50%, 99%, & 100%
 - ii. Phase 2 – Tender and Construction
 - Tender Calls, Bid Evaluation and Contract Award
 - a. Tender of each Work Package
 - Construction and Contract Administration
 - Closing
 - c. Provide an ongoing risk management program.
 - d. Prepare a quality management plan that includes quality reviews on a construction management project delivery approach.
 - e. Develop contingency plans to mitigate potential delays arising from logistic and weather-related challenges.

9.4 Phase 1 – Design

1. For the design phase of this Project, an Architectural and Engineering firm (referred to herein as the Consultant) is being engaged to complete the design and will direct and coordinate all phases of the design work for this Project.
2. During the design phase:
 - a. Architectural and Engineering services including all cross discipline coordination work has been provided by the Consultant Team;
 - b. The CM shall provide advisory and support services to the design team and provide quality reviews on the constructability of proposed designs and tender ready packages. Written comments shall be submitted before any construction work begins.
3. The Construction Manager Team will work closely with the Consultant to develop the design and ensure that all information is made available to the CM. The CM shall provide advice on the following activities:
 - a. Construction costs;
 - b. Material delivery and construction schedules;
 - c. Constructability;
 - d. Suitability and availability of materials and components;
 - e. Sustainable design, construction, and operation principles and practices;
 - f. The Risk Management Report.

9.5 Phase 2 – Tender and Construction

1. The CM shall provide services as the General Contractor during the construction phase of the project.
 - a. The CM shall implement and coordinate multiple tender packages and phases, while expediting the schedule of completion of the Work.
 - b. The CM shall oversee all construction tender packages on the building site and provide coordination, quality assurance and efficiency.
 - c. The CM, in consultation with the Consultant Team and Departmental Representative, will help determine the number of tender packages required for the project. This is to enable the Consultant Team to prepare the tender packages in a timely manner and ensure full coordination of the work of all disciplines.

9.6 Tentative Work / Tender Packages

1. The project will be delivered using multiple work and tender packages. The work packages will be determined in consultation with the Consultant during the design phase, and reviewed with the Departmental Representative prior to tender.

9.7 Project Stages

1. The scope of Construction Management Services comprises two stages:
 - a. Stage A (estimated duration 9 months) - Basic Construction Manager services.
 - b. Stage B (estimated duration 58 months) - Optional services, exercised at PWGSC's sole discretion, which include advisory and construction services.
2. Stage A: Basic Construction Manager services
 - a. The duration is estimated at 9 months and may be reduced or extended prior to triggering Stage B, Optional Services. The principal output of Stage A is to confirm the overall project estimate and schedule validation. This output is critical as the basis for a subsequent expenditure approval for the project to proceed to Stage B.
 - b. Basic Construction Manager Services: focus on planning and project development for the entire scope of work for the project.
3. Stage B: Optional Services
 - a. Stage B: shall be triggered by way of a Contract Amendment which is contingent upon receipt of the necessary Government of Canada approvals and is at the sole discretion of Canada.
 - b. The estimated duration of Stage B is 58 months.
 - c. Services: The scope of optional services includes advisory services and construction services required to complete the project. All ongoing Services under Stage A shall be transferred under the terms and conditions of Stage B.

SECTION 2 DESCRIPTION OF REQUIRED SERVICES AND WORK

PA 1 PROJECT ADMINISTRATION

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

1.1 PWGSC Project Management

The PWGSC Senior Project Manager (SPM) assigned to the project is the Departmental Representative.

The Project Manager (PM) is the Departmental officer directly concerned with the project and responsible for its progress. The Project Manager is also the liaison between the Consultant, Public Works and Government Services Canada (PWGSC) and the Client Departments.

Public Works and Government Services Canada (PWGSC) administers the project and exercises continuing quality control over the Construction Manager's work during all phases of development. Unless directed otherwise by the Departmental Representative, the Construction Manager obtains all federal requirements and approvals necessary for the work.

1.2 Reviews and approvals related to the design process

Chart of Reviews and Approvals (notcomprehensive)	PWGSC		Clients		Treasury Board (TB)		Property Management		Construction Manager	
	R	A	R	A	R	A	R	A	R	A
RS1 Analysis of Project Requirements – Verification and Validation										
Project Scope of Services Report	x	x		x			x			
Class D estimate	x	x		x					x	
LEED checklist with comments	x						x		x	
Sustainable Development Action Plan	x						x			
Human resources and communications plan	x	x							x	
BIM/MDB management plan	x	x							x	
Implementation timeline	x	x					x		x	
RS2 Schematic Design										
Design options	x		x				x		x	
Recommended design option		x								
Class C estimate(s)	x	x		x					x	
LEED checklist with comments	x						x		x	
Total cost analysis	x						x		x	
BIM/MDB model	x								x	
Human resources and communications plan	x	x							x	
Implementation timeline	x	x					x		x	
RS3 Design Development										
Design development documents	x	x	x				x		x	
Class B estimate(s)	x	x		x		x			x	
LEED checklist with comments	x								x	
Total cost analysis	x								x	
BIM/MDB model	x								x	
Human resources and communications plan	x	x							x	
Implementation timeline	x	x					x		x	
RS4-5 Construction and Tender Documents (by package)										
33% complete construction drawings	x	x	x				x		x	
66% complete construction drawings and specifications	x	x	x				x		x	

99% complete construction drawings and specifications	x	x	x				x		x	
Class A estimates (33%, 66%, 99%, 100%)	x	x		x					x	
Finalized bid documents (by package)	x	x	x				x		x	
LEED checklist with comments	x								x	
Total cost analysis	x								x	
BIM/MDB model	x								x	
Human resources and communications plan	x	x							x	
Implementation timeline	x	x							x	

R = Review
 A = Approval

1.3 Project Management Support Services (PMSS)

PWGSC will engage external Project Management Support Services (PMSS) to provide project management, construction advice and project management administration support for the Departmental Representative. PMSS personnel will assist in the day-to-day management of the Project. PMSS will operate on this Project as an extension of and part of the PWGSC Project Manager's responsibilities. Throughout the project, the external project management team will provide a review of the deliverables submitted by the Consultant and the Construction Manager.

1.4 Cost Specialist

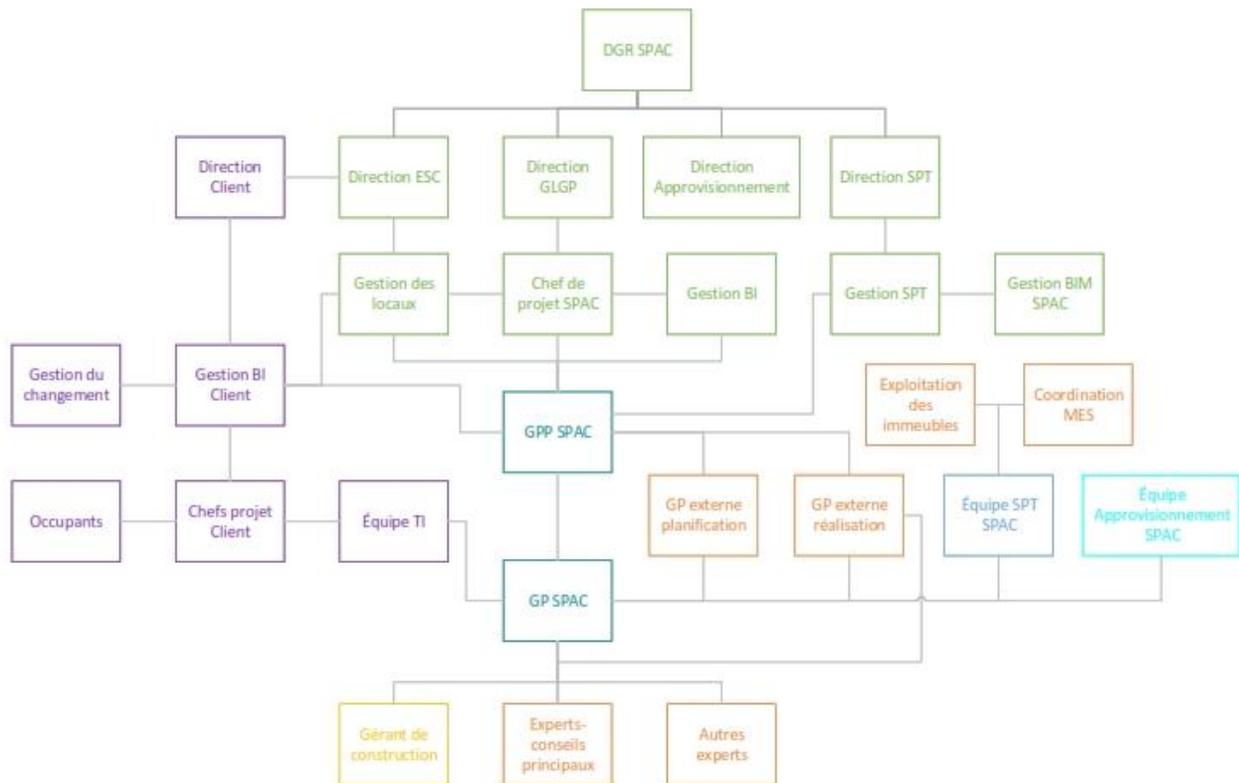
PWGSC will use the services of a cost specialist to support the project team. It will provide an independent assessment of the costs incurred by the Consultant and the Construction Manager and of risk management and will provide quality assurance services at all stages of the project.

1.5 Official Languages

The Project requires Services in both official languages. Refer to the Supplementary Conditions section of this Request for Proposals document entitled "Language Requirements".

1.6 Project Team Organization

This Project is to be managed and implemented in a collaborative manner. All members of the Project Team are required to work cooperatively at every phase of the design and construction process in order to assure the creation of a successful and meaningful end result. Under the leadership of the DR, all Project Team members are responsible for establishing and maintaining a professional and cordial relationship. The Project Team refers to the key representatives, involved in coordinating and delivering this Project.



From top to bottom and left to right:

- | | |
|-------------------------------------|----------------------------|
| 1. RDG, PSPC | 15. Building Operations |
| 2. Client Directorate | 16. Cx Coordination |
| 3. Client Services Team Directorate | 17. Occupants |
| 4. APM Directorate | 18. Client Project Leaders |
| 5. Procurement Directorate | 19. IT Team |
| 6. PTS Directorate | 20. External PM–Planning |
| 7. Accommodation Management | 21. External PM–Delivery |
| 8. PSPC Project Leader | 22. PSPC PTS Team |
| 9. RP Management | 23. PSPC Procurement Team |
| 10. PTS Management | 24. PSPC PM |
| 11. PSPC BIM Management | 25. Construction Manager |
| 12. Change Management | 26. Senior Consultants |
| 13. Client RP Management | 27. Other experts |
| 14. PPM PSPC | |

GR 1 GENERAL REQUIREMENTS

1.1 General

All Required Services will be included and covered by the fees identified in the Price Proposal Form.

The Construction Manager must:

1. Provide CMA Services throughout the project life cycle and respective milestones to PWGSC and the Consultant Team.
2. Counsel PWGSC and the Consultant Team by providing Advisory and Support services throughout the Design and Construction/Implementation Phases of the project to achieve a Quality process and outcome to meet or exceeds the Project requirements and expectations.
3. Assist in the development of the overall project concept.
4. In consultation with the Departmental Representative, develop and maintain a partnership, lines of communication and reporting between all members of the project delivery team and stakeholders throughout the project life cycle.

1.2 Summary of Services

The following is a summary of the project delivery for the Construction Manager contract, including:

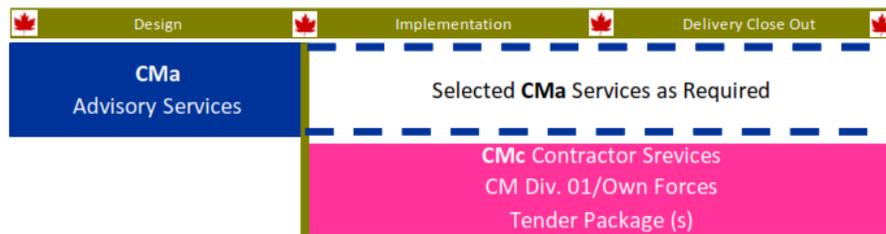
1. Subsequent simplified diagrams depict a conventional combined CMA and CMc Services condition with respective Level of Effort and Roles.
2. Level of effort associated with the CMA and CMc Required Services vary with the project delivery life cycle; simplified in diagram below.



Design	Conception
Implementation	Mise en œuvre
Delivery Close-Out	Clôture de la réalisation du projet
CM – Basic Advisory Services	Services consultatifs de base du gérant de construction
CM – General Contractor Services	Services d'entrepreneur général du gérant de construction

Figure 1 – Level of Effort

3. Roles of CMA and CMc switch and remain interrelated dependant on the overall project delivery life cycle and construction tender packages; simplified in diagram below.
4. Role switch-over typically occurs when the CM implements Work by Own Force and upon initiating or participating in a tender with subsequent contract award by either CM or PWGSC.



Design	Conception
Implementation	Mise en œuvre
Delivery Close Out	Clôture de la réalisation du projet
CMA Advisory Services	Services consultatifs du gérant de construction
Selected CMA Services as Required	Certains services consultatifs, au besoin
CMc Contractor Services	Services d'entrepreneur du gérant de construction
CM Div. 01/Own Forces	Division 01 ou personnel du gérant de construction
Tender Package (s)	Dossiers d'appel d'offres

Figure 2 – CMA and CMc Roles

5. CMA and CMc roles remain interrelated during construction- Implementation and Delivery Close-Out phases, to address select CMA services such as:
 - a. Preparation of tender package documentation;
 - b. Recommended listing of Subcontractors;
 - c. On-going Management and Reporting related to
 - i. Cost estimating and budgeting,
 - ii. Master and detail schedules updates,
 - iii. Quality Management;
 - d. Risk and mitigation input;
 - e. Commissioning Process – planning, coordination with Commissioning Manager, and implementation.

1.3 Required Services (RS)

Construction Management Required Services apply throughout Stage A and Stage B, unless otherwise specifically indicated.

RS 1 GENERAL ADMINISTRATION SERVICES

RS 1.1 - General Project Deliverables

Unless otherwise specified, for all submissions required under this contract, the CM must provide three (3) paper copies in a size/format suitable for easy reading/understanding of the information being conveyed, plus one (1) electronic copy in unprotected native format and one (1) electronic copy in portable document format (*.pdf).

RS 1.2 - Electronic Communications

All Team participants including PWGSC, Consultants and CM must be able to communicate electronically by e-mail.

Acceptable software is:

- a) Written reports and studies: MS Word (*.doc)
- b) Spreadsheets and budgets: Microsoft Excel (*.xls)
- c) Presentations: MS Power Point (*.ppt)
- d) Schedules: Microsoft Project (*.mpp)
- e) Drawings: AutoCAD (*.dwg)
- f) Specifications: MS Word (*.doc)

During the life of this project, the CM may find it necessary for various software programs employed to be upgraded. In such cases, it is the responsibility of the CM to notify PWGSC of such software upgrades in writing, and to ensure the software upgrade is backward compatible with the previous version in use on the project, and that all previous project documentation created in previous versions of the software is able to operate on the upgraded software. PWGSC will not be responsible for any costs associated with such software upgrades, or any costs associated with ensuring backward compatibility for any software employed on the project by the Construction Manager.

Copies of the documents should be provided in portable document format (*.pdf) to facilitate their distribution.

Acceptable formats and software for BIM will be determined in collaboration between the Construction Manager, the Consultant and the Departmental Representative.

The Construction Manager will have to set up a web sharing site for all electronic project documentation and ensure the costs associated with its maintenance, document management and access management.

RS 1.3 – Correspondence

Distribute all correspondence related to this project as directed by the Departmental Representative. Do not correspond directly with the other project stakeholders unless directed by the Departmental Representative. Respect and implement the project communications protocol to be submitted to the Construction Manager by the DR. All communications must carry the Contract name/number, PWGSC Project title and PWGSC Project number. The date must be indicated in the following format: YYYY-MM-DD (e.g. 2019.04.12).

RS 1.4 - Media Relations

Ensure that no personnel from either the CM's firm, or from the CM's subcontractors, communicate with the media unless requested to do so by the DR. If contacted by reporters, or others, refer the inquiring party to the DR immediately. Do not publish or agree to have published information on this Project or this Contract without the prior written approval of the Departmental Representative.

RS 1.5 – Project Response Time

It is a requirement of this project that the CM and the CM's key personnel and subcontractors be personally available to attend meetings or respond to inquiries within two (2) days.

RS 1.6 – Acceptance of Construction Manager Deliverables

While PWGSC acknowledges the CM's obligations to meet project requirements, the project delivery process entitles PWGSC to review the Work. PWGSC reserves the right to reject undesirable or unsatisfactory work.

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.

Acceptance does not relieve the CM of responsibility for the Work and compliance with the contract.

PWGSC acceptances do not prohibit rejection of work which is determined to be unsatisfactory at later stages of review.

Acceptances by the Client / Users Department and other agencies and levels of government must be obtained to supplement PWGSC acceptances.

RS 2 PROJECT MEETINGS

RS2.1 - Design Meetings

The Construction Manager must participate in all project design meetings every two (2) weeks throughout the design phase of the project. The Consultant will chair these meetings to coordinate and direct the activities of the Project. These meetings will be held at the offices of PWGSC in Quebec City (1550 D'Estimauville).

The Design Consultants will prepare and distribute meeting minutes, as well as create and maintain a list of outstanding action items and outstanding issues assigned to the CM. The CM shall review, provide comment as required, and follow-up on any action items or outstanding issues assigned to the CM.

Attendance at these meetings will include the DR (and other necessary PWGSC team members), the Design Consultants, sub-consultants as required in accordance with the work in question, and the CM. Representatives from the client/users may attend some meetings at the invitation of the Departmental Representative when deemed appropriate.

The purpose of these meetings is to:

1. Monitor the progress of the project design against project objectives, scope, costs and timelines and identify the measures to be put in place to ensure that progress meets basic requirements (cost, schedule, contractual scope)
2. Ensure communication between all participants;
3. Address special problem issues;
4. Ensure effective quality assurance and coordination;
5. Ensure design coordination of all disciplines;
6. Monitor the Implementation Strategy (batches).

RS2.2 - Construction Meetings

The CM must attend and chair construction meetings every two (2) weeks, for the duration of the Project construction phase. These meetings are to be held at the PWGSC offices in the Quebec City area, or on the Project site.

The CM must prepare and deliver the agenda, notice to invitees and minutes. The CM must issue the final meeting minutes within two (2) working days of the meeting.

The CM must create and maintain a searchable database of action items and issues that is directly linked to the risk management services of the CM. The top ten risks from this database must accompany the final minutes of the meeting.

Attendance at these meetings is to include at a minimum: Construction Management staff, DR, User Representative and Consultants. The CM's site services personnel or any entity or person contracted or employed by the CM for the specific services being discussed must attend each meeting.

The purpose of these meetings is to:

1. Monitor the progress and administration of the prioritized construction against the approved scope and construction cost estimate, and the construction schedule. Identify the measures to be put in place to ensure that progress meets basic requirements (costs, schedule, contractual scope).
2. Ensure efficient communication between all participants.
3. Ensure effective construction coordination with site and building operations.
4. Ensure effective and efficient site coordination of all disciplines and subcontractors.
5. Identify opportunities or problem issues, assigning responsible individuals and dates for resolution.
6. Ensure effective quality management.

The Construction Manager must:

1. Endeavour to hold all meetings as "Green Meetings" (i.e. electronic copies of documents where possible or double-sided hard copies);
2. Establish a list of standing agenda items, including (as a minimum):
 - a. Schedule and progress;
 - b. Cost issues and changes;
 - c. Risk and quality issues;
 - d. Quality;
 - e. Scope of work;
 - f. Site safety;
 - g. Sustainable development;
 - h. Commissioning;
 - i. Lessons learned.

[RS2.3 - Commissioning Meetings](#)

Once commissioning commences, the CM shall attend separate commissioning meetings with subcontractors, PWGSC, the Consultant and the Commissioning Manager to discuss and coordinate the commissioning of work and its progress.

The Commissioning Manager will prepare and distribute meeting minutes within 48 hours of the meeting, with copies to the Project Team.

[RS2.4 - Project core team Meetings](#)

The DR will chair these meetings to coordinate and direct the activities of the Project. These meetings will be held monthly at PWGSC offices in the Quebec City area and the departmental representative will prepare and distribute the minutes.

These meetings will vary in accordance with the stage of the project and usually includes the DR (and other team members), the CM, the Design Consultants, and other key stakeholders. Other Construction Management team members shall participate as required and according to the work/issues topical to the subject meeting.

The purpose of these meetings is to:

1. Monitor the progress of the project against project objectives and requirements;
2. Monitor the progress of the project against the accepted project scope, cost and schedule;
3. Ensure communication between all participants and address special problem issues;
4. Ensure coordination with the building occupants;
5. Ensure coordination of commissioning and construction activities with the client/users with PWGSC Property Manager.

RS2.5 – Workshops

Constructability

The CM shall organize and lead Constructability Workshops. The CM shall take an active lead role during these meetings to address the following subjects: constructability, implementation plan including site constraints, scheduling and cost implications. The CM shall produce a Constructability Review Report for each workshop, documenting all issues identified, options and recommendations on resolution of issues, decisions taken, and any outstanding issues to be actioned. The report shall be issued within five (5) working days of the workshop. These will be full-day workshops and will occur during the Construction Document Services stage of the project.

Cost and schedule coordination

During the Construction Document stage, the project budget and schedule are to be updated based on the current level of design development and documentation. These workshops will be arranged and chaired by the Departmental Representative and will include a page turn of the current design or construction documents, intended to ensure a common understanding of the documents for the purpose of obtaining accurate budget costing and schedule updates. Attendance at these workshops will include the Departmental Representative (and other team members), CM, Design Consultant, key Sub-Consultants, and PWGSC Schedule Consultant and Cost Consultant. These will be half-day workshops.

Risk management

The CM shall participate in half-day Risk Management sessions, which shall be held at approximately six (6) month intervals throughout the entire project life cycle. These will be half-day sessions arranged and chaired by the Departmental Representative.

Lessons learned

The CM shall participate in half-day Lessons Learned Workshops, arranged and chaired by the Departmental Representative. The Design Consultants will record all issues and lessons learned as well as prepare and distribute lessons learned documentation.

There will be Lessons Learned Workshops during both the Construction Document and Construction Services stages of the project.

1. Stage related to construction documents: During the design development stages of the project there will be Lessons Learned Workshops focused on incorporating lessons learned through screening and investigation activities conducted during the design stages.
2. Construction Services Stage: Construction will be executed in separate construction sub-phases, each with a unique set of construction documents. This will allow the lessons learned from each construction sub-phase to inform the subsequent construction document packages. The intent is to document lessons learned from issues realized during construction and use them to inform design and construction documents of future construction sub-phases.
3. Project Completion: At completion of construction, there will be a final lessons learned workshop incorporating and updating all lessons learned throughout the entire project.

Construction implementation plan

The Construction Manager shall organize and lead the full-day Construction Implementation Workshops. The CM shall take an active lead role during these meetings to address the following subjects: interior construction hoarding, building and occupant protection requirements, site security requirements, construction emergency egress, any impacts of construction activities on building occupant emergency egress, Regulatory requirements, sustainability and waste management requirements, building system and service tie-ins, fire hydrant and Siamese connection impacts, traffic and site coordination, traffic management plan, deliveries plan, Construction Site Plan including site hoarding plans, lay-down areas, personnel access plan, material flow plan, and all other logistics associated with the design and management of the construction site.

Value engineering

The CM must attend the value engineering workshops. The DR will chair the value engineering workshops. These workshops will seek to ensure value for money of the proposed design and construction methods. These meetings will be held throughout the pre-construction and construction phase at the PWGSC offices located in the Quebec City area, or on the Project site. Meetings will be held on an as-required basis.

The DR will prepare and deliver the agenda, notice to invitees and minutes.

Attendance at these meetings will vary in accordance with the meeting focus and usually includes the DR (and other Project Management Team members), representatives from the Users, the Construction Manager and required staff, and the Consultant Team members, who must participate as required and according to the work/issues in question. In addition to this typical list of workshop attendees, the third-party peer review body may attend these workshops.

BIM management meeting

A schedule of these meetings must be established by the Construction Manager at the BIM start-up meeting. Plan a minimum of 6 (six) meetings to write the BIM management plan.

BIM coordination meetings

A schedule of these meetings must be established by the Construction Manager at the BIM start-up meeting. Plan a minimum of 20 (twenty) meetings for BIM coordination and management.

Integrated design

The consultant will retain the services of an IDP expert to organize and facilitate the series of Integrated Design Meetings (IDM). In the RS1 design stage, plan one (1) half-day start-up workshop to introduce the key steps of the IDP Action Plan and to develop a common understanding. For the RS1 to RS4 design stages, schedule ten (10) intensive, multidisciplinary, integrated design workshops, each lasting one day or to be adapted according to the issues to be discussed and the project phase. The objectives of each of these meetings are determined in due course and jointly with the Departmental Representative and the Construction Manager.

The Departmental Representative considers that the IDM is a collaborative and multidisciplinary process that must begin at the beginning of a project and that aims to generate greater efficiency from integrated, optimal, innovative and sustainable solutions. IDMs are guided by functional, environmental and economic objectives and cover the useful life of a building.

IDMs during which the creative efforts of the designated representatives of the Departmental Representative and the Construction Manager are focused on addressing and resolving complex issues in a synergistic manner. These workshops aim to quickly build consensus around the issues of the Project by allowing all participants to be part of the decision-making process, in a climate of trust.

RS 3 ADVICE THROUGHOUT THE PROJECT

RS 3.1 - Construction Management Plan

The Construction Manager must:

1. Prepare, submit, maintain/update and implement a construction management plan (CMP) governing the CM's activities, as well as the effective management of the CM's resources;

The CM's CMP must comprise at least eight distinct plans:

- a. Communications management plan;
 - b. BIM Project execution plan (PxP);
 - c. Tender package documentation management plan;
 - d. Quality management plan;
 - e. Cost management plan;
 - f. Time management plan;
 - g. Risk management plan;
 - h. Human resources management plan.
2. For each of the plans, provide:
 - a. An initial proposed layout, format, template and samples, including a table of contents for review by the DR within 30 working days of Contract award;
 - b. A draft addressing all issues raised by the DR on the initial layout and format for review by the DR within 20 working days of the acceptance of the plan layout and format;

c. A final for acceptance by the DR within 20 working days after receiving DR's review comments on the draft.

The CM's plans must clearly detail how the CM's services will be managed, monitored, reported and controlled during the implementation of the Work.

Once the final plans are accepted by the DR, the CM must implement each plan and submit monthly CMP updates, including updates to all sub-plans.

The CM must discuss with the DR the contents and implementation of each of the plans, the monthly updates, and take the necessary actions as may be required to address any concerns as directed by the DR.

[RS 3.2 – BIM Project execution plan \(PxP\)](#)

The application of the BIM to the Construction Manager will have to address, but not be limited to, the following aspects:

- The Construction Manager is responsible for producing a construction model from the design models produced by the Consultant. The model must be used for constructability analysis and work coordination. The Construction Manager shall notify the Departmental Representative's Senior BIM Manager in the event that the Departmental Representative plans to create a construction model specific to the completion of its mandate in order to establish the sequencing of the work at the request of the Departmental Representative, and include construction management data and establish site logistics.
- The Construction Manager cannot require specialized contractors to provide digital mock-ups specifically for their contract. At the end of the work, the Departmental Representative may request to receive the final mock-up from the Construction Manager to create a BIM history for training and knowledge sharing purposes.
- All plans and specifications issued must be submitted in 2D format (Autocad). These plans and specifications must comply with PWGSC technical drawing standards.
- All plans and specifications issued must be submitted in 3D format (Revit).
- The Construction Manager shall comply with the standardized contract documentation principles of the Institute for BIM in Canada, including IBC 100-2014 and IBC 201-2014.
- The Construction Manager must attend BIM coordination meetings. The purpose of the meetings is to resolve any interference detected by the stakeholders.
- Plan a minimum of 6 (six) meetings to write the BIM management plan, led by the Departmental Representative;
- Plan a minimum of 20 (twenty) meetings for BIM coordination and management plan, led by the Departmental Representative;
- Deploy and ensure compliance with the BIM approach within its team in accordance with the BIM management plan. Refer to the preliminary BIM management plan presented in Annex A2.
- Produce a work plan that determines how to implement the BIM management plan.
- The Consultant will be required to produce signed and sealed plans for bidding and construction (2D). The 2D documents should be extracted directly from the BIM mock-ups and sent in both paper and PDF formats. These documents will be the contractual documents. The 3D BIM models will be used in design. Specialized contractors will be able to refer for a better understanding when submitting their bid. If there are contradictory elements, the 2D documents take precedence over the models.
- The Construction Manager shall provide comments relevant to the development of a BIM Project Implementation Plan, to which the CM will be a signatory, that sets out, at a minimum, the strategy and timeline for the implementation of the project-specific BIM topics described in Annex D. The BIM project implementation plan must be established within 30 working days of the contract award. The CM must work closely with the Consultant and the DR to finalize the BIM PxP and execute the plan once accepted by all parties. Refer to the preliminary BIM management plan presented in Annex A2.

- BIM topics must be re-evaluated every two (2) weeks by a BIM management team as the project progresses, in order to take advantage of opportunities and challenges. Any changes are to be approved by the Departmental Representative. The BIM management team must be composed of representatives of the Construction Manager, the Consultant and the Departmental Representative. If changes are required or recommended, the BIM management team should prepare a summary for the project team's review and approval.

RS 3.3 – Human Resources Management Plan

The CM must develop and implement a human-resource management plan specific to this Contract. The purpose of the human resources management plan is to document the deployment of appropriate human resources with the necessary skills, identify resource training if any gaps in skills exist, define team-building strategies, and describe effective management of team activities throughout the Project.

The CM's human resources management plan must include, but is not limited to:

1. The roles and responsibilities of the CM's team, including expected resourcing levels per area of expertise to meet the requirements of the project throughout the Contract.
2. CM team organization charts and how positions interact / relate to other members of the Project Team.
3. A staffing plan to include:
 - a. How and when resources/skills will be deployed;
 - b. Timeline for resources / skill sets;
 - c. Training required to develop skills and frequency of retraining;
 - d. Transition period required for succession of all positions;
 - e. A forward-looking work plan reflective of all CM services required over the next three (3) month, six (6) month, twelve (12) month, twenty-four (24) month and forty-eight (48) month periods that considers succession.
4. Any other human resource relevant information about the provision of the CM's services for the Project.

RS 3.4 - Design and Construction Document Review

The CM, as expert in matters of construction, counsels PWGSC and the Consultant Team by providing advisory and support services throughout the design and construction phases of the project.

Scope and activities

The Construction Manager must:

1. Analyze and become familiar with all the Project background documents and reports;
2. Review site conditions, with respect to technical and implementation issues affecting this project;
3. Review the program for all potential tender packages included in the project;
4. Prepare a construction schedule;
5. Develop a list of recommended construction trades and tender packages;
6. Prepare estimates for each tender package;
7. Prepare a detailed construction budget;
8. Participate in all integrated design sessions and provide advice on:
 - a. Constructability of the design and details contained in the contract documents,
 - b. Scheduling of the Work,
 - c. Costing, pricing and bid ability;
9. Assist in providing liaison and coordination with Government Authorities for various reviews and approvals;
10. Develop and maintain the Project Procedures Manual (PPM) and all documents triggered by the PPM;
11. Advise on construction related matters for the Departmental Representative, the User Department, the Consultant Team and members of the CM's Project Delivery Team;
12. Provide effective control measures and management of:
 - a. Project costs and expenditures,
 - b. Project schedule and progress,

-
- c. Scope and quality of the Work,
 - d. Change management and change order control,
 - e. Risk management and claims avoidance;
13. Mitigate potential conflict and overlap, with respect to:
 - a. The design services performed by the Consultant Team,
 - b. The work to be performed by the various Sub-Trades;
 14. Provide quality control methodologies with respect to:
 - a. Availability and cost comparisons of construction materials,
 - b. Methods of construction and constructability,
 - c. Scope and quality of construction materials and systems,
 - d. Alternative approaches to completing the Work,
 - e. Risk Management,
 - f. Life Cycle Cost analysis,
 - g. Sustainability,
 - h. Value Engineering;
 15. Develop procurement strategies and construction implementation phasing;
 16. Prepare the appropriate tender packages, award and administer contracts;
 17. Determine the potential impact to the Project of applicable labour conditions and availability of materials;
 18. Prepare a Commission Schedules for commissioning of all operating building components, systems and integrated systems at the appropriate phases of construction, so as to ensure coordinated, effective and efficient building operation (in conformance with the Commissioning Process);
 19. Obtain and administer project guarantees and manufacturer's guarantees;
 20. Provide advice on methods of construction as may be required from time to time by the Consultant Team.

The above listing of Services is neither complete nor exhaustive and the full scope of Advisory Services required shall include the entire content of the TOR, in concert with the terms and General Conditions of the Contract.

Document deliverables

1. Project Monitoring and Reporting
 - a. Provide a system for documentation and project monitoring and reporting through each stage of project delivery, for review and acceptance by the Departmental Representative.
 - b. Prepare and submit, at the start of the project, a sample of the report outline for all reports for review by the Departmental Representative. Sample report outline is contained in Part 6 of the GP&S document.
 - i. Resubmit as may be required.
 - ii. The date of issue of the CM Monthly Report shall be established.
 - iii. The structure of the CM Monthly Report shall be used for all subsequent project stages.
 - c. Prepare and submit quarterly reports to address:
 - i. Milestone reporting on Estimating and Cost Planning.
 - ii. Updated Project Procedures Manual.
 - d. Prepare and submit monthly progress reports during the Design Development and Construction Document Stages, in an outline approved by the Departmental Representative.
 - e. The purpose of the report shall be to review and monitor the progress of the Services by the CM. The report must:
 - i. Identify the progress of Advisory Support and Construction Support Services.
 - ii. Identify Progress Claims and Payments to date (including change orders) in a form that compares the original budgets for each Tender Package with the expected costs.
 - iii. Identify all instances where the schedule is not being met and identify impact on scheduled completion date.
 1. Outline remedial measures being taken or planned to be undertaken to meet the scheduled completion date.
 - iv. Identify any anticipated or potential problems to be addressed.

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- f. Prepare and submit monthly reports during construction to address status and variances with respect to schedule, budget, quality, and scope.
- i. The actual report outline shall be acceptable to the Departmental Representative, and shall provide the following:
1. An executive summary of key points.
 2. General progress of the Work and modifications to reflect changes in project parameters as may be identified throughout the project life.
 3. Construction Cost Plan Report including an overview of cost issues as outlined in this TOR.
 4. Master Schedule Update and narrative report including an overview of schedule issues as outlined in this TOR.
 - a. Monitor changes to the Master Schedule at least once a month and submit written reports to the Departmental Representative on any deviations or delays from the master schedule, and identify possible remediation measures required to maintain the Master Schedule Completion date.
 - b. Monthly reports must identify not only reasons for delay but also offer suggestions, where possible, on how to bring the project back on track.
 5. Identification of risks and proposed strategies for mitigation, including scope creep as well as quality control outlined in this TOR.
 6. Waste Management Report including an overview of Waste Management Strategies for construction.
 7. Health and Safety status Report, including narrative on the application or adjustment to the CM's Health and Safety Plans as well as any incidents and resulting actions.
 8. Commissioning Plan progress report.

RS 4 SCHEDULING SERVICES

Planning and scheduling is a continuous interactive and iterative process involving planning, action, measurement, evaluations and revision.

The Construction Manager shall employ an experienced scheduling resource fully conversant with all aspects of project planning, scheduling and construction sequencing. The scheduler will play a major role in the development and monitoring of the project schedule, providing scheduling services from commencement of the award of the Contract, through design, construction, commissioning, including the warranty period.

Prepare, monitor, update and maintain the overall schedule for the duration of the Project. Following consultation with the project team, incorporate into the schedules the sequence and timing of the required basic program decisions, including design time, documentation, bid calls, bid evaluations, subcontract awards and on-site construction activities and commissioning.

Scope and activities

The Construction Manager must also:

1. Revise, monitor and update the preliminary schedule as the project proceeds;
2. Finalize the overall Schedule for the approval of the Departmental Representative and estimate the labour requirements for the Work. Break down the schedule into individual networks and tasks for each package of Work. Indicate the sequence and timing for the construction operations and the milestone completion dates for the Work packages;
3. During the design stage of the services, identify items or processes where long lead times are required and that could jeopardize the schedule. Pre-purchase items and implement procurement methodologies to ensure timely delivery to meet the schedule and cash flow requirements. Assess the risk to the Project Schedule for late deliveries;

4. Identify and implement methodologies aimed at mitigating and minimizing the impact of construction activities on PWGSC's operations;
5. Provide advice and recommendations on:
 - a. A procurement strategy for any equipment or materials, which should be pre-ordered to meet the Master Schedule,
 - b. Means to minimize disruption to Canada Revenue Agency during construction;
6. If changes to the Schedule become necessary, indicate the impact and the reasons for such changes and submit proposed amendments to the Departmental Representative for review and acceptance.

Deliverables

1. Prepare and submit to the Departmental Representative for review and acceptance, a draft Master Schedule (within 14 calendar days of contract award) and maintain the Plan throughout the life of the Project:
 - a. Prepare the Schedule using Microsoft Project to develop detailed network diagrams, with work breakdown structures and Key milestones listings;
 - b. Develop critical paths for all major activities, indicating the dates of major milestones and timelines for each activity; also include approval, documentation, tendering and contracting, testing, commissioning, delivery, relocation and include all approved significant changes;
 - c. Identify anticipated start and completion dates for all design and construction activities, linked by interdependence on activities that must be completed prior to the start of a subsequent activity;
 - d. Prepare separate schedules for each tender package and incorporate them into the Master Schedule.
2. Ensure that the schedule has the capability of tracking changes.

Minimum requirements

1. Provide detailed project schedule (CPM logic diagram) showing activity sequencing, interdependencies and duration estimates. Include listed activities as follows:
 - a. Key Project milestones
 - i. Excavation work.
 - ii. Infrastructure work.
 - iii. Superstructure work.
 - iv. Building closed and weatherproofed.
 - v. Finishing and interior design work.
 - vi. Certificates of substantial acceptance (main building, parking).
 - vii. Certificates of acceptance (main building, parking).
 - b. Design
 - c. Shop drawings
 - d. Samples
 - e. Approvals
 - f. Procurement
 - g. Construction
 - h. Installation
 - i. Site development
 - j. Testing
 - k. Commissioning
 - l. Acceptance
 - m. Relocation
 - n. Demolition of the existing building
2. The execution schedule with critical path must cover the entire duration of the work from the date of award of the contract.
 - a. The timetable must show the activities of the critical path that remain to be carried out until the moment of issue of the unqualified type-approval certificate. The details must be indicated as the Project moves ahead.
 - b. Detail activities completely and comprehensively throughout duration of project.
3. Relate Detail Schedule activities to basic activities and milestones developed and approved in Master Plan.
4. Clearly show sequence and interdependence of construction activities and indicate:
 - a. Start and acceptance of all items of Work, their major components, and interim milestone completion dates.

- b. Activities for procurement, delivery and installation of each major piece of equipment, materials and other supplies, and for the acceptance of connected work, including:
 - i. Time for submittals, resubmittals and review;
 - ii. Time for fabrication and delivery of manufactured products for Work;
- c. Interdependence of procurement and construction activities.
5. Include sufficient detail to assure adequate planning and execution of Work.
6. Provide level of detail for project activities such that sequence and interdependency of Contract tasks are demonstrated and allow coordination and control of project activities. Show continuous flow from left to right.
7. Ensure activities with no float are calculated and clearly indicated on logical CPM construction network system as being, whenever possible, continuous series of activities throughout length of Project to form "Critical Path". Increased number of critical activities is seen as indication of increased risk.
8. Insert Change Orders in appropriate and logical location of Detail Schedule. After analysis, clearly state and report to Departmental Representative and construction professionals for review effects created by insertion of new Change Order.

SR 5 COSTING SERVICES

PWGSC manages all funding for the Project, including budgeting, expenditures and Progress Payment approvals.

The Construction Manager must provide costing and cost control services for all aspects of the Work, from commencement of contract award through to the completion of the project, including:

1. During design (design stages RS1 to RS4);
2. At development of tender documents (50%, 99%, 100%);
3. Prior to and after award of each tender package;
4. Monthly during the delivery of the Project;
5. During the warranty period;
6. When there is Project scope change affecting the construction estimates by more than 5%.

The Construction Manager must work with the Consultant and the Departmental Representative to derive the best overall solution to meet the program requirements, Estimated Construction Cost and the Schedule. The Construction Manager is to establish a cost control program and prepare a projected cash flow for the Project, based upon reconciled estimates.

Within the limits of the estimated construction cost, establish estimates for Work packages, as well as make and document assumptions for Work not yet defined. Submit to the Departmental Representative for review. Update and refine the estimates for the approval of the Departmental Representative as the development of the drawings and specifications proceeds.

The intent is to ensure that, at all times during the project, a comprehensive construction estimate is in place, which includes all aspects of the project, even those which are not fully developed and/or which have not yet been assigned to any specific Work package.

The CM's estimator is expected to review all information provided and to visit the site as required throughout the course of project to become familiar with the site conditions, site access and on-site progress.

Incorporate into cost estimating process and cost estimates a broad range of cost techniques, especially the following:

Risk analysis

All construction estimates (except the final pre-tender estimate) shall include and identify design, estimating, inflation, escalation and currency exchange allowances as are deemed necessary in light of the current information available.

Life cycle costing

In advising the Consultant of the cost information for alternative materials, methods and systems, use all available information to ensure that the project estimated construction cost (upon which design and construction decisions will be made) is respected.

Cash flow

Provide and maintain a cash flow for the Work, based upon the project schedule and the current estimate at each stage. The cash flow is to be updated at each stage of the project. At all times, provide the Departmental Representative and the Consultant with all costing estimates, information and assumptions related to the Work.

The Construction Manager must prepare cost estimates at each design stage (RS1 to RS4) and Class 'A' estimates for each Work package in advance of the tender of that package. Submit a monthly report outlining activities during the previous month, highlighting any areas of concern and new information received, along with forecast and proposed construction estimate revisions. Include, as separate cost categories, the CM's Fixed Fee, Time Based Fee and Percentage Fee. The cost estimation categories are those defined in PWGSC's National Project Management System (NPMS) and correspond to Treasury Board definitions.

A typical Master Cost Plan report from the CM will contain:

1. Elemental or another format for an Estimate Summary;
2. Estimate Back-Up Detail:
 - a. basis for escalation, inflation and contingency calculations, detailed measurement and pricing;
3. Narrative including:
 - a. Outline description of estimate basis,
 - b. A description of the information obtained and used in the estimates, including a list of significant elements,
 - c. Listing of notable exclusions,
 - d. Listing of items/issues carrying significant risk;
4. Reconciliation against last submission;
5. Any other relevant information.

Provide a sample of the report to the Departmental Representative for acceptance. Revise as required incorporating comments of the Departmental Representative.

Each monthly report shall be based on the previous report and will provide the Departmental Representative with up to date information on all aspects of the construction estimate and the Construction Manager's fees. Indicate all costs committed and expended to date. Identify for each Work package the original estimate amount, the contract amount, the breakdown and total of approved change orders, estimated amounts on contemplated change orders, the revised contract amount, the total cost anticipated and the cost to complete the project.

Inform the Departmental Representative and Consultant in writing immediately of any issue. Recommend actions to ensure the project remains within the estimated construction cost.

Provide timely identification and early warning of all changes that affect or potentially affect the construction budget, by identifying issues immediately to Departmental Representative and through the submission of Exception Report as part of the Master Cost Plan. Suggest appropriate mitigating measures including proposed alternative design solutions to bring the Project back on budget.

No acceptance or approval by the Departmental Representative, whether expressed or implied, shall be deemed to relieve the CM of its professional or technical responsibility for the CM's estimates and monthly reports. Neither does acceptance of an estimate by the Departmental Representative in any way abrogate the CM's responsibility to maintain the estimated construction cost throughout the life of the project and to undertake corrective action should the lowest acceptable bid, for any Work package, differ significantly from the approved estimate.

Scope and activities

The Construction Manager must:

1. Provide advice and recommendations on:
 - a. Costs related to construction feasibility, availability of materials and labour, time requirements for installation and construction,
 - b. Budget costs of systems, assemblies, equipment, materials and specialty labour,
 - c. Current pricing levels and trends in associated activities relating to the project,
 - d. The selection, availability and pricing of goods and services,
 - e. Insurance and bonding requirements;
2. Provide suggestions and/or alternatives for cost reductions or acceleration of the Construction Schedule if requested by the PWGSC Departmental Representative:
 - a. Evaluate costs for alternative materials, construction techniques and installation methods;
3. Revise and refine the initially approved Master Cost Plan as the project progresses, incorporate approved changes as they occur and develop cash flow reports and forecasts as required by the Departmental Representative;
4. Advise of deviations from the Master Cost Plan and obtain written authorization from the Departmental Representative. Seek and report on authorization as per the Departmental Representatives change process;
5. Monitor Project costs and expenditures against the approved Construction Cost Limit and identify variances between actual and budgeted or estimated costs:
 - a. Notify the Departmental Representative in the event that the CM considers that the Construction Cost Estimate will exceed the Construction Cost Limit,
 - b. Provide recommendations for remedial action to maintain and keep the estimates within the Construction Cost Limit;
6. Track costs so that PWGSC can manage the budget.

Deliverables

1. Prepare and submit to the Departmental Representative for review and acceptance a Master Cost Plan within 14 calendar days of award of contract and maintain the Plan throughout the life of the Project.
 - a. Include all CM projected costs, Construction Cost Estimates and Construction Cost Limits.
 - b. Develop budgets for the work of each work package.
 - i. Prepare tender package budgets as soon as major project requirements have been identified.
 - ii. Update at the milestone review stages for PWGSC acceptance.
 - c. Address all costs in Federal Fiscal Year (FY) format (April 01 to March 31 of the following year).
 - d. Report costs by allocating costs for the base building and for each of the different client departments. For distribution, refer to the GC Workplace Accommodation Standard. A distribution template will be provided by the Departmental Representative upon request.
 - e. Prepare estimated costs according to the overall summary format and itemized breakdown of the Unifomat II standard (including summary plus full back-up showing items of work, quantities, unit prices and amounts) at:
 - i. RS1 design stage: studies (Class D);
 - ii. RS2 design stage: schematic design (Class C);
 - iii. RS3 design stage: design development (Class B);
 - iv. RS4 design stage: construction documents (Class A);
 - v. The time of tendering each tender package (Class A).
 - f. Prepare estimated costs according to the overall summary format and itemized breakdown in the form of cost breakdown by trade according to the Masterformat template, (including summary plus full back-up showing items of work, quantities, unit prices and amounts) at:
 - i. The time of tendering each tender package (Class A).
2. Prepare and submit, as part of the Master Cost Plan, an Exception Report which will include sufficient description and cost detail to clearly identify:

- a. Scope Change: Identifying the nature, reason and total cost impact of all identified and potential Project scope changes affecting the estimated construction cost;
 - b. Cost overruns and under runs: Identifying the nature, reason and total cost impact of all identified and potential cost variations.
3. Options enabling a return to the estimated construction cost: Identifying the nature and potential cost effects of all identified options proposed to return the project within estimated construction cost. Update at monthly intervals as agreed with the Departmental Representative.

RS 6 RISK MANAGEMENT

The Departmental Representative prepares the Risk Management Plan for the Project. The Construction Manager must provide support to the Departmental Representative in identifying risks throughout the project life cycle, and providing input and assessment on the project risk plan. Provide the Departmental Representative with written comment on the Project risk plan at each stage of the Project.

Scope and services

The Construction Manager must:

1. Review, comment and advise the Departmental Representative on the risk management plan;
2. Advise on project risks specific to the project and recommend mitigation options to the Departmental Representative;
3. Advise on issues of risk that integrate project planning with procurement planning and construction;
4. Identify and implement methodologies aimed at mitigating and minimizing the impact of construction activities on occupants and user department operations during construction;
5. Implement a claims avoidance program;
6. Monitor risk as outlined in the risk management plan.

Deliverables

1. The Construction Manager must feed the risk section of the project into the monthly report to the Departmental Representative.
2. Advise the DR in writing of any new risk considered.

RS 7 SCOPE OF WORK CONTROL

The Construction Manager must immediately advise the Departmental Representative of any potential increase or decrease in scope **before** it affects project cost, schedule or quality.

The Construction Manager will have to develop a work breakdown structure (WBS) and represent it in the work schedule. The scope of work at the design stage must address all identified needs and all additional and work related to those needs. At the completion stage, the scope of the work must be fully covered in the work packages.

RS 8 REPORTING AND PROJECT SITE DOCUMENTS

RS 8.1 - Weekly Reporting

The Construction Manager must produce and present a weekly report at the end of each work week, in the form of a one-page dashboard, with performance indicators, milestone tracking and key current issues.

RS 8.2 - Monthly Reporting

The CM shall prepare and submit a Monthly Report for the duration of the contract. The monthly report must be structured with separate sections to reflect the services provided, and will follow the format and methodology captured in the PPM.

Within 30 calendar days of contract award, submit a sample of the CM Monthly Report structure for review by the Departmental Representative. Resubmit as required for approval and acceptance. The structure of the report must be used for all subsequent monthly reports.

The monthly report shall accompany each application for Progress Payment. The Progress Payment will not be considered for approval unless the monthly report is attached. This report will provide a system for documentation, project monitoring and reporting through each stage of project delivery, for review and acceptance by the Departmental Representative.

The Construction Management Monthly Report shall include as a minimum:

1. Scope Section – including:
 - a. Summary of project status;
 - b. Summary of CM services provided during the month;
 - c. Construction implementation plan, including updates;
 - d. Summary of project issues and highlights;
2. Cost Section;
3. Time Section. Detail for each package: calls for tenders, contract awarded, progress of work, progress of commissioning;
4. Quality Section;
5. Construction Monitoring Section;
6. Invoicing Section – including:
 - a. The billing section should be broken down by tender package and then itemized by trade;
 - b. Identify all expenditures to date (including all change orders) in a form that compares the original budgets for each trade with the expected costs, including contingencies;
7. Risk Section;
8. Health & Safety Section – including:
 - a. Updated incident report log;
9. Waste Management and Project Sustainable Measures Section, including waste reduction efforts, waste audits, disposal site and chain of custody to the end receiving destination that will reuse, recycle and/or repurpose the waste materials;
10. Status of processed and outstanding RFIs/SIs/Submittals on a monthly basis;
11. Summary of daily worker counts by trade;
12. List of Requests for Site Access;
 - a. Updated Personnel Security Request log.

RS 8.3 - Project Site Documents

The CM shall maintain at the Project Site, on a daily basis, records of all necessary contracts, samples, purchases, materials, equipment, waste management logs and records, maintenance and operating manuals and instructions, and other work-related documents, including the prevention program and revisions thereof. These site documents are to be made available to DR at all times.

RS 8.4 – Project Procedures Manual

The CM must develop a Project Procedures Manual (PPM) in consultation with the DR, within four weeks of contract award, for the execution of key Project activities. The PPM will provide a clear description of procedures, roles, responsibilities, levels of authority and the information systems for the execution of the Project, including details of the processes and sample forms.

The PPM will include the process and methods to:

1. Prepare, update, monitor, and maintain the Construction Implementation Plan;
2. Prepare, update, monitor and maintain the Master Project Construction Schedule;
3. Prepare, update, monitor and maintain the Cost Plan, Expenditures, Change Orders and Cash Flow, including changes in construction contingency;
4. Manage communications between Project Team participants based upon the documented roles, responsibilities and authority of Team members, and maintain a listing of meetings, frequency, type, etc.;
5. Manage correspondence, reports and performance records;
6. Distribute correspondence electronically by email;
7. Update the CM risk registry;
8. Implement a quality assurance program;
9. Maintain Project records;
10. Prepare, review, submit and process Shop Drawings;
11. Document the process for reviews and approvals of Tender Package Contracts and change orders;
12. Maintain an issue and decision log during the construction, recording participants, date, and place of all decisions affecting: schedule, budget, scope, or quality;
13. Identify all expenditures to date (including all change orders) in a form that compares the original budgets for each trade with the expected costs, including contingencies;
14. Provide billing section broken down by tender package and then itemized by trade;
15. Prepare, update, monitor, and maintain the Site Specific Health and Safety plan;
16. Prepare, update, monitor, and maintain the Site orientation and training plan;
17. Prepare, update, monitor, and maintain the Incident response and reporting procedures;
18. Prepare, update, monitor, and maintain the Site Security and Site Access Control processes and procedures;
19. Prepare, update, monitor, and maintain the Project Specific Sustainability and Waste Management processes and procedures, including:
 - a. The Waste Reduction Work Plan;
 - b. The Waste Audit Plan;
 - c. Monthly reports on waste reduction efforts.

[RS 8.5 – Decision Log](#)

The CM shall maintain a separate decision log indexed for preconstruction, construction and post-construction for the entire duration of the Contract, recording participants, date and place of all decisions affecting scope, schedule, cost and quality. These records are to be made available to DR at all times.

RS 9 HEALTH AND SAFETY PLANNING AND IMPLEMENTATION

Responsibilities of the construction manager

The Construction Manager must accept and assume all the tasks and obligations normally assigned to the prime contractor under the Act respecting occupational health and safety (R.S.Q., chapter S-2.1) and the Safety Code for Construction Work (S-2.1, r.4) and must ensure that all aspects of the project's construction work comply with that Act.

The Construction Manager must follow the requirements described in the National Master Specification (NMS) - Quebec Region (November 2016) attached as Annex A3.

1. Validate through weekly on-site inspections and related reports that the Work and the BCC fit-up comply with technical requirements and standards:
 - a. The National Building Code of Canada 2015 (NBCC), Part 8 Safety Measures at Construction and Demolition Sites and Provincial Regulations for Construction Projects;
 - b. The Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of hazardous materials, as well as, labelling and the provision of Material Safety Data Sheets (MSDS).

- i. Ensure that all designated hazardous materials are properly treated, handled and stored.
- ii. Ensure that workers' exposure to fumes is within acceptable health and safety limits.
- iii. Ensure that temporary ventilation or protection, as required for products utilized, is properly provided.
- iv. Ensure that construction dust is controlled at the source such that workers and occupants are not adversely impacted by dust from construction activities within the building or on the site.
- v. Ensure that shop-drawing submissions include Manufacturers Standard Data (MSD) Sheets.

2. In addition, the CM shall:

- a. Develop and implement a Health and Safety program including a Site Specific Hazard Assessment and Site Specific Safety Plan for all aspects of this Project. The Departmental Representative will review CM's Health and Safety program including the Site Specific Hazard Assessment and Site Specific Safety Plan and provide comments to CM within ten (10) days after receipt of plan. The CM shall revise the program as appropriate and resubmit to the Departmental Representative within seven (7) days after receipt of comments. The Departmental Representative's review of CM's final Health and Safety program should not be construed as approval and does not reduce the CM's overall responsibility for construction Health and Safety.
- b. Implement a Site Specific Safety Plan and Safety Program on site.
- c. Perform a Site Specific Safety Hazard Assessment related to the Project activities and update as necessary throughout the course of the project.
- d. The Site Specific Safety Plan shall be based on a preliminary and ongoing hazard assessment of the Project to be performed. Update the Site Specific Hazard Assessment and Site Specific Safety Plan for each subsequent construction sub-phase, or as Site conditions or hazards change. Inform all persons on the Site of the change in conditions or hazards. Resubmit the updated plan to the Departmental Representative immediately.
- e. Provide a traffic protection (control) plan including loading/unloading zones, road restrictions, etc.
- f. Provide hoarding plans that meet PWGSC and municipal requirements.
- g. Provide a pedestrian traffic plan including building access/egress, exterior scaffolding, etc.
- h. Develop an On-site Contingency and Emergency Response Plan that must address standard operating procedures to be implemented during emergencies.
- i. Ensure the full health and safety protection afforded under the *Canada Labour Code* Part 2 to all visitors to the site, including workers, staff, contractors and the general public. This includes PWGSC maintenance workers and contractors responsible for on-going operation and maintenance of all existing building systems.
- j. Provide appropriate safeguards to ensure safe protection and security of materials and holdings on the site.
- k. Provide full-time services of a Health and Safety Officer who will visit and document Site conditions daily throughout the implementation of the Project.
 - i. The Health and Safety Officer assigned by the successful proponent shall be one or more of the following:
 1. a Canadian Registered Safety Professional (CRSP);
 2. a Certified Health and Safety Consultant (CHSC);
 3. a Certified Risk Manager (CRM);
 4. a Construction Health and Safety Officer (CHSO);
 5. an individual who can demonstrate a combination of education and experience in the construction health and safety field for a period of no less than (5) years.
 - ii. The Health and Safety Officer assigned by the successful proponent shall have experience in performing Job Hazard Analysis (JHA), hazard identification and development of safe work/operating procedures (SWP/SOP).

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- l. Provide site specific occupational health and safety orientation sessions to all workers and visitors.
 - m. Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for work.
 - n. Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
 - o. Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.
 - p. Respond to any unforeseen or peculiar safety-related factor, hazard, or condition that becomes evident during performance of the Project, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of the Province. Advise DR verbally and in writing.
 - q. Ensure applicable documents, articles, notices and orders are posted in conspicuous location on site in accordance with provincial statutes and regulations and in consultation with Departmental Representative.
 - r. Ensure that workers' exposure to biological or chemical agents is within acceptable health and safety limits. Minimize exposure by first, engineering controls, and lastly by administrative controls and personal protective equipment.
 - s. Ensure that temporary ventilation or protection, as required, for products utilized is properly provided.
 - t. Ensure that construction dust is minimized at all times such that workers and occupants are not adversely impacted by dust from construction activities within the building or on the site.
 - u. Ensure that shop-drawing submissions include Manufacturers Standard Data (MSD) Sheets.
 - v. Provide appropriate safeguards to ensure safe protection and security of materials and holdings on the site to minimize / eliminate loss and waste.
 - w. Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by DR. Provide DR with written report of action taken to correct non-compliance of health and safety issues identified. DR may stop work if non-compliance of health and safety regulations is not corrected. Immediately escalate significant Health and Safety incidents to the Departmental Representative.
 - x. Use powder actuated devices only after receipt of written permission from DR. Blasting or other use of explosives is not permitted without prior receipt of written instruction by DR.
 - y. Maintain on Site sufficient personal protective equipment to equip a minimum of ten (10) PWGSC visitors, including hard hats and safety glasses.
 - z. Shall be responsible for site security and emergencies 24 hours a day, 7 days a week.
 - aa. Ensure that there is a competent site supervisor on site at all times when work is being performed.

The DR will review CM's Site-specific Health and Safety Plan and provide comments to the CM within ten days after receipt of plan.

The Construction Manager shall revise the plan as appropriate and resubmit plan to Departmental Representative within three days after receipt of comments from Departmental Representative. The Departmental Representative's review of Construction Manager's final Health and Safety plan should not be construed as approval and does not reduce the Construction Manager's overall responsibility for construction Health and Safety.

Health and safety deliverables

As a separate section in the CM's monthly report, submit to the DR the following documents complete with monthly updates:

1. Traffic control plan and updates as necessary;
2. Hoarding plan and updates as necessary;
3. Pedestrian traffic plan and updates as necessary;
4. Site specific Health and Safety plan and updates as necessary;

5. Copies of reports or directions issued by Federal, Provincial and Municipal health and safety inspectors;
6. Contingency and emergency response plans (24 hours/day, 7 days/week) and updates as necessary;
7. Copies of incident and accident reports; and
8. Safety Data Sheets (SDS); File Notice of Project (NoP) with Provincial authorities prior to commencement of Work. Provide a copy of the NoP to the Departmental Representative.
9. Certificate of conformity of the CNESST at the end of construction

RS 9.1 - Not applicable

RS 9.2 – Construction Traffic Management

The CM will be responsible for implementing and managing the Construction Traffic Management Plan for the project. This plan is to address the project requirements and procedures with regard to:

1. Construction materials delivery;
2. Construction waste removals;
3. Construction lift or crane locations, set-up and operations;
4. Coordination between pedestrian access to the building and in the vicinity of the building grounds with construction traffic;
5. Requirements for construction traffic control measures such as temporary barriers, temporary signage, flagmen, etc.;
6. Coordination, with traffic, with the activities of neighbouring buildings;
7. Coordination, with traffic, of existing and temporary parking.

RS 10 ONGOING PWGSC PROJECTS AND OPERATIONS

RS 10.1 - PWGSC Operations

The Construction Manager will have to collaborate with:

1. Shared Services Canada's cabling Contractor, allowing access to the site to complete their cabling installation work;
2. The furniture supplier, allowing access to the site to complete their furniture installation work;
3. The signage supplier, allowing access to the site to complete their signage installation work.

RS 11 QUALITY CONTROL

The Construction Manager is responsible for construction quality control. As part of the CM Advisory and the CM Project Procedures Manual, the development and implementation of the Quality Control Plan (QCP) and application of associated Interrelated Processes, such as Quality Planning (QP), Quality Assurance (QA) and Quality Control (QC), remain with the CM.

The Construction Manager's team must:

1. Adopt project delivery processes such as Risk Management and advising on methods to obtain best value;
2. Ensure that Health, Safety, Security and Sustainable Development requirements are adhered to.

Develop a Quality Management System to ensure that the specified quality standards for the Project are achieved.

Conduct meetings as outlined in this document at which subcontractors, the Departmental Representative, the HOC, the Consultant and the CM can jointly discuss matters related to the Project. The CM's continuous, daily adherence to quality management of the entire construction process throughout all aspects of construction is essential. The significance of this issue cannot be overstated. Actively document non-compliance, monitor and follow up on the Work of all subcontractors to ensure the construction is carried out, as designed. The Construction Manager is not to solely rely upon the Consultant to document non-compliance with the design, but rather take a leading role in managing the subcontractors and their Work, establishing a quality management database to ensure all construction issues, observations and reports are recorded and

closed out, completely and correctly, to the approval of the Departmental Representative. This database shall be approved by the Departmental Representative.

Establish, monitor, update and report on a quality management database specific to this Project. Inputs to the database will come from the Departmental Representative, the Consultant team, and the CM team's daily site observations. Output from the database will go to subcontractors, suppliers, as required, the Consultant and the DR. All quality issues are to be addressed promptly, to ensure the pace of construction is maintained without the need for rework of the Work.

The Construction Manager must provide field engineering quality control services responsible for:

1. Day-to-day execution of the Quality Plan – architectural, mechanical, electrical and structural components and systems;
2. Working with subcontractors to explain the nature of the quality control plan and their role in it and ensuring quality workmanship on site;
3. Maintaining quality records on Site including:
 - a. Inspections and tests reports,
 - b. Non-conformance reports,
 - c. Corrective actions reports and sign offs,
 - d. Facilitating quality inspections by the Departmental Representative and Consultant;
4. Reporting to the CM's project manager on the quality process for the project.

Scope and services

1. The CM shall apply quality assurance reviews during the design and construction phases, including participation in reviews of the systems, components, construction tools and techniques of the proposed design.
2. The CM shall be responsible for ensuring that the CM's subcontractors adhere to:
 - a. Industry standard practices following the requirements of the Construction Documents;
 - b. Professional conduct in all phases of the project, employing best practices for budget, schedule, quality, and scope management.
3. The CM shall participate in Integrated Design Process (IDP) Workshops.
 - a. The Consultant Team shall facilitate IDP Workshops through the design stage. The CM's Construction Project Manager shall attend IDP workshops for the purpose of providing advice to the Consultant Team on Constructability of various options that the Consultant Team is considering including:
 - i. Selection of materials, building systems and equipment;
 - ii. Constructability;
 - iii. Coordination between all design disciplines.
4. Review construction drawings and specifications for each tender package at various stages acceptable to the Departmental Representative:
 - a. At the Design Development Stage;
 - b. At 50% and 99% stages of construction documentation associated with each Tender Package:
 - i. Some tender packages may require fewer reviews, due to the nature of the work involved;
 - c. Once Divisions 00 and 01 of each Tender Package are prepared.
5. Track quality management actions and results and compile a monthly report.

Deliverables

1. Submit to the Departmental Representative within fourteen (14) working days of contract award a Quality Control Plan (QCP) including, but not limited to:
 - a. Identification and definition of key activities and deliverables;
 - b. Description of internal controls;

- c. Quality Control methodologies and procedures to be utilized to deliver a quality project that meets the established Standards;
 - d. Deliverable verification plan.
 2. Update the Quarterly Quality Control Plan (QCP) and submit a QCP report:
 - a. Including QM planned/actual actions and results.
 3. Perform QA reviews.
 4. Submit a written summary of the design and construction document reviews to the Departmental Representative.

RS 12 COMMISSIONING

The Construction Manager, in consultation with the PWGSC Commissioning Manager, shall:

Retain an experienced third-party independent Commissioning Agent with a minimum of ten (10) years of experience. The CM's Commissioning Agent will be directing a commissioning process, or program of activities, for all of the Work that is reasonable and practical. This Commissioning Agent shall document and witness all test results. The CM is to report on the activities of the Commissioning Agent to the DR. The actual cost of commissioning agent and trade commissioning is part of the fixed fee. The agent can neither be the project manager nor the project superintendent.

The PWGSC DR, the CM and the CM's Commissioning Agent, the subcontractors, the Consultants, and the PWGSC Commissioning Manager will form the commissioning team. The Commissioning Team must work together in a collaborative and open manner to successfully complete the commissioning process. The CM and the CM's Commissioning Agent shall take on a key and leading role in driving the Commissioning process to successful completion according to standard CSA.Z320.11 and its variants presented in the Commissioning Standard document in Annex A4.

The following is a summary table of roles and responsibilities for commissioning.

E : Execute
 A : Assist/Participate
 C : Check

Lead	Departmental Representative	Design Quality Review Team	Commissioning coordinator - Quality assurance	Design Professionals	Commissioning Manager	Commissioning Officer	Construction Manager's Team	Property Manager
Organization	PSPC	PSPC - AES	PSPC - TMS	Consultant	Independent Consultant	Construction Manager	Subcontractors and Suppliers	Operation - BGIS
Update of:								
Design Quality Review Team	E		C					
Commissioning Coordinator - Quality Assurance	E							
General Work Progress:								
Action		E						
Design:								
Commissioning Meetings	A		A	A	E	A	A	
Commissioning Risks	E		A					
Specifications - Commissioning Section			C	A	E			
Commissioning Planning								
Commissioning Organization			C		E	A	A	
Commissioning Plan			C		E	A		
Commissioning Schedule			C		C	E		
Commissioning:								
Commissioning Activities	A		A		C	A	E	A
Performance and Operation			A	C	C	E		
Testing			A	C	A	A	E	
Test Reports			C	C	C	E	A	
TAB Operations			C	C	A	A	E	
Building Management:								
Building Management Manual			C	C	C	A	E	
Training:								
Training Plan	A		C		E		A	
Training			A		C	A	E	A
Documentation:								
Commissioning Documentation			C	C	A	A	E	
PI and PV Forms/Records			C		C	E	A	
Operations:								
Acceptance								E
Operation and Maintenance								E

RS 12.1 - Commissioning Plan

The commissioning work is an integral part of all phases of the project. Commissioning and performance verification are a key element of the Project Quality Management Plan and shall be conducted at all stages of the Project. Therefore, it is important to develop and update a Commissioning Plan throughout the Project. The plan must include input and direction from the Consultants. Administer and manage the implementation of the commissioning plan. Commission each phase of the Work and the overall Work and make every effort to reduce the Project Schedule and Estimated Construction Cost.

The CM and the CM's Commissioning Agent are responsible for:

1. Ensuring that all required commissioning activities are identified in the project schedule and in construction documents.
2. Reviewing the preliminary commissioning plan made project-specific by the Commissioning Manager during the design and development of the construction documents. The Construction Manager must use the project-specific plan prepared by the Commissioning Manager as a reference during the work.
3. Ensuring that information on labelling protocols, maintenance data requirements and protocols are relayed to the subcontractors and related information sessions with PWGSC are scheduled as required.
4. Confirming that subcontractors' Work is sufficiently complete to warrant inspection and testing by the Consultants and for scheduling of the required inspections and tests.
5. Developing and implementing a Site quality assurance program: to minimize delays as a result of poor workmanship or subcontractor error; to reduce deficiencies and call-backs during warranty periods; and to reduce long-term risk to PWGSC arising from poor workmanship.
6. Administering and managing independent quality control testing as may be required by PWGSC, the Consultant or the Contractor to confirm the adequacy of a subcontractor's Work or commissioning reports.
7. Ensuring that all test results, documents, and manuals are provided by subcontractors, monitoring the Consultant review process, and reporting to PWGSC on the progress of the commissioning effort.
8. Directing subcontractors to complete, repair, adjust or rebuild portions of the Work that do not meet the verification standards including monitoring deficiencies and ensuring that they are corrected.
9. Ensuring that seasonal commissioning activities are detailed within the project schedule and are completed on time with the proper documentation and/or follow-up action.
10. Monitoring and inspecting with the Consultant the Work during its warranty period and during seasonal commissioning activities to ensure defects are corrected. The frequency of monitoring and inspection is expected to occur twice during the warranty period at three and eleven months.
11. Ensuring that testing and commissioning of equipment is witnessed and inspected by the Design Consultant and the required authority.
12. Coordinating the federal, provincial and municipal inspections required for occupancy.
13. Undertaking all actions required to close out subcontracts, including final warranty reviews and contract close-outs.
14. Coordinating the training of PWGSC operational staff and the equipment handovers.
15. Monitoring and reporting to PWGSC on the progress of the commissioning process against the plan.
16. Witnessing all testing including testing of all components, systems and integrated systems. This includes, but is not limited to, a complete verification of the controls sequence of all systems in a dynamic operating state.
17. Completing and signing off on all verification reports and compiling into a comprehensive Commissioning Manual as the Project progresses, including Commissioning Manual updates to include seasonal commissioning activities.
18. Providing Schedules related to all commissioning activities as well as reporting and monitoring. Provide an updated commissioning Schedule at all commissioning meetings. Identify any variances and issues to be addressed at those commissioning meetings.
19. Assisting in the labelling protocols by gathering all forms dealing with product information from various subcontractors and reviewing and verifying that the information is correct. The physical labelling requirements are the responsibility of the subcontractors.

20. Confirming that the subcontractors' Work is sufficiently complete prior to start-up so that inspections are carried out. Ensuring deficiencies identified by the Consultants are corrected by the subcontractors.
21. Gathering all the start-up reports, reviewing format and content against manufacturer's instructions prior to start-up, and ensuring that they reflect the procedures listed in the manufacturer's instructions.
22. Managing the process of developing the testing and performance verification. The Commissioning Agent will prepare verification forms and make them project specific. All forms will be submitted to the Consultant and Commissioning Manager for review and comment. Update the forms as required. During testing, the Commissioning Agent will record all results and report any variances to the Commissioning Manager and Design Consultant.

RS 12.2 – Enhanced Commissioning

The CM and the CM's Commissioning Agent must:

1. Cooperate with the Commissioning Manager and obtain the EA 2 Enhanced Commissioning credit.
2. In addition to basic commissioning, apply the Enhanced Commissioning credit requirements of the LEED V4 Canada Rating System.
3. Ensure that enhanced commissioning requirements are incorporated into the commissioning plan, including:
 - a. Review of contract documents by the independent commissioning manager;
 - b. Review of the Departmental Representative's requirements with regard to the functionality, energy performance, water consumption, maintenance, durability, cost, and impact on quality of the indoor environment of the systems and assemblies chosen;
 - c. Integrate the indoor air quality plan (investigation, monitoring and correction).

The documents to be produced to obtain the enhanced commissioning credit under LEED certification will be provided by the project commissioning manager.

RS 13 TENDERING THE WORK

Background

The CM shall develop a procurement strategy and process plan that is transparent and enhances access, competition and fairness for awarding all Tender Packages approved by the DR. PWGSC may audit the process at any time at the sole discretion of the DR.

For construction work that is tendered by the CM, it is important that these selection processes for subcontractors are fair, open and transparent and that all qualified subcontractors have the opportunity to be considered for the construction work. PWGSC believes that competitive bidding and open tendering processes will yield the best value at lowest cost for subcontracted work.

Scope

In subcontracting for the construction, the CM must:

1. In consultation with the Design Consultant, prepare tender and contract documents that clearly set out the full requirements for material and services (i.e. 100 % tender ready documents). Exceptions may be considered on a case-by-case basis to meet schedule requirements subject to PWGSC DR approval.
 - a. Using standard construction industry documents, such as CCDC 11 - 1996 (R2006) Contractor's Qualification Statement, ensure that subcontractors in trades that are essential to the successful delivery of the Work, are pre-qualified prior to being invited to submit tenders. Basis for prequalification is to be determined with the input of the Design Consultants and to be submitted to DR prior to solicitation of tenders. CM is to consider prequalifying all key subcontractors at the beginning of the project to expedite tendering of work.
 - b. Submit an Expenditure Authorization (EA) recommendation to DR for approval prior to contract award.
2. Enter into contracts with qualified subcontractors who submit the lowest-priced compliant tenders. Note where appropriate that time and materials contracts are acceptable, subject to DR approval. Entry into subcontracts on a

time and material basis is dependent on following the process outlined in this section and where an upset limit has been established. Upset limits do not preclude proper reporting procedures required by the DR. A site-based inventory control system must be set up and managed by the CM to ensure time and material usage does not exceed upset limits. The CM is to notify the DR when and if the time and material usage reaches 80% of the upset limit. In the event that an upset limit needs to be increased, the CM shall seek appropriate approval from the DR prior to exceeding the upset limit.

3. Include in any contract entered into with any subcontractor such provisions of the Contract as they apply to a subcontractor's responsibilities, except bonding. The departmental representative may require a bond for one or more subcontracted firms, and PWGSC will incur the costs.
4. Manage subcontractors and ensure they provide the required services in a manner consistent with the terms and conditions of this Contract and achieve timely delivery of quality services at the lowest cost.
5. Establish quality and performance requirements and monitor subcontractor performance, including quality of deliverables, adherence to schedules and costs.
6. Provide for dispute resolution, initiation of subcontract amendments and payments.
7. Obtain open, fair and competitive bids for the subcontracts required for each portion of the Work in accordance with the following requirements:
 - a. Subcontracts estimated at less than \$25,000 including Harmonized Sales Tax, may be single-sourced to qualified suppliers only upon the written approval of the Departmental Representative.
 - b. For subcontracts estimated at less than \$100,000, including Harmonized Sales Tax, and upon the written approval of the Departmental Representative, the Construction Manager may invite on a rotating basis a minimum of 3 qualified suppliers from the CM's prequalified lists to submit bids. It is recommended that the Construction Manager will notify in writing subcontractors who are unsuccessful.
 - c. For subcontracts estimated at less than \$100,000, including all applicable taxes, the CM, upon the written agreement of the Departmental Representative, may set aside the requirement to solicit a minimum of three (3) bids if it has demonstrated to the satisfaction of the Departmental Representative, that less than three (3) firms are capable of performing the Work.
 - d. For subcontracts estimated at \$100,000 or more, including harmonized sales tax, advertise publicly on MERX or SEAO, in accordance with the following open bidding procedures:
 - i. The public advertisement shall include, at a minimum, a description of the nature of the Work to be performed, information regarding any technical requirements, financial guarantees or other documentation to be provided with the bid, the completion date for the Work, the address of the bid closing location and the final date and time for receiving bids, the identification of a contact point for obtaining bid documents and from which further information may be obtained, the date, time and place of the public opening of the bids.
 - ii. The period (in calendar days) for the receipt of bids will vary depending on the estimated value of the sub-contracts (including HST) based on the table below. Shorter tender periods could be considered on a case-by-case basis subject to written approval from the PWGSC department representative.

From \$ 100,000 to \$ 1,000,000	15 days
From \$ 1,000,001 to \$ 2,000,000	15 days
Between \$ 2,000,001 and \$ 8,000,000	21 days
More than \$ 8,000,000	28 days

- iii. Tender documentation shall include all of the public advertisement information, as well as identification of the bid validity period, the criteria for awarding the contract including any factors other than price to be considered in the evaluation of bids, the type of procurement (i.e. 1 or 2 stage process), the terms of payment and any other terms or conditions.
- iv. During the solicitation the CM shall reply promptly to any request for bid documents or any reasonable request for relevant information made by a supplier participating in the tender. Information provided in response to questions during the tender period shall be provided to all bidders.

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- e. Tenders issued by the Construction Manager must be:
- i. published in each of the two official languages for contracts of \$100K and over (taxes included); and
 - ii. made available in the other language upon request from invited suppliers for contracts under \$100K (taxes included),
- f. The receipt and opening of bids and the awarding of contracts shall be consistent with the following:
- i. Bids shall be opened in Quebec City in the presence of at least two representatives of the CM, as well as a representative of Canada, all of whom will act as witnesses to the opening by verifying and signing the Record of Bids received.
 - ii. Contracts shall be awarded in accordance with the requirements specified in the notices and bid documentation, and must be submitted by a supplier that complies with the terms and conditions of the bid documents.
- g. The CM shall, upon request, promptly inform in writing suppliers participating in the bid decisions on contract awards. The Construction Manager must:
- i. Seek pre-approval from the DR for any deviation from the competitive subcontracting process and make the documentation available to PWGSC.
- h. Demonstrate to the DR that it has a competitive subcontracting process and a prequalification process, reflecting best industry practices.
- i. The CM shall submit a Class A pre-tender estimate for each tender package at least one day prior to bid close. Any major variances from the previous CM estimates should be itemized and explained.
- j. The CM shall analyze the bids received and recommend awards to the DR through a trade contract award recommendation. The format of the trade contract award recommendation is the responsibility of the Construction Manager. However, at a minimum; the recommendation must include copies of the following documents:
- i. Prequalification Phase (if applicable) – copies of prequalification documents such as CCDC 11 - 1996 (R2006) Contractor's Qualification Statement or equivalent, the list of contractors submitting applications for prequalification and the results of the evaluation of prequalification submissions;
 - ii. Tender Phase: copies of all bids received, verification (e.g. a time stamp) that bids were received on time prior to the time scheduled for bid closing, a copy of the Record of the bid opening, properly witnessed, a copy of the notice on MERX or SEAO, or invitation to tender if the Work is valued at under \$100,000, a copy of all solicitation documents, a summary of all tenders received with bid amount breakdowns and totals, verification that bid security (if applicable) was provided with the bid, information on any tender qualifications or disqualifications; and identification of the supplier recommended for contract award.
- k. When the Departmental Representative approves the procurement process and the trade contract award recommendation by the CM, the Construction Manager shall prepare the subcontracts for execution. No award of subcontracts to a subcontractor can proceed without an approved trade contract award recommendation. It is recommended that the Construction Manager will notify in writing subcontractors who are unsuccessful.
- l. Canada reserves the right to require the CM to enter into subcontracts for the supply of services or materials with subcontractors that have been prequalified by Canada for any component of the Work. Any such subcontract shall form part of the Cost of the Work.

RS 13.1 - Negotiation

Analyze and reconcile any differences between pretender estimates and the submitted bids. Advise the Departmental Representative of lowest compliant bidder and bidder's tender price.

Ensure the Estimated Construction Cost is not exceeded at the Completion of the Project. In order to maintain the Estimated Construction Cost, if required, negotiate with lowest compliant bidder prior to awarding the Contract. Prior to negotiation, provide cost and scope deduction recommendations to the Consultant and the DR to assist them in making the decisions to accept the reductions. Negotiation is to be based on the agreed scope reductions.

RS 14 CONSTRUCTION MONITORING

Monitor the progress of the Work of the subcontractors on site, coordinate the Work with trades and suppliers, the Departmental Representative and the Consultant, and direct the Work to completion.

1. Maintain competent personnel on site as follows:
 - a. One (1) full-time superintendent, one (1) full-time safety officer, one (1) field engineer (as required), and one (1) commissioning agent on site during implementation of the Work to monitor and provide general direction to all those associated with the Work.
2. Identify unacceptable Work early to avoid delays that might arise as a result of required corrections of deficient Work. Ensure that comprehensive quality management processes are followed daily. Ensure that adequate back-up personnel are available.
3. Establish on-site organization and lines of authority in order to carry out the overall plans of the CM and the Departmental Representative.
4. Schedule and conduct progress meetings at which subcontractors, Departmental Representative, Consultant and CM can discuss jointly such matters as procedures, progress, problems, risks, costs and scheduling.
5. Provide daily monitoring of the Schedule as the Work proceeds.
6. Complete the Work according to the accepted construction documents, project schedules and project estimated construction cost.
7. As part of a comprehensive quality management process, provide daily inspection of all aspects of the Work, documenting matters for action or follow-up by subcontractors, or referral to the Consultant. Ensure the Work is constructed as specified. Include photographs to document issues and associated corrections.
8. Review the adequacy of the subcontractor's personnel and equipment and availability of material and supplies to meet the Schedule. Implement remedial action when requirements of a subcontract or the project schedule are not being met.
9. Prepare and maintain a decision log recording all decisions affecting schedule, construction estimates, scope or quality, including dates, place and participants. These records are to be made available to the Departmental Representative at all times.
10. Monitor and document all health and safety matters daily.

RS 15 CHANGES (NOTICES AND ORDERS)

When a change to a subcontract is identified on site, the Consultant will prepare and issue a contemplated change notice (CCN). The Consultant will review the cost estimate provided by the CM and provide recommendations to the Departmental Representative with respect to the fairness and reasonableness of the quotation. The Departmental Representative will be responsible for authorizing the change based on the indicative cost estimate and request that the CM obtain firm pricing on it.

1. The CM shall prepare and submit an indicative cost estimate breakdown for each contemplated change to the Departmental Representative and the Consultant for review and approval before proceeding with the change. The breakdown shall itemize all labour, material, plant and equipment costs estimated by the CM.
2. It is the responsibility of the CM to ensure that all prices included in the CM's breakdown, including the costs and mark-ups of subcontractors, are fair and reasonable.

3. Labour rates, for all trades, shall be paid in accordance with trade union agreements and with the approval of the Departmental Representative.
4. The costs of all material, plant and equipment must be based on the actual amount paid to suppliers by the CM or subcontractors and said costs are to include all applicable discounts.
5. The CM's percentage fee of the project estimated construction cost will include for all services and Work associated with changes and shall not be subject to any mark-ups or additional fees.
6. Upon acceptance of the quotation, the CM shall prepare a notice of change and sent it to the subcontractor and provide a copy to the Consultant and the Departmental Representative.
7. A detailed log of the cost of forecasted final subcontract amounts, change notices and change orders is to be maintained by the CM for all subcontracts, at all times throughout the project.

RS 16 CONSTRUCTION GENERAL INSTRUCTIONS

RS 16.1 - Minimum Standards

The CM shall comply with the latest addition of all statutes, codes, regulations and by-laws applicable to the design and, where necessary, shall review the design with public authorities having jurisdiction in order that the consents, approvals, licenses and permits required for the project may be applied for and obtained. Unless otherwise advised, federal codes and standards will govern.

The CM shall identify all jurisdictions appropriate to the project.

RS 16.2 - Shop Drawings

The review of shop drawings by the DR is for the sole purpose of ascertaining conformance with the general concept. This review does not mean that the Departmental Representative approves the detailed design inherent in the shop drawings; this responsibility must be assumed by the contractor or subcontractor submitting the shop drawings. Such review shall not relieve the Contractor nor the subcontractor of responsibility for errors or omissions in the shop drawings or of their responsibility for meeting requirements of the Contract Documents.

The Construction Manager must stamp the following on the shop drawings: "Checked and Certified Correct for Construction"; and the Consultant must stamp "reviewed" before they are returned to the subcontractor.

The Construction Manager must:

1. Provide and maintain a Shop Drawing Log to identify all required shop drawings and submittals, monitor and record the progress of shop drawing review, and record parties designated for action and follow up. A copy of the updated Shop Drawing Log is to be included in the CM's monthly report.
2. Prioritize the preparation and submission of shop drawings to ensure critical path of schedule is maintained.
3. Submit for the DR's review, electronic copies of each shop drawing.
4. Review, discuss, record problems and identify agreed remedial action.
5. Monitor and record the progress of shop drawing review. Record parties designated for action and follow up.
6. On completion of the project, forward reviewed/as-commissioned shop drawings to the Departmental Representative as part of the As-Built documents identified in Section RS 16.23 Operations and Maintenance Manuals.
7. Verify that shop drawings include the project number and are recorded in sequence.
8. Do not commence manufacture or order materials before shop drawings are reviewed.
9. Maintain a hardcopy of all review shop drawings at the construction site. Reviewed shop drawings are to be made available on site to the DR and Consultants at all times during construction.

RS 16.3 – Not applicable

RS 16.4 – Not applicable

RS 16.5 – Not applicable

RS 16.6 - Fees, Permits and Certificates

Pay all fees and levies and obtain all permits as required by authorities having jurisdiction. Provide authorities with plans, applications and information as required to obtain permits and acceptance certificates. Provide inspection and completion certificates as evidence that the work conforms to the requirements of authority having jurisdiction. Only the actual cost of fees or levies will be reimbursed in accordance with the Price Proposal. All works related to obtaining permit or certificates are to be included in the Price Proposal Form.

RS 16.7 - Fire Safety Requirements

Comply with the National Building Code of Canada (NBC, most current) for fire safety in construction and the National Fire Code of Canada (NFC, most current) for fire prevention, firefighting and life safety in building in use.

Welding and cutting: Before cutting and welding operations commence, issue hot work permits then continuously monitor all welding, soldering, grinding and/or cutting work. Store flammable liquids in approved CSA containers. No open flame shall be used unless permitted and authorized by the Construction Manager.

At least 48 hours prior to commencing cutting, welding or soldering procedure, advise the Departmental Representative:

1. Notice of intent, indicating devices affected, time and duration of isolation or bypass;
2. Completed welding permit as defined in NFC;
3. Return welding permit to Site Superintendent immediately upon completion of procedures for which permit was issued.

A fire watcher as described in National Fire Code (NFC) must be assigned when welding or cutting operations are carried out in areas where combustible materials within 10m may be ignited by conduction or radiation.

Where work requires interruption of fire alarms or fire suppression, extinguishing or protection systems:

1. Provide watchman service as described in NFC; In general, watchman service is defined as an individual conversant with Fire Emergency Procedures, performing fire picket duty within an unprotected and unoccupied (no workers) area once per hour;
2. Retain services of manufacturer for fire protection systems on daily basis or as approved by NFC, to isolate and protect all devices relating to:
 - a. Modification of fire alarms, fire suppression, extinguishing or protection systems;
 - b. Cutting, welding, soldering or other construction activities, which might activate fire protection systems.

Immediately upon completion of work, restore fire protection systems to normal operation and verify that all devices are fully operational. Inform fire alarm system monitoring agency and local Fire Department immediately prior to isolation and immediately upon restoration of normal operation.

RS 16.8 - Field Quality Control

This is supplemental to Section RS 11 Quality Control and outlines additional QC/QA services to be provided during the Construction Phase.

The Construction Manager must:

1. Be responsible for ensuring that the CM's subcontractors:
 - a. Comply with best industry practices and standards following the requirements of the Construction Documents;
 - b. Professional conduct in all phases of the project, employing best practices for budget, schedule, quality, and scope management;

-
- c. Respecting the building's high heritage value and protecting all heritage zones and character-defining elements during all construction phases.
 2. Arrange for testing services as required, which may include concrete testing, mortar testing, compaction testing, etc.
 3. Carry out work using qualified licensed workers or apprentices in accordance with Provincial Act respecting labour vocational training and qualification.
 4. Permit employees registered in Provincial apprenticeship programs to perform specific tasks only if under direct supervision of qualified licensed workers.
 5. Determine permitted activities and tasks only if under direct supervision of qualified licensed workers.
 6. Develop a Quality Incident Protocol for incidents arising from any inspection that indicates a project deficiency.
 7. The Construction Manager shall provide a resource responsible for Quality Management who is responsible for:
 - a. Day-to-day execution of the Quality Plan – as it pertains to all building systems and site work procedures.
 - b. Working with subcontractors to explain the nature of the Quality Plan and their role in it and ensuring quality workmanship on Site and off Site where applicable such as at recycling facilities, chain of custody of waste, etc.
 - c. Reporting to the DR in regards to the quality processes for the Project.
 - d. Maintaining quality records on Site including:
 - i. Inspections and tests reports;
 - ii. Non-conformance reports;
 - iii. Corrective actions reports and sign offs;
 - iv. Facilitating quality inspections by the DR, and the Design Consultants.

RS 16.9 - Hazardous Materials

The CM shall comply with the requirements of the Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of hazardous materials, and regarding labelling and the provision of Material Safety Data Sheets (MSDS) acceptable to the DFPSC.

For work in occupied buildings, give the Departmental Representative ten working days' notice prior to work involving designated substances according to the CNESST, hazardous substances, and before painting or caulking, installing carpet or using adhesives.

RS 16.10 - Temporary Utilities

Provide temporary heating and ventilation as required to facilitate progress of work. Arrange for connection with appropriate utility company for water supply and temporary power and lighting. Provide temporary telephone, fax and data for own use. Pay costs for installation, maintenance and removal.

Give the Departmental Representative one (1) week notice related to each necessary interruption of any mechanical or electrical service throughout the course of the work. Keep duration of these interruptions to a minimum. Carry out all interruptions after normal working hours of the occupants, preferably on weekends.

RS 16.11 – Not applicable

RS 16.12 - Protection

Protect trees, shrubs, lawns or others in work areas. Protect finished work against damage until take-over. Protect adjacent work against the spread of dust and dirt beyond the work areas. Protect operatives and other users of site from all hazards. Protect mobilization area so run-off into existing storm water systems is contained.

Provide dust tight screens or partitions to localize dust-generating activities, and for protection of workers, finished areas of work and public. Maintain and relocate protection until such work is complete.

RS 16.13 - Use of Site and Facilities

Execute Work with least possible interference or disturbance to the normal use of premises. Make arrangements with Departmental Representative to facilitate the work requested. The CM shall install proper site separation and identification.

Where elevators exist, the CM may use these at Departmental Representative's discretion. Protect from damage, safety hazards and overloading of existing equipment.

Provide sanitary facilities as required by Provincial regulation for the expected workforce.

Smoking is not permitted on the site. Obey smoking restrictions on building property.

Maintain an office at the site until project completion. Provide and setup site offices for CM's dedicated site staff, meeting area and lunchroom. Office areas are to be secure, clean and quiet (by construction site standards). Each office shall be maintained in clean condition during the progress of the Work and adequately lighted, heated, ventilated and air-conditioned space for meetings, filing and plan tables for Contract Documents.

RS 16.14 - Site Storage

Provide all required storage space, which shall be equipped and maintained by the CM. Do not unreasonably encumber site with material or equipment. Move stored products or equipment which interferes with the operations of users. Obtain and pay for use of additional storage or work areas needed for operations.

RS 16.15 - Not applicable

RS 16.16 - Not applicable

RS 16.17 - Not applicable

RS 16.18 - Signs

Provide signs related to traffic control, information, instruction, use of equipment, public safety devices, to the Departmental Representative's approval. No advertising will be permitted on this project.

RS 16.19 - Access and Egress

Design, construct and maintain temporary access to and egress from work areas, including stairs, runways, ramps or ladders and scaffolding, independent of finished surfaces and in accordance with relevant municipal, provincial and other regulations.

RS 16.20 - Scaffolds and Work Platforms

Design, install, and inspect scaffolds and work platforms required for work in accordance with relevant municipal, provincial and other regulations. Provide design drawings, signed and sealed by an Engineer who is a member of the Ordre des ingénieurs du Québec. Additions and modifications to scaffolding must be approved by a qualified Professional Engineer in writing.

RS 16.21 - Public Way Protection

Design, erect and maintain hoarding and covered pedestrian walkways to support all loads including wind loads and provide protection, complete with signs and electrical lighting as required by authority having jurisdiction.

Provide one (1) lockable truck entrance gate and one (1) pedestrian door as directed and conforming to applicable traffic

restrictions. Equip gates with locks and keys.

RS 16.22 - Waste Management

Comply with federal and provincial laws and regulations regarding the waste management program for construction and demolition projects.

The Construction Manager must:

1. Review the draft waste reduction plan from the Environmental Consultant and submit to the Departmental Representative and Environmental Consultant a final waste reduction work plan for the project.
2. Ensure that the plan is in compliance with PWGSC guidelines and meets the requirements of local authorities having jurisdiction.
3. Clearly outline the strategy and methodology for optimizing solid waste diversion from landfill and disposal of toxic or hazardous materials in the most appropriate manner.
4. Include all related schedules outlining expected inventory targets and results required when waste audits are conducted.
5. Include non-hazardous solid waste reduction program for eliminating waste through reduction, reuse and recycling, including:
 - a. Requirements for sorting construction waste on site by types;
 - b. A description of the most practical manner for recycling each individual material.
6. Develop specific procedures for conducting waste management audits on site, including audit objectives, frequency and format.
7. Prepare written monthly reports containing records of waste disposal efforts, including:
 - a. A review of the implementation strategy;
 - b. A review of subcontractors' disposal practices for paints, solvents and pressure treated wood scraps and other similar products or materials.
8. Perform a waste management audit indicating the degree to which recycling objectives are being achieved and recommendations for improvements if objectives are not being met.

RS 16.23 - Operations and Maintenance Manuals

Two (2) weeks prior to any scheduled training, submit to Departmental Representative four (4) hard copies and two (2) electronic copies of approved Operations Data and Maintenance Manual compiled as follows:

1. Bind data in vinyl hard cover 3 "D" ring type loose leaf binders for 212 x 275 mm size paper. Binders must not exceed 75 mm thick or be more than 2/3 full.
2. Enclose title sheet labelled "Operation Data and Maintenance Manual", project name, date and list of contents. Project name must appear on binder face and spine.
3. Organize contents into applicable sections of work to parallel specification break-down.
4. Mark each section by labelled tabs protected with celluloid covers fastened to hard paper dividing sheets.

Include following information plus data specified:

1. Maintenance instruction for finished surface and materials.
2. Copies of hardware and paint schedules.
3. Description: Operation of the equipment and systems defining start-up, shut-down and emergency procedures, and any fixed or adjustable set points that affect the efficiency of the operation. Include nameplate information such as make, size, capacity and serial number.
4. Maintenance: Use clear drawings, diagrams or manufacturers' literature which specifically apply and detail the following:
 - a. Lubrication products and schedules;

- b. Trouble shooting procedures;
 - c. Adjustment techniques;
 - d. Operational checks;
 - e. Suppliers names, addresses and telephone numbers and components supplied by them must be included in this section. Components must be identified by a description and manufacturers part number.
5. Guarantees showing:
- a. Name and address of projects;
 - b. Guarantee commencement date (date of Interim Certificate of Completion);
 - c. Duration of guarantee;
 - d. Clear indication of what is being guaranteed and what remedial action will be taken under guarantee;
 - e. Signature and seal of Guarantor;
 - f. Additional material used in project listed under various Sections showing name of manufacturer and source of supply.
6. Spare parts: List all recommended spares to be maintained on site to ensure optimum efficiency. List all special tools appropriate to unique application. All parts/tools detailed Instructions Manual must be identified as to manufacturer, manufacturer part number and supplier (including address).

Include one complete set of final shop drawings (bound separately) indicating corrections and changes made during fabrication and installation.

As-Built drawings and O&M manual shall be converted, where necessary, into Portable Document File (PDF) format for viewing using Acrobat Reader.

[RS 16.24 - Files](#)

As work progresses, maintain accurate records to show deviations from contract drawings. Just prior to Departmental Representative's inspection for issuance of the Certificate of Completion, supply to the Departmental Representative one (1) electronic copy and two (2) sets of hard copies of the prints with all deviations neatly inked in.

[RS 16.25 - Guarantees](#)

Before completion of Work, the CM shall collect all manufacturers' guarantees and warranties and deposit with the DR. The CMA shall also provide copies of all manufacturers' guarantees and warranties in the O&M Manuals.

[RS 16.26 - Cleaning](#)

The CM will be responsible for construction cleaning throughout the life of the project, as Work progresses. At the end of each work period, and more often if requested by the Departmental Representative, remove debris from site, neatly stack material for use, and clean up to ensure a safe work environment.

Upon completion remove scaffolding, temporary protection and surplus materials. Make good defects noted at this stage.

Clean areas under contract to a condition at least equal to that previously existing, including building exterior and surrounding site, to approval of Departmental Representative.

As work packages are completed and/or construction areas are completed, perform a final construction cleaning of the entire area, including all interior surfaces, fixtures and equipment to eliminate all construction dust and debris. Advise the DR in writing before final cleaning is to proceed. Obtain acceptance of cleaning in writing from DR when completed. Cleaning shall be completed prior to application for Certificate of Substantial Performance.

RS 16.27 - Security Clearances

Personnel employed on this project may be subject to security check. Obtain requisite clearance, as instructed, for each individual requiring access to the premises.

RS 16.28 - Site Security

CM shall be responsible for security of the entire site until the facility is ready for intended use. Develop a security plan in consultation with the DR. Revise plan as required to approval of DR. Update plan to meet requirements of DR as Project progresses. Be responsible for:

1. Coordination of construction activities and Clients and PWGSC operations;
2. Coordination of Shared Services Canada's cabling Contractor, allowing access to the site to complete their cabling installation work;
3. Collaboration with furniture supplier, allowing access to the site to complete furniture installation work;
4. Collaboration with signage supplier, allowing access to the site to complete signage installation work;
5. Access to the site including sign-in procedures and security clearances;
6. Off-hours security including procedures to escort, to lockup, evening and weekend surveillance, fire watches, emergency procedures and responses;
7. All safety issues related to the Work or its site to be performed as required by federal, provincial or municipal regulations;
8. Safeguarding of components to be reused or recycled;
9. Protection of materials, equipment, workmanship and, throughout the implementation of the project, any items installed prior to the building being ready for use;
10. A site protocol to be developed and enforced, including:
 - a. No CDs, radios or tape machines,
 - b. Noise control,
 - c. No parking on Site,
 - d. Due regard for the general public's expectations with respect to behaviour, language and dress in public places (all portions of the Site are deemed to be public).

The Construction Manager must provide emergency response coordination and for responses to Site problems during non-working hours. In consultation with the DR, establish a list of contacts for responses and communication. In the event of any problems, contract DR immediately. In case of an emergency where the safety of persons or property is concerned, or Work is endangered by the actions of the subcontractors or other persons, take immediate action. If required, stop Work. In all situations, notify the DR. Give immediate written notice to the subcontractor or other person of the hazard.

RS 16.29 - Not applicable

RS 16.30 - Not applicable

RS 16.31 - Testing/Laboratory Services

Departmental Representative will appoint CM and will reimburse the latter for costs of inspection and testing services, unless indicated otherwise.

Provide safe working areas and assist with testing procedures, including provisions for materials or services and coordination, as required by testing agency and as authorized by Departmental Representative.

Where tests indicate non-compliance with specifications, CM is to pay for initial test and all subsequent testing of work to verify acceptability of corrected work.

RS 16.32 - Not applicable

RS 16.33 - Not applicable

RS 16.34 - Surveying

The Construction Manager is responsible for the conservation of the signs and markers as well as for the exact location of the structure and the prescribed levels in accordance with the Consultants' plans.

The Construction Manager must have the implementation of the work verified and approved by a survey professional at the CM's own expense before starting work.

If, during the course of the work, the Construction Manager sees existing signs and markers in the right-of-way, it must immediately notify the Consultants and the Departmental Representative.

If the Construction Manager notices anomalies at any time in alignments and levels, it must immediately notify the Consultants and the Departmental Representative.

RS 16.35 - Snow removal

The Construction Manager is responsible for the evacuation of water, snow, ice or other things that may interfere with the performance of the work.

RS 16.36 - LEED Certification

The project must obtain LEED v4 C+CB certification. To this end, the Construction Manager must in particular:

1. Have a LEED Accredited Professional (LEED AP) on their project team who may be employed by the project team or hired as a specialized consultant;
2. Once the project begins, coordinate with the Consultant to complete the LEED NC Checklist and determine which credits to target for Gold-level certification;
3. Make recommendations to the Departmental Representative regarding the credits to target, favouring measures with the quickest return on investment, or payback period;
4. Identify the Innovation credits to target, where necessary;
5. Produce all the documentation and calculations required to obtain certification;
6. Consider the scorecard (or table highlighting the 16 principles of sustainable development, LEED criteria and Eco-Energy criteria) and integrate all identified requirements, monitor and validate the content, update and improve it as needed;
7. Attend planned coordination meetings on sustainable development.
8. Cooperate with the Commissioning Manager and obtain the EA 2 Enhanced Commissioning credit;

A LEED certification feasibility study is underway and will be provided to the project team at the beginning of the mandate. Preliminary results show that:

1. 68 points were identified as achievable and 21 points were classified as "maybe" achievable.

The priority appropriations for departmental commitments are:

1. Location and transport
 - a. Bicycle facilities
 - b. Green Vehicles
2. Sustainable Sites
 - a. Protect or restore habitats (classified as "maybe")
 - b. Stormwater Management
 - c. Reduce heat islands (classified as "maybe")
 - d. Light Pollution Reduction
3. Water efficiency
 - a. Reduced water consumption
4. Energy and Atmosphere
 - a. Enhanced Commissioning

- b. Advanced energy metering
- 5. Materials & Resources
 - a. Reduce the lifecycle impact of the building
 - b. Construction and Demolition Waste Management
- 6. Indoor Environmental Quality
 - a. Enhanced Indoor Air Quality strategies
 - b. Indoor Air Quality Assessment
 - c. Thermal Comfort
 - d. Interior Lighting

RS 17 - Post Construction Services

During the Post Construction Services portion of the Contract, the CM shall:

1. Assemble Record Documents. Provide copies of Record Documents to PWGSC as directed by the DR.
2. Review and comment on the accuracy of warranties and guarantees.
3. Coordinate with Sub-trades to provide final Record Documents (Operations and Maintenance Manuals, As-built drawings and specifications) as required for each sub-trade.
4. Within eleven (11) months of the commencement of the warranty period, arrange for an inspection of the facility to determine all deficiencies to be corrected:
 - a. Prepare a deficiency list for review and acceptance by the DR.
 - b. Provide a schedule indicating when correction of all deficiencies covered under the warranty will be corrected and submit to the DR for review and acceptance.
 - c. Arrange for and correct all identified deficiencies in accordance with the schedule and advise when all deficiencies have been properly corrected.
 - d. Ensure that all warranty deficiencies are properly corrected in a timely manner. The CM warranty inspection and up to four return inspections to be included in the fees.
5. Attend all warranty site meetings.
6. Participate in a half-day lessons learned workshop and provide an updated lessons learned log at the end of each construction sub-phase.

Provide a post-construction evaluation and cost analysis report within one month of the completion of each tendered construction package; include lessons learned, outstanding issues and any Work that was not completed or was deferred to subsequent projects. Submit a sample format of this report for review and acceptance by the DR. Amend as required.

ANNEX "B"

BASIS OF PAYMENT

1. The Bidder offers to Canada to perform and complete the Work for the above-named project in accordance with the Bid Documents for the **TOTAL BID AMOUNT**.
2. **Stage A:**
Basic Construction Manager Advisory Services

Item	Description (See description of items below)	Amount excluding taxes																																								
2.1	Fixed monthly fee Point 1. a. of Annex "B" - Basis of payment _____ \$ x 9 months = →→→	_____ \$																																								
2.2	Daily rate – Additional personnel Point 1. c. of Annex "B" – Basis of payment <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: left; padding-left: 5px;"><u>Firm daily rates for personnel</u></th> </tr> <tr> <th style="width: 35%;">Category of personnel</th> <th style="width: 15%;">Estimated number of days (X)</th> <th style="width: 15%;">Firm daily rate (Y)</th> <th style="width: 35%;">Extentd total (X × Y)</th> </tr> </thead> <tbody> <tr> <td>Project leader</td> <td>10</td> <td>\$</td> <td>\$</td> </tr> <tr> <td>Project Manager</td> <td>10</td> <td>\$</td> <td>\$</td> </tr> <tr> <td>Cost estimator</td> <td>5</td> <td>\$</td> <td>\$</td> </tr> <tr> <td>Scheduler</td> <td>5</td> <td>\$</td> <td>\$</td> </tr> <tr> <td>PA LEED Resource</td> <td>5</td> <td>\$</td> <td>\$</td> </tr> <tr> <td>BIM construction Manager</td> <td>5</td> <td>\$</td> <td>\$</td> </tr> <tr> <td>Commissioning Agent</td> <td>5</td> <td>\$</td> <td>\$</td> </tr> <tr> <td colspan="2">Total</td> <td></td> <td>→→→</td> </tr> </tbody> </table>	<u>Firm daily rates for personnel</u>				Category of personnel	Estimated number of days (X)	Firm daily rate (Y)	Extentd total (X × Y)	Project leader	10	\$	\$	Project Manager	10	\$	\$	Cost estimator	5	\$	\$	Scheduler	5	\$	\$	PA LEED Resource	5	\$	\$	BIM construction Manager	5	\$	\$	Commissioning Agent	5	\$	\$	Total			→→→	_____ \$
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Total			→→→																																							
2.3	Total amount for stage A Sum of items 2.1 and 2.2	_____ \$																																								

**3. Stage B - Optional Services:
 For Advisory Services (CMA) and Construction Services (CMc)**

This section and the bid amounts indicated in Stage B below do not constitute a commitment on Canada's part to amend the contract to include the optional services of Stage B.

Item	Description (See description of items below)	Montant excluant les taxes																																																				
3.1	Fixed monthly fee Point 1. a. of Annex "B" – Basis of payment _____ \$ x 58 months= →→→	_____ \$																																																				
3.2	Percent Construction Fee Point 1.b of Annex "B" – Basis of payment _____ % x 106 000 000,00 \$ = →→→	_____ \$																																																				
3.3	Estimated construction cost Point 2 of Annex "B" – Basis of payment	106 000 000,00 \$																																																				
3.4	Bonding and Insurance Point 3. i of Annex "B" – Basis of payment	_____ \$																																																				
3.5	Cask allowance for permits Point 3.ii of Annex "B" – Basis of payment	1 000 000,00 \$																																																				
3.6	Taux journaliers - Personnel supplémentaire Point 1. c. of Annex "B" – Basis of payment <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: left; padding-left: 5px;">Firm daily rates for personnel</th> </tr> <tr> <th style="width: 35%;">Personnel Category</th> <th style="width: 15%;">Estimated number of days (X)</th> <th style="width: 15%;">Firm daily rate (Y)</th> <th style="width: 35%;">Extented total (X × Y)</th> </tr> </thead> <tbody> <tr><td>Project leader</td><td>60</td><td>\$</td><td>\$</td></tr> <tr><td>Project Manager</td><td>60</td><td>\$</td><td>\$</td></tr> <tr><td>Cost estimator</td><td>30</td><td>\$</td><td>\$</td></tr> <tr><td>Scheduler</td><td>30</td><td>\$</td><td>\$</td></tr> <tr><td>Superintendant</td><td>60</td><td>\$</td><td>\$</td></tr> <tr><td>Foreman</td><td>60</td><td>\$</td><td>\$</td></tr> <tr><td>PA LEED Resource</td><td>30</td><td>\$</td><td>\$</td></tr> <tr><td>BIM construction Manager</td><td>30</td><td>\$</td><td>\$</td></tr> <tr><td>Commissioning Agent</td><td>30</td><td>\$</td><td>\$</td></tr> <tr><td>Site safety officer</td><td>60</td><td>\$</td><td>\$</td></tr> <tr> <td colspan="2">Total</td> <td></td> <td>→→→</td> </tr> </tbody> </table>	Firm daily rates for personnel				Personnel Category	Estimated number of days (X)	Firm daily rate (Y)	Extented total (X × Y)	Project leader	60	\$	\$	Project Manager	60	\$	\$	Cost estimator	30	\$	\$	Scheduler	30	\$	\$	Superintendant	60	\$	\$	Foreman	60	\$	\$	PA LEED Resource	30	\$	\$	BIM construction Manager	30	\$	\$	Commissioning Agent	30	\$	\$	Site safety officer	60	\$	\$	Total			→→→	_____ \$
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Total			→→→																																																			
3.7	Total amount for stage B Sum of Items 3.1 to 3.6	_____ \$																																																				

4. Total Bid Amount

Item	Description	Extended amount excluding taxes
4.1	Total Bid amount (Stage A + Stage B) Sum of Items 2.3 and 3.7	_____ \$

Notes:

- The Total Amount in Stage A and Stage B will be used to calculate the **Total Bid Amount** for evaluation purposes.
 - The full scope of work is to be completed within the deadline prescribed in BA06 Construction Time.
5. The quantities and categories of personnel identified in 2.2 and 3.6 are to be included in the Total Bid Amount but will not be included in the total contract award value. They are for evaluation purposes only and will not be interpreted by the Bidder to be a commitment by Canada to request the services.
- Per Diem rates (inclusive of payroll costs, overhead and profit) represent a full 8-hour work day. The bidder's daily rates will be used to calculate its hourly rates in the event of requirements below 8 hours. Canada may use the daily rates as required or by requesting a flat rate for a specific task for which the daily rates will be used to establish a flat rate.
- In order to ensure that fair and competitive rates are received for each of the category of personnel, the following requirements must be adhered to:
- a. The Bidder must provide a rate for each category of personnel.
 - b. The rate for any given listed category of personnel cannot be \$0 or nil value.
 - c. The daily rates must reflect the level of experience for each of the listed category of personnel.
6. Canada may reject the bid if any of the prices submitted do not reasonably reflect the cost of performing the part of the work to which that price applies.
7. When Canada evaluates the bids, it may, but is not obliged to, correct any error in the extended pricing of bids by using unit pricing and any error in quantities in bids to reflect the quantities stated in the bid solicitation; in the case of error in the extension of prices, the unit price will govern.

DESCRIPTION OF ITEMS CONTAINED IN THE BASIS OF PAYMENT OF THE CONTRACT

1. CONTRACTOR'S FEE

- Fixed Monthly Fee
- Percent Construction Fee
- Additional Personnel

2. CONSTRUCTION COSTS

3. ALLOWABLE DISBURSEMENTS

1. Contractor's Fee

The Contractor's Fee will be paid monthly in arrears for the term of the contract. The Contractor's fee is based on the aggregate of the following:

a. Fixed Fee

The fixed monthly fees will be paid in equal monthly installments in arrears over the Term of the Contract. The fixed monthly fees will constitute reimbursement for Services provided by the Contractor's Staff as specified in detail in the Terms of Reference. All Required Services specified in the Terms of Reference are to be included in and covered by the Fixed Monthly Fee portion of the contract.

The fixed monthly fee will include but not be limited to:

- All overhead, administration, mark-up and profit for the Contractor's operations, including, but not limited to standard office expenses such as any photocopying, and supplies, taxi charges, computer hardware, Internet, all telephone and fax, cellular telephones, depreciation, rent and maintenance of office facilities, furniture, office equipment parking. Note: Site office costs are included in the percent construction fee;
 - The actual cost of all personnel employed or contracted by the Contractor to deliver the services specified in the Terms of Reference and includes all payroll costs such as salary, statutory holidays, vacations with pay, unemployment insurance premiums and worker's compensation contributions where applicable, pension plan contributions, sick time allowance, medical/dental insurance premiums and any other benefits. insurance premiums and any other benefits. Do not include contracted personnel of sub-trades that will perform the construction;
 - The salaries, benefits or other compensation for the Contractor's officers, directors, principals and support staff;
 - Travel and accommodation costs related to the Work for the duration of the Contract, of the Contractor's personnel;
 - All other costs which may be considered disbursements unless specifically listed;
 - Any part of the Contractor's capital expenses, including interest on the Contractor's capital employed for the Work, unless otherwise expressly provided herein;
 - All field personnel such as superintendents, health and safety officers, assistant superintendents, field engineers, commissioning agent, etc., including vehicles and vehicle expenses.
- b. Percent Construction Fee**
- The Percent Construction Fee includes:
- The Contractor's percentage mark-up for overhead, profit and general administration costs that are not included in the item below;
 - The construction, maintenance and operation of a site field office at the Site, including, but not limited to standard office expenses such as any photocopying, computer costs, Internet, all telephone and fax, cellular telephones, depreciation, rent and maintenance of office facilities, furniture, office equipment and supplies, taxi charges, parking, communication equipment, advertising and publications, long distance phone, bottled water, courier, stamps, software, office supplies and petty cash items;

- iii. All costs that have not been identified for reimbursement under the Basis of Payment - Fixed Monthly Fee, Additional Personnel, Construction Costs and Allowable Disbursements will be included in the Percent Construction Fee. The percent construction fee will be paid in arrears for each progress claim submitted in accordance with GC5 - Terms of Payment, during the Term of the Contract. The value of the Percent Construction Fee for the payment period will be based on the construction cost of the work actually incurred during that period.

c. Additional Personnel

The Contractor must include in the Fixed Monthly Fees sufficient personnel to complete the Work within the time frame stipulated in BID AND ACCEPTANCE FORM - CONSTRUCTION TIME.

However, should Canada determine that, for the project needs, additional personnel are required, Canada will have the right to request that the Contractor provide such additional personnel for the performance of the Work on any part or parts thereof.

The contractor will be reimbursed for additional personnel requested by Canada in accordance with the firm daily rates (including wage costs, indirect costs and profit) set out in the Annex "B" BASIS OF PAYMENT for the categories of personnel determined or in accordance with the rates that have been negotiated and agreed between Canada and the Contractor for personnel that have not been pre-defined in the Annex "B" BASIS OF PAYMENT. Such costs will be payable monthly in arrears.

2. Construction Costs

Determination of Construction Cost will be in accordance with the SUPPLEMENTARY CONDITIONS (SC). Construction Costs will be reimbursed in accordance with GC5 - Terms of Payment.

Construction Costs will include

- i. The actual, reasonable and direct costs of subcontracts;
- ii. The actual, reasonable and direct costs incurred by the Contractor, as previously agreed to by Canada in performing the Work, as follows:
- iii. Materials incorporated into the Work, including costs of transportation,
- iv. Materials, products, supplies, equipment, temporary services and facilities, including transportation and maintenance thereof, which are consumed in the performance of the Work, and cost less salvage value on such items used, but not consumed, which remain the property of the Contractor,
- v. Tools, machinery and equipment, exclusive of hand tools, used in the performance of the Work, whether rented by the Contractor or others, including installation, minor repairs and replacements, dismantling, removal, transportation and delivery costs thereof,
- vi. Site engineering, as-built drawings, maintenance manuals and all other documents required to be provided prior to certification of Substantial Performance, as well as commissioning activities,
- vii. Independent inspection and testing services other than those described in the construction documents,
- viii. Temporary services, O & M Manuals, as-builts, engineering drawings and rental costs of site trailers,
- ix. Site washrooms other than those furnished by Canada,
- x. Health and Safety sundries for visitors (hard hats, boots, gloves, goggles, masks, etc.),
- xi. Bilingual Site signage,
- xii. Utility costs, as applicable,
- xiii. The cost of safety measures and requirements,
- xiv. Cleaning materials supplies, hand tools and consumables,
- xv. Site photos,
- xvi. Printing of construction documents,
- xvii. Removal and disposal of waste products and debris.

Site Labour Costs (allowance is included within Estimated Construction Cost)

The Contractor shall not use its own forces or the forces of a non-arm's length entity to provide Trade Work unless the Contractor has been specifically authorized to do so by Canada.

However, the Contractor will be reimbursed for the labour expended by the Contractor's carpenters and general site labourers for any physical construction work related to RS16 which received prior approval from the Departmental Representative. Site labour costs that have been authorized by the Departmental Representative will be paid monthly in arrears.

Notwithstanding the above, Canada may require that the Contractor competitively procure any or all of the construction work, including work that may be completed by the Contractor's own labourers.

Any costs incurred by the Contractor due to failure on the part of the Contractor to exercise reasonable care and diligence in the Contractor's attention to the Work shall be borne by the Contractor.

3. Allowable Disbursements

In addition to the Contractor's Fee, Canada will reimburse at actual cost, without any administrative cost or mark-up for overhead or profit, the following disbursements supported by invoices/receipts:

- i. The cost of the Contractor's insurance and bonding;
- ii. Fees, levies, permits, costs and charges levied by authorities having jurisdiction at the Site;
- iii. Travel, if requested in writing by Canada, will be reimbursed in accordance with the National Joint Council Travel Directives without any administrative cost or mark-up for overhead or profit.

Solicitation No. - N° de l'invitation
 EE474-200945/A
 Client Ref. No. - N° de réf. du client
 EE474

Amd. No. - N° de la modif.
 File No. - N° du dossier
QCM-9-42096

Buyer ID - Id de l'acheteur
 qcm039
 Project No.- N° du projet

ANNEX C
 (not required at bid submission)
CERTIFICATE OF INSURANCE

Page 1 of 2



Travaux publics et
 Services gouvernementaux
 Canada

Public Works and
 Government Services
 Canada

Description and Location of Work CONSTRUCTION MANAGEMENT SERVICES New Federal Government Building 4695 Shawinigan-Sud Blvd., Shawinigan, Quebec	Contract No. EE474-200945
	Project No. R.082974

Name of insurer, broker or agent	Address (Street No.)	City	Province	Postal code
Name of the insured (Contractor)	Address (Street No., Street)	City	Province	Postal Code
Additional insured Her Majesty the Queen in right of Canada as represented by the Minister of Public Work and Government Services.				

Type of Insurance	Insurer Name and Policy Number	Effective Date D / M / Y	Expiry Date D / M / Y	Limits of Liability		
				Per Occurrence	Annual General Aggregate	Completed Operations Aggregate
Commercial General Liability				\$	\$	\$
Umbrella/Excess liability				\$	\$	\$
Wrap-Up General Liability				\$	\$	\$
Umbrella/Excess liability				\$	\$	\$
Builder's Risk / Installation Floater				\$		
Pollution Liability				<input type="checkbox"/> Per Incident <input type="checkbox"/> Per Occurrence		Aggregate \$
Transit Liability				\$		

I certify that the above policies were issued by insurers in the course of their Insurance business in Canada, are currently in force and include the applicable insurance coverage's stated on page 2 of this Certificate of Insurance, including advance notice of cancellation of / reduction in coverage.

Name of person authorized to sign on behalf of Insurer(s) (Officer, Agent, Broker)	Telephone Number
Signature	Date D / M / Y

CERTIFICATE OF INSURANCE Page 2 of 2

General

The insurance policies required on page 1 of the Certificate of Insurance must be in force and must include the insurance coverage listed under the corresponding type of insurance on this page and the policies must insure the Contractor and must include Her Majesty the Queen in Right of Canada as represented by the Minister of Public Works and Government Services as an additional Insured and the Policy shall be endorsed to provide Canada with not less than thirty days' notice in writing in advance of any cancellation or reduction in coverage.

Without increasing the limit of liability, the policies must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.

Commercial General Liability

The insurance coverage provided must not be substantially less than that provided by the latest edition of IBC Form 2100.

The policy must either include or be endorsed to include coverage for the following exposures or hazards if the Work is subject thereto:

- a) Blasting.
- b) Pile driving and caisson work.
- c) Underpinning.
- d) Removal or weakening of support of any structure or land whether such support be natural or otherwise if the work is performed by the insured contractor.

The policy must include:

- a) **\$5,000,000** Each Occurrence Limit;
- b) **\$10,000,000** General Aggregate Limit per policy year if the policy contains a General Aggregate.
- c) **\$5,000,000** Products/Completed Operations Aggregate Limit.

Umbrella or excess liability insurance may be used to achieve the required limits. Builder's Risk / Installation Floater.

Wrap-Up General Liability

The insurance coverage provided must exceed all other insurance policies and must not be less than that provided by the latest edition of IBC Form 2100, except for liability arising from damage to the Work during construction, which must be limited to the completed operations period.

The policy must include an extension for a standard provincial and territorial form of non-owned automobile liability policy and must either include or be endorsed to include coverage for the following exposures or hazards if the Work is subject thereto:

- a) Blasting.
- b) Pile driving and caisson work.
- c) Underpinning.
- d) Removal or weakening of support of any structure or land whether such support be natural or otherwise if the work is performed by the insured contractor.

- e) Damage to the existing structure

The policy must include:

- a) Limit of each occurrence: **\$25,000,000**
- b) Overall limit of completed work: **\$25,000,000**

Umbrella or excess liability insurance may be used to achieve the required limits.

Umbrella or excess liability insurance may be used to achieve the required limits.

Builder's Risk / Installation Floater

The insurance coverage provided must not be less than that provided by the latest edition of IBC Forms 4042 and 4047.

The policy must permit use and occupancy of any of the projects, or any part thereof, where such use and occupancy is for the purposes for which a project is intended upon completion.

The policy may exclude or be endorsed to exclude coverage for loss or damage caused by asbestos, fungi or spores, cyber and terrorism.

The policy must have a limit that is **not less than the sum of the contract value** plus the declared value (if any) set forth in the contract documents of all material and equipment supplied by Canada at the site of the project to be incorporated into and form part of the finished Work. If the value of the work is changed, the policy must be changed to reflect the revised contract value.

The policy must provide that the proceeds thereof are payable to Canada or as Canada may direct in accordance with GC10.2, "Insurance Proceeds" (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R/R2900D/2>).

Pollution Liability

The policy must have a limit usual for a contract of this nature, but not less than **\$2,000,000** per incident or occurrence and in the aggregate.

All Risk in Transit Insurance

The Contractor must obtain on the Government's Property, and maintain in force throughout the duration of the Contract, All Risk Property in Transit insurance coverage for all applicable conveyances while under its care, custody or control, the amount of **protection must be not less than** \$750,000.

Government Property must be insured on replacement cost basis (new).

(a) Administration of Claims: The Contractor must notify Canada promptly about any losses or damages to Government Property and monitor, investigate and document losses of or damage to ensure that claims are properly made and paid.

(b) The All Risk Property in Transit insurance must include the following:

i. Notice of Cancellation: The Insurer will endeavor to provide the Contracting Authority at least thirty (30) days written notice of any policy cancellation.

ii. Loss Payee: Canada as its interest appears or as it may direct.

iii. Waiver of Subrogation Rights: Contractor's Insurer to waive all rights of subrogation against Canada as represented by Public Works and Government Services Canada for any and all loss of or damage to the property however caused.

Solicitation No. - N° de l'invitation
EE474-200945/A
Client Ref. No. - N° de réf. du client
EE474

Amd. No. - N° de la modif.
File No. - N° du dossier
QCM-9-42096

Buyer ID - Id de l'acheteur
qcm039
Project No.- N° du projet

ANNEX A1
APPLICABLE STANDARDS, CODES AND REQUIREMENTS

Out of sequence – See document (ANNEX A1) below

Solicitation No. - N° de l'invitation
EE474-200945/A
Client Ref. No. - N° de réf. du client
EE474

Amd. No. - N° de la modif.
File No. - N° du dossier
QCM-9-42096

Buyer ID - Id de l'acheteur
qcm039
Project No.- N° du projet

ANNEX A2
PRELIMINARY BIM MANAGEMENT PLAN

Out of sequence – See document (ANNEX A2) below

Solicitation No. - N° de l'invitation
EE474-200945/A
Client Ref. No. - N° de réf. du client
EE474

Amd. No. - N° de la modif.
File No. - N° du dossier
QCM-9-42096

Buyer ID - Id de l'acheteur
qcm039
Project No.- N° du projet

ANNEX A3
NMS - QUEBEC REGION (NOVEMBER 2016)

Out of sequence – See document (ANNEX A3) below

Solicitation No. - N° de l'invitation
EE474-200945/A
Client Ref. No. - N° de réf. du client
EE474

Amd. No. - N° de la modif.
File No. - N° du dossier
QCM-9-42096

Buyer ID - Id de l'acheteur
qcm039
Project No.- N° du projet

ANNEX A4
COMMISSIONING STANDARDS

Out of sequence – See document (ANNEX A4) below

Solicitation No. - N° de l'invitation
EE474-200945/A
Client Ref. No. - N° de réf. du client
EE474

Amd. No. - N° de la modif.
File No. - N° du dossier
QCM-9-42096

Buyer ID - Id de l'acheteur
qcm039
Project No.- N° du projet

ANNEX D
Security Requirements Check List (SRCL)

Out of sequence – See document (SRCL) below

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

ANNEX A1 APPLICABLE STANDARDS, CODES AND REQUIREMENTS

The list of reference documents below is not exhaustive and is provided for information purposes only.

A.1 Reference documents

This section includes all codes, standards and regulations to which reference is made in the following reference documents.

A.1.1 Codes

- National Building Code of Canada 2015
- National Fire Code of Canada 2015
- National Plumbing Code of Canada 2015
- CSA C22.1-18 – Canadian Electrical Code, Part I (24th edition)
- National Energy Code of Canada for Buildings 2017
- Safety Code for Elevators and Escalators, ASME A17.1-2010/CSA B44-10 (ASME A17.1-2016/CSA B44-16 for universal accessibility requirements only)
- Canada Labour Code, R.S.C., 1985, c. L-2, Part II – Occupational Health and Safety; Canada Occupational Health and Safety Regulations (SOR/86-304)
- Environmental Code of Practice for the Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems
- Installation Code for Oil-Burning Equipment (CSA B139)
- Code of Practice for the Environmental Management of Road Salts
- Code of Practice for the Reduction of Volatile Organic Compound Emissions from Cutback and Emulsified Asphalt
- Safety Code for the Construction Industry, S-2.1, r.4

A.1.2 Standards

- PSPC (PWGSC) standards, guidelines and clauses
- Treasury Board standards
- "Doing Business with PWGSC – Documentation and Deliverables Manual," January 12, 2018, and "Doing Business with PWGSC – Addenda –Quebec Region," June 1, 2018
- Computer Aided Drafting & Design: PSPC Quebec Region, Supplément à la norme CDAO [Supplement to CADD Standard], May 2019
- Government of Canada Workplace Fit-Up Standards, PSPC, May 2018
- Technical Reference for Office Building Design, PSPC, July 2017 version
- Accessible Design for the Built Environment - CSA B651-18
- Accessibility Standard for Real Property – Treasury Board of Canada Secretariat

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- Federal Identity Program Manual (FIP)
- PSPC Commissioning Manual and PSPC Commissioning Guidelines
- PSPC Asbestos Management Standard
- Norme de conception routière [Road Design Standard], Transport Québec
- MD 15000: Mechanical Environmental Standard for Federal Office Buildings
- MD 15161: Control of Legionella in Mechanical Systems
- MD 16001 – Air Filters for HVAC Systems
- MD 250005-2009 – Energy Monitoring and Control Systems Design Guidelines (EMCS)
- ANSI/TIA 569, Telecommunications Pathways and Spaces and related addendas
- Government of Canada (GC) Workplace Fit-Up-Special Technical Standard Guidelines (Section A4): Telecommunications (Cable Networks) Pathways and Spaces – Planning and Implementation
- AABC National Standards for Total System Balance
- AHRI 410: Forced Circulation Air-Cooling and Air-Heating Coils
- ANSI/AHRI 880: Performance Rating of Air Terminals
- ANSI/AMCA 210: Laboratory Methods of Testing Fans for Certified Aerodynamic Performance Rating
- ASHRAE handbooks:
 - Handbook – HVAC Applications
 - Handbook – Fundamentals
 - Handbook – Refrigeration
 - Handbook – HVAC Systems and Equipment
- ASHRAE 0: The Commissioning Process
- ASHRAE 4: Preparation of Operating and Maintenance Documentation for Building Systems
- ASHRAE 15: Safety Standard for Refrigeration Systems
- ASHRAE 34: Designation and Classification of Refrigerants
- ASHRAE 52.2: Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size
- ASHRAE 55: Thermal Environmental Conditions for Human Occupancy
- ASHRAE 62.1: Ventilation for Acceptable Indoor Air Quality
- ANSI/ASHRAE/IES 100: Energy Efficiency in Existing Buildings
- ASHRAE/IES 90.1: Energy Standard for Buildings Except Low-Rise Residential Buildings

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- ASHRAE 105: Standard Methods of Determining, Expressing, and Comparing Building Energy Performance and Greenhouse Gas Emissions
- ASHRAE 111: Measurement, Testing, Adjusting, and Balancing of Building HVAC Systems
- ASHRAE 135: BACnet: A Data Communication Protocol for Building Automation and Control Networks
- ASHRAE/ACCA 180: Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems
- ASHRAE 189.1: Standard for the Design of High Performance Green Buildings
- ASME UPV: Code for Unfired Pressure Vessels
- ASME BPVC: Boiler and Pressure Vessel Code
- CAN/CSA B149.1: Natural Gas and Propane Installation Code
- CAN/CSA B214: Installation Code for Hydronic Heating Systems
- CAN/CSA B44: Safety Code for Elevators and Escalators
- CAN/CSA B51: Boiler, Pressure Vessel and Pressure Piping Code
- CAN/CSA B52: Mechanical Refrigeration Code
- CAN/CSA B64: Backflow Preventers and Vacuum Breakers (DAR)
- CAN/CSA B651: Accessible Design for the Built Environment
- CAN/CSA C282-15: Emergency Electrical Power Supply for Buildings
- CAN/CSA C743: Performance Standard for Rating Packaged Water Chillers
- CAN/CSA Z204: Guideline for Managing Indoor Air Quality in Office Buildings
- CAN/CSA ISO 50001: Energy Management Systems
- CAN/CSA B651, Accessible Design for the Built Environment
- CSA B125.1, Plumbing Supply Fittings
- CTI STD201: Certified Cooling Towers
- National Environmental Balancing Bureau (NEBB) TABES, Procedural Standards for Testing, Adjusting, Balancing of Environmental Systems
- NFPA 54, National Fuel Gas Code
- NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances
- NFPA 214, Standard on Water-Cooling Towers
- ISO 29481-1:2016 Building Information Models – Information Delivery Manual – Part 1: Methodology and Format
- ISO 29481-2:2012 Building Information Models – Information Delivery Manual – Part 2: Interaction Framework
- ISO/TS 12911:2012 Framework for Building Information Modelling (BIM) Guidance

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- ISO 16739:2013 Industry Foundation Classes (IFC) for Data Sharing in the Construction and Facility Management Industries
- ISO 15686-4:2014 Service Life Planning – Part 4: Service Life Planning Using Building Information Modelling
- ISO 16354:2013 Guidelines for Knowledge Libraries and Object Libraries
- Institute for BIM in Canada's Contract Language Documents Package
- The Canadian Practice Manual for BIM

A.1.3 **Directives**

- Occupational Health and Safety Directive by the National Joint Council, Part VII, Noise Control (Levels of Sound)
- Guidelines for Canadian Drinking Water Quality by Health Canada
- Guidelines for Canadian Drinking Water Quality, August 2012

A.1.4 **Regulations**

- SOR/2003-307: Environmental Emergency Regulations
- SOR/2009-264: Volatile Organic Compound (VOC) Concentration Limits for Architectural Coatings Regulations
- Canadian Environmental Protection Act, Ozone-Depleting Substances Regulations
- Canadian Environmental Protection Act, Federal Halocarbon Regulations
- Regulation Respecting Stationary Enginemen (provincial)
- Migratory Birds Regulations, C.R.C., c. 1035
- Wastewater Systems Effluent Regulations
- Regulation Respecting the Application of Section 32 of the Environment Quality Act
- Transportation of Dangerous Goods Regulations
- Transportation of Dangerous Substances Regulation (C-24.2, r. 43)
- Regulation Respecting Hazardous Materials (Q-2, r. 32)
- Pest Control Products Regulations (SOR/2006-124)
- Regulation Respecting Solid Waste, CQLR, c. Q-2, r.13
- Federal Halocarbon Regulations (2003) (SOR/2003-289)
- Prohibition of Asbestos and Products Containing Asbestos Regulations, (SOR/2018-196)
- PCB Regulations, (SOR/2008-273)
- Ozone-depleting Substances and Halocarbon Alternatives Regulations, (SOR/2016-137)

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- Petroleum Products Act (P-30.01)
- Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations, (SOR/2008-197)
- Regulation Respecting Snow Elimination Sites, (1997), Q-2 r.31
- Canada Occupational Health and Safety Regulations (s. 9.24) (SOR-86-304)
- Regulation Respecting the Landfilling and Incineration of Residual Materials
- Regulation Respecting Occupational Health and Safety, (c. S-2.1, s. 223)
- Municipal by-law - Environnement [Environment] - SH-1, section 10
- Urban planning by-laws: By-law No. SH-200
- Zoning by-law: By-law No. SH-550
- Zoning by-law: Coupe d'arbre [Tree Felling]

A.1.5 **Specifications**

- Canadian National Master Specification (NMS) (latest edition)

A.1.6 **Guidelines**

- Guideline – Project GHG Options Analysis Methodology

A.1.7 **Documents:**

- Cadre stratégique pour la durabilité des immeubles [Strategic Framework for Building Sustainability]
- Greening Government Strategy by the Treasury Board of Canada Secretariat
- CaGBC LEED BD+C V4.1 or more recent
- CaGBC Zero Carbon Building Standard
- WELL Building Standard V2 or more recent
- Workplace Hazardous Materials Information System (WHMIS) published by Health Canada
- SMACNA Air Duct Leakage Test SMACNA
- Workspaces Supply Arrangement (AMA)
- Critères de qualité de l'eau de surface au Québec [Groundwater Quality Criteria for Quebec]
- Guide de gestion des eaux pluviales [Stormwater Management Guide]
- Guide d'aménagement des lieux d'élimination de neige et mise en œuvre du Règlement sur les lieux d'élimination de neige [Development Guide for Snow Elimination Sites and Application of the Regulation Respecting Snow Elimination Sites] (MEF, 1997)
- Guide for Radon Measurements in Public Buildings, Health Canada

A.1.8 **Policies**

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- Policy on Emergency Management and Operational Security Standard - Business Continuity Planning (BCP) Program of the Treasury Board of Canada Secretariat
- PSPC Sustainable Buildings Policy

A.1.9 **Legislation**

- Canadian Environmental Protection Act
- Canadian Environmental Assessment Act (2012)
- Migratory Birds Convention Act, 1994 (S.C. 1994, c. 22)
- Species at Risk Act (S.C. 2002, c. 29)
- Transportation of Dangerous Goods Act (S.C. 1992, c. 34)
- Pest Control Products Act (S.C. 2002, c. 28)
- Hazardous Products Act (R.S.C. (1985), c. H-3)
- Petroleum Products Act (P-30.01)
- Accessible Canada Act (C-81, 2019)

A.1.10 **Standards of client departments**

Canada Revenue Agency (CRA):

- Physical Security Standards and Design Specifications Guide, Version 2.1 (November 4, 2016)

Employment and Social Development Canada (ESDC):

- ESDC Interior Design Standards version 2.1 (June 2016): Sections A to G

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

ANNEX A2 PRELIMINARY BIM MANAGEMENT PLANS

PRELIMINARY BIM MANAGEMENT PLAN (BMP)

The following BMP is provided for information purposes only. The Senior BIM Manager is responsible for improving it in whole or in part.

1. Preface

Project Context

Public Services and Procurement Canada (PWGSC) is constructing a new Government of Canada building to be occupied by the Canada Revenue Agency (CRA), Employment and Social Development Canada (ESDC) and Health Canada (HC). The project also includes the rental of a temporary parking lot, the deconstruction of the National Verification and Collections Centre (NVCC) and the construction of a new parking lot. This major project, which will take 60 months to complete, will be carried out with a view to sustainable development and compliance with the Federal Sustainable Development Strategy (FSDS).

Primary Objective

Implement an innovative strategy to increase performance in reducing changes during the project.

Implementation

The implementation of the BIM strategy must be included in the tender documents in order to achieve the main objective. A preliminary BIM Management Plan (BMP) must be drawn up to outline the organization's visions for the BIM.

2. Context of the BMP

The BMP is the result of the collaboration of all BIM stakeholders in the Project for deployment and implementation. The BMP serves as a roadmap for all parties involved in the development of BIM models for a Project delivered according to the BIM ("Building Information Model") process, for the duration of the Project.

It includes the methods required to create the various BIM models, the level of development (LOD) required and the content required in these models, the responsibility of each of the parties relative to the models, and the timeframe for delivering the models.

It also defines collaboration standards and techniques, as well as communication strategies and contact points for all Consultants in the Project Team. All stakeholders concerned by the BIM should refer to the BMP to ensure that they comply with all BIM requirements of the Project.

3. Modification and Acceptance Process

This document is intended to be evolving at the same pace as progress is made in implementing the Project and in parallel with the teams working on the Project. However, any changes to this document must be made through the Senior BIM Manager. All requests for changes must be made in writing to the Senior BIM Manager. They must be reviewed and approved by all parties involved in the Project.

All changes to the BMP must be explicitly notified and approved by all Project stakeholders. If, for any reason, requests for changes to this plan should have any impact on the progress

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

and schedule of the Project, these requests must first be reviewed and approved by PWGSC. Notification must be made for all changes to the BMP at the beginning of the document in the grid named "Monitoring of changes to the BMP."

4. Definitions

Attestation of reliability: Certification by a communicating party of the reliability of a deliverable with respect to authorized uses.

BIM: BIM is a digital representation of the physical and functional characteristics of a facility. A BIM is a shared-knowledge resource for information about a facility forming a reliable basis for decisions during its life cycle. [Definition taken from the National Building Information Modeling Standard (NBIMS)].

Interference detection: Interference detection is an automated analysis performed on federated models that identifies interference between different elements or modelled systems.

Digital data: Any information including, but not limited to, communications, drawings, models, databases, analyses, specifications or other BIM deliverables described in the BMP, as created or hosted for the project in digital form.

Confidential digital data: Digital data containing confidential or business information clearly identified as such and owned exclusively by the communicating party.

BIM Agreement: The agreement signed by the Departmental Representative and some stakeholders involved in the BIM approach, including architectural and engineering service providers, regarding the BMP.

BIM Discipline Manager: The BIM specialist of each of the professionals involved in the BIM approach within the framework of a project and responsible for the application of the BIM by their respective teams in accordance with the rules and terms of the BIM agreement.

Senior BIM Manager: The person responsible for the planning and implementation of a collaborative BIM by all project stakeholders.

Project stakeholder: Any person or team involved in the delivery of the project.

Stakeholder concerned by the BIM approach: Any project stakeholder who creates, consults, analyses or uses the data grouped within the various BIM deliverables.

LOD (Level of Development): Level at which the geometry of an element of a model and the information attached to it are developed according to the progress of the project or according to the needs of the users of the model. The LOD defines the level of reliability that project team members can rely on when using an element of a model.

Design model: Any 3D digital model produced by design professionals during the entire life cycle of the Project.

Federated model: A digital BIM model that gathers, in dead links, all the BIM models produced by the design and construction teams. This model is produced and updated by the BIM experts team (BET) on key dates defined in the coordination schedule. This model

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

will be used for interference detection, design monitoring, visualization and centralization of information for reference.

Integrated model: A digital BIM model that brings together, with a living or dead link, all the BIM models produced by the design and construction teams. This model is created and used by professionals for their internal coordination.

Construction model: During the construction phase, the Construction Manager is responsible for producing construction models from the design models produced by the design professionals.

Federated construction model: A digital BIM model that gathers, in dead links, all the BIM models produced by the construction teams. This model is produced and updated by the Construction Manager. This model will be used for interference detection, construction monitoring, visualization and centralization of information for reference.

Party to the BIM agreement: As the case may be, one or all of the signatories to the BIM agreement.

Communicating party: A party responsible for creating and sharing digital data.

Recipient Party: A stakeholder involved in the BIM approach who receives and processes digital data shared by a communicating party.

BIM Management Plan (BMP): The document that facilitates the planning of the BIM project implementation process by outlining how the BIM will be implemented as part of a project to support the achievement of project objectives. The BMP is developed jointly by all stakeholders involved in the BIM approach. And once adopted and signed by all stakeholders involved in the BIM approach, it becomes the BIM Agreement.

BIM Implementation Plan (BIP): BIM managers in each of the disciplines (architecture, structural, civil, mechanical, electrical and construction) will be responsible for producing a BIP that will include all the modelling elements and principles preferred by their discipline within their respective mandates.

Authorized uses: The uses authorized by a communicating party of the digital data for which it is responsible.

Confidential digital data: Digital data containing confidential information or business information clearly identified as such.

Level of detail (LOD): The LOD defines the level of geometric precision relative to an object in the digital model.

Information Exchange Matrix (IEM): The Senior BIM Manager is responsible for setting up an IEM matrix. This indicates the level of detail and information required to achieve the Project objectives defined in the BMP.

Shared parameters: All parameters created and shared by one or more disciplines. They can be used in several models or families. The creation of shared parameters makes it possible to structure the information contained in the models.

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

Collaboration platform: A virtual workspace for centralizing all information and activities related to a project or organization. The collaborative platform provides, among other things, efficient document management that is accessible to all stakeholders in a project or organization.

Coordination platform: A virtual workspace for centralizing all information and activities related to the coordination of the project or an organization. The coordination platform provides, among other things, an efficient and accessible “*issue*” management of interferences by all stakeholders in a project or organization.

5. Project Delivery Method

The Project Delivery Method is part of a Construction Management Delivery method. Consequently, the BMP approach must take into account the aspects related to this mode of implementation and be properly planned and managed in order to support the achievement of the project objectives.

6. Project Schedule and Phases

The highlights of project schedule are defined as follows:

- Project Identification Stage Closure: September 2019
- Tenders and contract awards (Consultants and Construction Managers): August 2019 to February 2020
- Analyses, concepts, preliminary plans: March 2020 to November 2020
- Plans and specifications (in batches): November 2020 to July 2023
- New building work (in batches): January 2022 to November 2024
- Relocation: November 2024 to January 2025
- Demolition of existing building: January 2025 to July 2025
- Parking: July 2025 to February 2026

7. BIM objectives and requirements

This section will be expanded upon by the BIM Manager at a later date.

As part of the implementation of the BIM in the project, PWGSC wishes to achieve various objectives, such as the production of plan specifications at the required time, the production of contract documents according to CAD standards in place by PWGSC, and the monitoring of the functional elements established in the FTP, taking into account ratios and functions, surface area and numbering, validate environmental analyses, perform interference detection analyses and model reviews and ensure 3D tracking, ensure good communication and coordination to produce optimal documentation and ensure that the needs of the technical service (2D) and the models (3D) are bridged.

8. BIM Uses

This section will be expanded upon by the BIM Manager at a later date.

Design Model: Models produced by professionals during the design stage for design development. At this stage, professionals must ensure that the design models have the required level of development (LOD) for the modelled elements (refer to the LOD information exchange matrix in Annex 1).

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

Federated Model: The BET is responsible for producing the Federated Model. This model will be used for quality control and interference detection. The Federated Model is created at a key moment in the Project according to the coordination schedule. The professionals' models linked in the Federated Model will be in dead link.

Integrated Model: The BIM Managers in each discipline will produce their respective integrated models to ensure their internal coordination and to monitor design and modifications. The professionals' models linked in the Federated Model will be in dead link.

9. Duties and Responsibilities

This section will be expanded upon by the BIM Manager at a later date.

Senior BIM Manager

The Senior BIM Manager is responsible for the development of the BMP for the Project, coordinates the deployment of the BIM approach, and acts in support of the Project teams for its implementation.

Purpose

- Ensure optimal deployment of the BIM approach;
- Ensure that the BIM approach adds value to the various implementation activities, supports the Continuous Design Process (CDP) and that its implementation enables the achievement of the Project objectives;
- Provides quality control to ensure that the work and deliverables of the Project teams comply with the BMP.

Duties and Responsibilities

- Develop (produce and draft) a BMP, in accordance with the BIM objectives and the objectives of the Project, and supervise its overall implementation and updating;
- Develop and define the various modelling strategies with each discipline's BIM managers;
- Coordinate the BIM component of coordination meetings;
- Coordinate the BIM kick-off meeting;
- Coordinate the BIM managers' meetings and draft the minutes of the meetings;
- Coordinate the work of the BIM managers in each discipline;
- Supervise and validate the conformity of the models with the PGB;
- Supervise the choice of BIM tools and ensure the interoperability of all data created and software used by design professionals;
- Monitor the availability and capacity of BIM resources required to achieve the Project objectives;
- Coordinate and monitor the achievement of objectives;
- Act as a main point of contact for BIM issues.

Intermediate BIM Manager

The Intermediate BIM Manager consolidates the discipline models and creates the federated models required for the various analyses. He/she provides support for the Senior BIM Manager and Project Teams for the implementation of the BIM approach.

Purpose

- Ensure optimal integration of the BIM approach into the Project in line with the BIM objectives and uses defined by all Project stakeholders;
- Ensure the sharing, quality control and compliance of the models with the BMP.

Duties and Responsibilities

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- At the request of the Senior BIM Manager, attend BIM manager meetings, and start-up and coordination meetings;
- Monitor the sharing of models and the procedure for the transfer and exchange of information between the Project teams;
- Create and provide the federated models required by BIM stakeholders for the various analyses;
- Create and maintain an up-to-date grid of all planned models and ensure their distribution to all professionals;
- Provide the required assistance to project stakeholders concerned by the BIM approach according to their expressed needs (in support of and complementary to the activities of the Senior BIM Manager).

BIM Specialist

The BIM specialist supports the coordination work and communication between the various project stakeholders. He/she is responsible for performing interference detection analyses and monitoring with the Project teams.

Purpose

- Ensure optimal coordination between the Project's stakeholders and adequate support for integrated design based on the use of federated models;
- Ensure that the implementation of the BIM approach enables the achievement of the BIM objectives and that the work of the Project teams is in accordance with the BMP.

Duties and Responsibilities

- Coordinate the implementation of BIM uses (resources required, change management);
- Coordinate the Master model in order to geo-reference locations, as well as underground (partial) and above-ground services;
- Identify the software that will be used to execute the mandate in collaboration with the Senior Manager and the Professional teams;
- Ensure that the choice of software makes it possible to achieve the BIM objectives of the Project;
- Assemble the list of software (including software versions and updates) provided by the discipline managers;
- Coordinate the work and information-sharing between the various Project teams;
- Coordinate and monitor the modelling strategy for the various BIM analyses and uses;
- Draw up the schedule for interference detection reviews and analyses;
- Coordinate the resolution of detected interferences between professionals and ensure follow-up;

BIM Discipline Manager

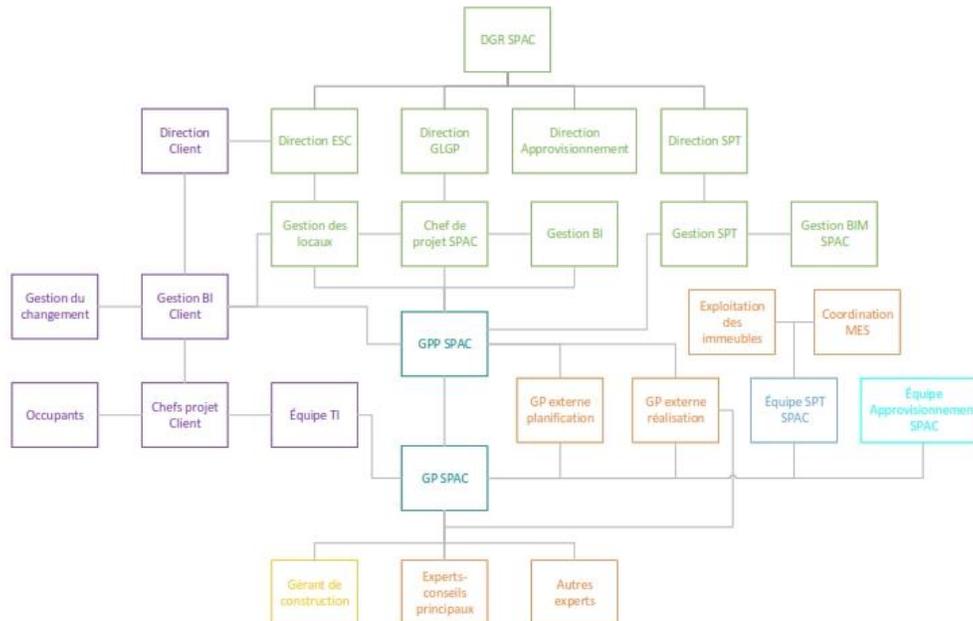
The BIM Discipline Manager will coordinate the execution of the BIM by their respective teams.

Responsibilities

- Act as the main point of contact for his/her discipline for the execution of the BIM;
- Ensure internal quality control of the models and information before sharing them with other Project stakeholders;
- Ensure that the work of own team is in accordance with the BMP and that the models of own discipline adhere to the guiding principles of the Project;
- Participate in BIM manager meetings and coordination meetings;
- Participate in the development of the BMP according to the guiding principles of the Project and supervise its implementation within own team;

- Ensure that own team has the BIM capabilities to comply with the requirements listed in the BMP and upgrade each if necessary;
- Provide technical support to own team in order to meet the objectives and requirements of the BMP;
- Identify the software that will be used by own team (including software versions and updated) and provide the list to the BET;
- Participate in the development of the modelling strategy and supervise its implementation in own team;
- Supervise and coordinate the work of own team regarding the BIM approach;
- Act as the person responsible for the models in own discipline;
- Ensure the sharing of own team's models and the recovery of models from other disciplines to produce the federated model;
- Coordinate the team's models with models from other disciplines.
- Ensure that the modelling is in accordance with the BMP;
- Provide the models to the BET for conformity/quality analyses;
- Supervise and coordinate the updating of the models based on comments generated in the model reviews and interference detection;
- Supervise the updating of the models during the construction phase according to change orders and actual conditions following the work;
- Adhere to the schedule for own team's deliverables;
- Develop a list of planned models for own discipline and submit it to the BET;
- Ensure that the models for own discipline are in accordance with the Level of Development (LOD) Matrix and that the required information is modelled at the required time.
- Enter data and maintain an up-to-date table of functional and area requirements and their characteristics;
- Produce plans by space and the ratio by SILU space category and net/gross ratios.

10. Project Organization Chart



Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

11. Deliverables

This section will be expanded upon by the BIM Manager at a later date.

Paper deliverables

At each stage of the Project, when plans are officially issued, the various professionals must produce the number of hard copies determined by the Project Manager according to the instructions that are proof of contract documents.

Native Revit format (or equivalent)

At each stage of the Project, when the plans are officially issued, all the models in .rvt format (including federated models) will be retrieved and delivered and archived.

Navisworks format

At each stage of the Project, at the end of the interference detection process, all models in .nwc and .nwf format (including federated models) will be retrieved and delivered and archived.

PDF format

At each stage of the Project, when drawings are officially issued, the various professionals must produce deliverables in.pdf format. Each drawing sheet will be done independently, except for the submission filing, where the filings will have to be attached by discipline.

.dwg format

At each stage of the Project, when drawings are officially issued, the various professionals must produce deliverables (plans, sections and elevations) in .dwg format.

.ifc format

The .ifc format is a standardized file format (ISO 16,739 standard) used by the building industry to exchange and share information between software applications. At the submission stage, professionals will be required to produce a model in .ifc format for a clear understanding of the Project.

Other formats

At each stage of the Project, when drawings are officially issued, the BIM manager of the architectural team must ensure that the database of functional requirements, areas and net/gross ratios, including tables in Excel format, is filed.

12. Timeline for BIM deliverables

This section will be expanded upon by the BIM Manager at a later date.

13. Data Sharing and Intellectual Property Rights

This section will be expanded upon by the BIM Manager at a later date.

General principle of BIM data access rights

BIM will be the primary collaboration and communications medium for the Project Team. Unless otherwise specifically agreed, the Consultant Team will use the Model to convey design and the CM; associated trades will use the Model to help interpret the design, and construct the Work. BIM provides an opportunity to streamline, optimize, and, in some cases, omit processes in the delivery chain. To achieve this, the Consultant Team and CM

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

must understand the Project comprehensively and have the digital tools and requisite skills necessary to enable all members of the Project Team through BIM. The author of a model element retains copyright to the model element unless otherwise stated. The author of a model element must grant to the Project Team a non-exclusive license to use the Model element and associated content within the scope established by the authorized uses and Model Elements Table as defined in the BIM PxP for the design and construction of the Project and for Canada's operations following the issuance of the Certificate of Substantial Performance. Project Team members may, at their own risk, adapt or make changes to the model or model element(s) for their own use. Notwithstanding the copyright over model elements, PWGSC has, without exception, the ownership of and the right to use all models, files, and facility/operations and maintenance data developed for the Project. Further, PWGSC must have access to these assets at any time during the implementation of the Project.

Advantages:

- Easy access to data;
- Obtain information in real time;
- Better interdisciplinary coordination;
- Enables fast and efficient communication;
- Saves time by working with the latest data;
- Have a single source of information; avoid multiple creation of the same data; and avoid duplication and duplication of information;

Risks

- Work on data that is not validated;
- Assumption that the data is good;
- Losing data or changing data by mistake;
- Resumption of work due to lack of communication and strategy with other disciplines;

Mitigation measures

- Each item of data must have an owner according to the governance model;
- Maintain a record of shared data, including ownership and authorized use;
- Develop collaborative processes;
- Validation, when using data, that they will not be modified in a short period of time;
- Weekly publication process;
- Systems must allow data recovery;
- Systems must provide a history of data;

14. 3D coordination and interference detection

This section will be expanded upon by the BIM Manager at a later date.

3D Coordination

The 3D coordination process must be a continuous process during all phases of the Project. It consists, among other things, in validating design intentions, carrying out general coordination between the various disciplines, carrying out spatial coordination between the main systems and modelled elements, etc., using federated models. Design professionals, project managers and BIM discipline managers must be involved on an ongoing basis in this process.

Interference detection

The Senior BIM manager is responsible for creating the federated model in order to perform interference detection analysis, between all disciplines, using the Navisworks Manage software, according to the deliverable schedule. BIM discipline managers are responsible

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

for conducting the intra-disciplinary interference detection analysis, and subsequently collaborate for interdisciplinary coordination according to their methodology described in their work plan. The Senior BIM Manager will review each interference found and determine with the BIM discipline managers the level of impact. Only interference with a real impact will then be considered. BIM discipline managers will be responsible for transmitting interference to their Project Managers, updating the status of conflicts and communicating them to all stakeholders involved. An interference detection report illustrating the major conflicts and their resolution status issued by the Senior BIM manager will be forwarded to the Departmental Representative.

15. Level of development of the models

This section will be expanded upon by the BIM Manager at a later date.

The level of development of the models described below corresponds to the minimum level of development to be achieved in order to meet the requirements of the various BIM uses described in this document. A "Level of Development Matrix" of the models will be created and updated throughout the Project and will take into account each BIM use to be achieved, in each phase of the Project. Everything is based on the classification format of the Uniformat II standard. The various levels of development listed below are based on the document "LOD Spec 2016 Part I":

http://www.energymep.it/wordpress/wp-content/uploads/LOD_Spec_2016_Part_I_2016-10-19.pdf

Level 100 (program): The model element can be graphically represented by a symbol or a generic representation, but does not meet the requirements of the LOD200. A preliminary model specifies the size, shape, functional spaces, quantities, materials, systems.

Level 200 (design): The model element is graphically represented as a system, object or generic assembly with approximate quantity, size, shape, location and orientation. Non-graphical information can also be attached to the model element. A design model includes sufficiently precise and coordinated modelled elements for cost estimation and compliance control.

Level 300 (plan): The model element is graphically represented as a specific system, object or assembly with quantity, size, shape, location and orientation. Non-graphical information can also be attached to the model element. A pre-construction model specifies the construction requirements and specific construction elements. This model is suitable for the production of tender documents.

Level 350: The model's elements are graphically represented as a specific system, object or assembly in terms of quantity, size, shape, location, orientation and interfaces. They interact with other building systems. Non-graphical information can also be attached to the model element.

16. IT Requirements

This section will be expanded upon by the BIM Manager at a later date.

Table of contents

ATTENTION : THIS DOCUMENT IS ALSO AVAILAIBLE AT R/RPS/AES/NMS/Québec/Août 2016/Français/Division 1 Exigences générales

1.1 à 1.18 General Clause

1.19 Blasting

1.20 Powder Actuated Device

1.21 Use of Public Roads

1.22 Lockout-Tagout

1.23 Electrical Work

1.24 Asbestos Exposure

1.25 Fungal Contamination

1.26 Exposure to Silica

1.27 Sandblasting

1.28 Lead-Base Paint Removal

1.29 Exposure to animal's Fecal Droppings

1.30 Respiratory protection

1.31 Fall Protection

1.32 Scaffolding

1.33 Confined Spaces

1.34 Excavation Work

1.35 Lifting Loads with Crane or Boom Truck

1.36 Hot Work

1.37 Roofing Work

1.38 Steel structure erection or dismantling work

1.39 Work Near Bodies of water

1.40 Interior Use of Internal Combustion Engines

1.41 Temporary Heating

1.42 Work Near Overhead Power Lines

1.43 Diving Operations

1.44 Health and safety subordination agreement

Partie 1 General

GENERAL NOTE: in this section the term “site” includes all the facilities located at the site where the work is taking place (construction site, buildings, access, infrastructure, parkings, bays, etc.).

1.1 RELATED REQUIREMENTS

.1 Section [_____].

1.2 REFERENCES

- .1 Province of Québec
 - .1 Loi sur la santé et la sécurité du travail L.R.Q., c. S-2.1 (Act respecting occupational health and safety).
 - .2 Code de sécurité pour les travaux de construction L.R.Q., c. S-2.1, r.4 (Safety code for the construction industry).

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Make submittals in accordance with Section [01 33 00 - Submittal Procedures].
- .2 Submit to Departmental representative, [and the CNESST] the site-specific prevention program, as outlined in the article “GENERAL REQUIREMENTS”, at least 10 days prior to the start of work.
- .3 Departmental representative will review Contractor’s site-specific prevention program and provide comments to Contractor within 10 days after receipt of the document. Revise plan as appropriate and resubmit to Departmental representative within 5 days after receipt of comments from Departmental representative. Departmental representative reserves the right not to authorize the start of work on the construction site as long as the content of the prevention program is not satisfactory. The Contractor shall then update his prevention program and resubmit it to the Departmental representative if the scope of work changes or if the working methods of the Contractor differ from his initial plans or for any other applicable new condition.
- .4 Departmental representative’s review of Contractor’s site-specific prevention program should not be construed as approval of the program and does not reduce the Contractor’s overall responsibility for construction Health and Safety during the work.
- .5 Submit copies of Contractor’s authorized representative’s construction site health and safety inspection reports to Departmental representative, [determine frequency, but at least once a week].
- .6 Submit to Departmental representative within 24 hours a copy of any inspection report, correction notice or recommendation issued by Federal, Provincial and Territorial health and safety inspectors.
- .7 Submit to Departmental representative within 24 hours an investigation report for any accident involving injury and any incident exposing a potential hazard.

The investigation report shall contain at least the following:

- 1. date, time and place of accident;
- 2. name of sub-contractor involved in the accident;
- 3. number of persons involved and condition of wounded;
- 4. witness identification;
- 5. detailed description of tasks performed at the time of the accident;
- 6. equipment being used to accomplish the tasks performed at the time of the accident;
- 7. corrective measures taken immediately after the accident;
- 8. causes of the accident;

9. preventive measures that have been put in place to prevent a similar accident.
- .8 Submit to Departmental representative WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 - Submittals [01 47 15 - Sustainable Requirements: Construction] and Section [02 81 01 - Hazardous Materials]. Contractor must also keep one copy of these documents on the construction site.
- .9 Medical Surveillance: where prescribed by legislation, regulation or prevention program, submit certification of medical surveillance for construction site personnel prior to commencement of Work, and submit additional certifications for any new construction site personnel to Departmental representative.
- .10 Submit to Departmental representative an on-site Emergency Response Plan at the same time as the prevention program. The Emergency Response plan must contain the elements listed in the article “GENERAL REQUIREMENTS” of this section.
- .11 Submit to Departmental representative copies of all training certificates required for the application of the prevention program, in particular (if applicable) for the following:
- .1 first aid in the workplace and cardiopulmonary resuscitation;
 - .2 work likely to release asbestos dust (mandatory for all work where asbestos is present);
 - .3 work in confined spaces (mandatory for all work in confined spaces);
 - .4 lockout-tagout procedures (mandatory for all work requiring lockout);
 - .5 safely operating forklift trucks (mandatory for all forklift usage);
 - .6 safely operating elevating work platforms (mandatory for the use of all elevating platforms);
 - .7 any other requirement of Regulations or the safety program.

In addition, the certifications of the *Cours de santé et sécurité générale pour les chantiers de construction* (General Health and Safety Training for Construction Sites) shall be available on demand on the construction site.

- .12 Engineer’s plans and certificates of compliance: Contractor must submit to the Departmental representative and to the *Commission des normes, de l’équité, de la santé et de la sécurité du travail* (CNESST) a copy signed and sealed by engineer of all plans and certificates of compliance required pursuant to the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry) or by any other legislation or regulation or by any other clause in the specifications or in the contract. The Contractor must also submit a certificate of conformity signed by an engineer once the facility for which these plans were prepared has been completed and before a person uses the facility. A copy of these documents must be available on site at all times.

1.4 FILING OF NOTICE OF CONSTRUCTION SITE OPENING

- .1 Notice of construction site opening shall be submitted to the CNESST before work begins. A copy of such notice and acknowledgment of receipt from the CNESST shall be submitted to Departmental representative.

At the completion of all the work, a notice of construction site closing shall be submitted to the CNESST, with a copy to Departmental representative.

- .2 The Contractor shall assume the role of being the Principal Contractor in the limits of the construction site and elsewhere where he must execute work within the framework of this project. The Contractor shall recognize the responsibility of being the Principal Contractor of the project and identify himself as such in the notice of the construction site opening he provides to the CNESST.
- .3 The Contractor shall accept to divide and identify the construction site adequately in order to define time and space at all times throughout the course of the project.

1.5 HAZARD ASSESSMENT

- .1 The contractor must perform construction site specific safety hazard assessment related to project.

1.6 MEETINGS

- .1 Schedule and administer Health and Safety meeting with Departmental representative prior to commencement of Work.
- .2 Contractor's representative with decision power must attend any meetings at which construction site safety and health issues are to be discussed.
- .3 If it is anticipated that there will be 25 workers or more on the construction site at any given time, the Contractor shall set up a worksite committee and hold meetings as required by the *Code de sécurité pour les travaux de construction* (S-2.1, r. 4) (Safety code for the construction industry). A copy of the minutes of the meetings of the committee shall be provided to the Departmental representative no later than 5 days after the committee meeting.

1.7 REGULATORY REQUIREMENTS

- .1 Do the Work in accordance with Section [01 41 00 - Regulatory Requirements].
- .2 Comply with all legislation, regulations and standards applicable to the construction site and its related activities.
- .3 Comply with specified standards and regulations to ensure safe operations on a site containing hazardous or toxic materials.
- .4 Always use the most recent version of the standards specified in the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry), notwithstanding the date indicated in that *Code*.

1.8 COMPLIANCE REQUIREMENTS

- .1 Comply with the *Loi sur la santé et la sécurité du travail* (L.R.Q., c. S-2.1) (Act Respecting Occupational Health and Safety) and the *Code de sécurité pour les travaux de*

construction (S-2.1, r. 4.) (Safety code for the construction industry) in addition to respecting all the requirements of this specification manual.

1.9 RESPONSIBILITIES

- .1 The Contractor must acknowledge and assume all the tasks and obligations which customarily devolve upon a principal Contractor under the terms of the *Loi sur la santé et la sécurité du travail* (L.R.Q., ch. S-2.1) (Act Respecting Occupational Health and Safety) and the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry).
- .2 The Contractor must be responsible for health and safety of persons on construction site, safety of property on construction site and for the protection of persons adjacent to construction site and the environment to the extent that they may be affected by conduct of the work.
- .3 No matter the size or location of the construction site, the Contractor must clearly define the limits of the construction site by physical means and respect all specific regulation requirements applicable in this regard. The means chosen to define the limits of the construction site must be submitted to the Departmental representative.
- .4 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific prevention Plan.

1.10 WORK PERFORMED BY EXTERNAL CONTRACTORS

- .1 On this construction site, it is anticipated that work will be performed by an external contractor that has not been hired by the Contractor:
- .2 The Contractor must take the necessary steps to protect the health and safety of external contractors that have no contractual link with the Contractor but have been mandated by the Departmental representative to perform certain work. In return, these external contractors are obligated to submit to the authority of the Contractor (Principal Contractor). A subordination agreement must be signed by the Contractor and by each external contractor to this effect and submitted to the Departmental representative prior to the start of the work of each contractor (see the wording in the article HEALTH AND SAFETY SUBORDINATION AGREEMENT)

1.11 GENERAL REQUIREMENTS

- .1 Before undertaking the work, prepare a site-specific prevention program based on the hazards identified according to the article “HAZARD ASSESSMENT” and the article “RISKS INHERENT TO THE WORKSITE” in this section. Apply this program in its totality from the start of the project until demobilization of all personnel from the construction site. The prevention program shall take into consideration the specific

characteristics of the project and cover all the work to be executed on the construction site.

The safety program must include at least the following:

- .1 company safety and health policy;
- .2 description of the stages of the work;
- .3 total costs, schedule and projected workforce curves;
- .4 flow chart of safety and health responsibilities;
- .5 physical and material layout of the construction site;
- .6 risk assessment for each stage of the work, including preventive measures and the procedures for applying them;
- .7 identification of the preventive measures relative to the specific risks inherent to the worksite indicated in the article “RISKS INHERENT TO THE WORKSITE”;
- .8 identification of preventive measures for health and safety of employees and / or public works site as indicated in the article “SPECIFIC REQUIREMENTS FOR THE HEALTH AND SAFETY OF OCCUPANTS AND PUBLIC”;
- .9 training requirements;
- .10 procedures in case of accident/injury;
- .11 written commitment from all parties to comply with the safety program;
- .12 construction site inspection checklist based on the preventive measures;
- .13 emergency response plan which shall contain at least the following:
 - .1 construction site evacuation procedures;
 - .2 identification of resources (police, firefighters, ambulance services, etc.);
 - .3 identification of persons in charge of the construction site;
 - .4 identification of the first-aid attendants;
 - .5 communication organizational chart (including the person responsible for the site and the Departmental representative);
 - .6 training required for those responsible for applying the plan;
 - .7 any other information needed, in the light of the construction site’s characteristics.

If available the Departmental representative will provide the evacuation procedures to the Contractor who shall then coordinate the construction site procedure with that of the site and submit it to the Departmental representative.

- .2 Departmental representative may respond in writing, where deficiencies or concerns are noted in the prevention program and may request resubmission with correction of deficiencies or concerns.
- .3 In addition to the prevention program, during the course of the work the Contractor shall elaborate and submit to the Departmental representative specific written procedures for any work having a high risk factor of accident (for example: demolition procedures, specific installation procedures, hoisting plan, procedures for entering a confined space, procedures for interrupting electric power, etc.) or at the request of the Departmental representative.

- .4 The Contractor shall plan and organize work so as to eliminate the danger at source or ensure collective protection, thereby minimizing the use of personal protective equipment.
- .5 Equipment, tools and protective gear which cannot be installed, fitted or used without compromising the health or safety of workers or the public shall be deemed inadequate for the work to be executed.
- .6 All mechanical equipment (for example, but not limited to: hoisting devices for persons or materials, excavators, concrete pumps, concrete saws) shall be inspected before delivery to the construction site. Before using any mechanical equipment, the Contractor shall obtain a certificate of compliance signed by a qualified mechanic dated less than a week prior to the arrival of each piece of equipment on the construction site; the certificate shall remain on the construction site and transmitted to the Departmental representative on demand.
- .7 Ensure all inspections (daily, periodic, annual, etc.) for the hoisting devices for persons or materials required by the current standards are carried out and be able to provide a copy of the inspection certificates to the Departmental representative on demand.
- .8 The Departmental representative can at all times, if he suspects a malfunction or the risk of an accident, order the immediate stop of any piece of equipment and require an inspection by a specialist of his choice.
- .9 The Departmental representative must be consulted for the location of storing gas cylinders and tanks on the construction site.

1.12 RISKS INHERENT TO THE WORKSITE

- .1 In addition to the risks related to the tasks to be carried out, personnel responsible for the execution of the work on the construction site will be exposed to the following risks, inherent to the area where the work will be executed..

At the worksite there is in particular the presence of the following:

- .1 materials containing asbestos;
- .2 materials containing lead;
- .3 moulds;
- .4 other dangerous materials (specify);
- .5 confined spaces;
- .6 overhead power lines;
- .7 underground services (electric, gas, vapour, water system, etc.);
- .8 laboratories;
- .9 trees and landscaping to preserve and protect;
- .10 potentially unstable ground;
- .11 barbed wire fences;
- .12 body of water close by;
- .13 [other to specify];
- .14 [other to specify];

.15 [other to specify].

The Contractor shall process to a risk assessment of the site to validate this information and see if other risks are present on the site. He must include in its prevention program all risks that have been identified.

1.13 SPECIFIC REQUIREMENTS FOR THE HEALTH AND SAFETY OF OCCUPANTS AND PUBLIC

.1 The worksite is occupied by employees and/or the public during the following times: [specify the times]. The Contractor shall consider the following specific requirements for the protection of employees and / or the public:

.1 []

.2 []

.3 []

These requirements must be included in the Contractor's site-specific safety plan as well as any other measures provided by the Contractor to protect the health and safety of employees and / or the public on the site.

1.14 UNFORESEEN HAZARDS

.1 Whenever a source of danger not defined in the specifications or identified in the preliminary construction site inspection arises as a result of or in the course of the work, the Contractor must immediately suspend work, notify the person responsible for health and safety on the construction site, take appropriate temporary measures to protect the workers and the public and notify Departmental representative, both verbally and in writing. Then the Contractor must do the necessary modifications to the prevention program or apply the security measures required in order to resume work.

1.15 PERSON IN CHARGE OF HEALTH AND SAFETY

.1 If the construction site meets the requirements of article 2.5.3 of the *Code de la sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry), the Contractor needs to hire a competent person authorized as a safety officer and appoint this person full time from the beginning of the work. This person's tasks shall solely be dedicated to the management of health and safety on the construction site. This safety officer must have the following qualifications:

.1 have a safety officer certificate issued by the CNESST;

.2 have site-related working experience of at least [_____] years specific to the activities associated with the present project;

.3 have working knowledge of occupational health and safety regulations in the workplace;

- .4 be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter the construction site to perform work;
- .5 be responsible for implementing, enforcing in detail and monitoring site-specific Contractor's Health and prevention program;
- .6 be on construction site at all times during execution of work;
- .7 inspect the work and ensure compliance with all regulatory requirements and those indicated in the contract documents or the site-specific prevention program.
- .8 Keep a daily log of actions taken and submitting a copy to Departmental representative each week.

The safety officer's certificate shall be submitted to the Departmental representative before the start of the work.

- .2 When the hiring of a safety officer is not required or if this person is hired by the Departmental representative, the Contractor shall designate a competent person to supervise and take responsibility for health and safety, no matter the size of the construction site or how many workers are present at the workplace. This person shall be on construction site at all times and be able to take all necessary measures to ensure the health and safety of persons and property at or in the immediate vicinity of the construction site and likely to be affected by any of the work. The Contractor shall submit the name of this person to the Departmental representative before the start of work.

1.16 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on construction site in accordance with Acts and Regulations of the Province, and in consultation with Departmental representative.
- .2 At a minimum, the following information and documents must be posted in a location readily accessible to all workers:
 - .1 notice of construction site opening;
 - .2 identification of principal Contractor;
 - .3 company OSH policy;
 - .4 site-specific prevention program;
 - .5 emergency plan;
 - .6 minutes of worksite committee meetings;
 - .7 names of worksite committee representatives;
 - .8 names of the first-aid attendants;
 - .9 action reports and correction notices issued by the CNESST.

1.17 INSPECTION OF THE CONSTRUCTION SITE AND CORRECTION OF NON-COMPLIANCES

- .1 Inspect the construction site and complete the construction site inspection checklist and submit it to the Departmental representative in accordance with the article “ACTION AND INFORMATIONAL SUBMITTALS” in this section.
- .2 Immediately take all necessary measures to correct any situations deemed non-compliant during the inspections mentioned in the previous paragraph or noticed by the authorities having jurisdiction or the Departmental representative or his agent.
- .3 Submit to Departmental representative written confirmation of all measures taken to correct the situation in case of non-compliance in matters pertaining to health and safety.
- .4 The Contractor shall give the safety officer or, where there is no safety officer, the person assigned to safety and health responsibilities, full authority to order cessation and resuming of work as and when deemed necessary or desirable in the interests of safety and health. This person should always act so that the safety and health of the public and construction site workers and environmental protection take precedence over cost and scheduling considerations.
- .5 The Departmental representative or his agent may order cessation of work if the Contractor does not make the corrections needed to conditions deemed non-compliant in matters pertaining to health and safety. Without limiting the scope of the preceding articles, the Departmental representative may order cessation of work if, in his view, there is any hazard or threat to the safety or health of construction site personnel or the public or to the environment.

1.18 PREVENTION OF VIOLENCE

- .1 Health and safety management of Public Works and Government Services Canada construction sites includes the implementation of measures designed to protect the psychological health of all persons who access the construction site where the work is taking place. Consequently, in addition to physical violence, verbal abuse, intimidation and harassment are not tolerated on the construction site. Any person who demonstrates such actions or behaviors will receive a warning and/or could be definitely expelled from the construction site by the Departmental representative.

1.19 BLASTING

- .1 Blasting or other use of explosives is not permitted without prior receipt of written instruction by Departmental representative.
- .2 Do blasting operations in accordance with Section [31 23 16.26 - Rock Removal].
- .3 Any operation involving explosives must be carried out under the supervision of a qualified shot-firer.
- .4 The purchase, carriage, storage and use of explosives must comply with all applicable federal and provincial legislation:

- .1 Canada: *Explosives Act* (E-17)1, *Explosives Regulations* (C.R.C. CH. 599), Standard for Storage of Blasting Charges and Detonators, *Transportation of Dangerous Goods Act and Regulations*.
- .2 Québec: *Loi sur les explosifs* (Explosives Act) (E-22), *Règlement d'application sur les explosifs* ((E-22, r.1), *Code de sécurité pour les travaux de construction* (S-2.1, r.4), (Safety code for the Construction Industry) *Règlement sur le transport des matières dangereuses* (Transportation of Dangerous Goods Regulations).
- .5 Contractor shall obtain all permits required pursuant to the legislation and regulations referred to above and keep copies on hand at the construction site.
- .6 Contractor shall facilitate inspection of the construction site, stored explosives and vehicles used to transport explosives by any government representatives or police officers whose jurisdiction encompasses explosives.

1.20 POWDER ACTUATED DEVICE

- .1 Use powder actuated devices only after receipt of written permission from Departmental representative.
- .2 Any person using an explosive actuated tool shall hold a training certificate and meet all requirements of Section 7 of the *Code de sécurité pour les travaux de construction* (S- 2.1, r. 4). (Safety code for the construction industry)
- .3 Any other explosive-actuated device shall be used in accordance with the manufacturer's directions and applicable standards and regulations.

1.21 USE OF PUBLIC ROADS

- .1 Where it is necessary to encroach on a public road for operational reasons or to ensure the security of the workers, the occupants or the public (for example: the use of scaffolding, cranes, excavation work, etc.), the Contractor shall obtain at his own expense any authorizations and permits required by the competent authority.
- .2 The Contractor shall install at his own expense any signage, barricades or other devices needed to ensure the safety and security of the public and the Contractor's own facilities.

1.22 LOCKOUT-TAGOUT

- .1 For all work on electrically or otherwise energized equipment, the Contractor shall draw up and implement a general lockout-tagout procedure and submit it to the Departmental representative.
 - .2 Supervisors and all workers concerned by work requiring lockout-tagout must have received training on lockout-tagout procedures by a recognized organization; Contractor shall submit training certificates to the Departmental representative.
-

- .3 Before starting the lockout-tagout procedure of a piece of equipment on an occupied site, Contractor must coordinate his work with the representative of the site if the interruption of the power sources can have an impact on the operations of the site or on its occupants.
- .4 Contractor must designate a qualified person as responsible for the lockout-tagout and must make sure that that person prepares a lockout-tagout data sheet for each piece of equipment involved. The lockout-tagout data sheet must be submitted to the Departmental representative at least 48 hours before the beginning of the work. The Departmental representative will review the data sheet with the representative of the site if the work takes place in an existing building. The data sheets for lockout-tagout must contain at least the following information:
 - .1 description of work to carry out;
 - .2 identification, description and location of the circuit and/or ~~piece of~~ piece of equipment to lockout-tagout;
 - .3 identification of energy sources that feeds the ~~piece of~~ piece of equipment;
 - .4 identification of each cutout point;
 - .5 sequence of lockout-tagout and the release of residual energy as well as the sequence of unlocking;
 - .6 list of material needed for the lockout-tagout;
 - .7 method of verification of zero energy implementation;
 - .8 name and signature of the person who prepared the data sheet.

When required by the Departmental representative, Contractor must record all this information on the site's representative form.

- .5 At the time of lockout-tagout, the person responsible must date the data sheet and ensure that each worker involved in the work on the circuit/~~piece of~~ piece of equipment to lockout-tagout puts his name on the data sheet and signs it.

1.23 ELECTRICAL WORK

- .1 Contractor shall ensure that all electrical work is executed by qualified employees in accordance with the provincial regulation respecting vocational training and qualification.
- .2 Contractor shall respect all requirements of standard CSA Z462 *Workplace Electrical Safety Standard*.
- .3 No repairs or alterations shall be carried out on any live equipment except where complete disconnection of the equipment is not feasible.
- .4 Contractor shall respect all requirements prescribed in paragraph "LOCKOUT-TAGOUT" in this section.
- .5 Contractor shall advise in writing the Departmental representative of all the work that cannot be done with de-energized equipment and obtain his authorization. Contractor shall demonstrate to the Departmental representative that it is impossible to do the work with de-energized equipment and provide all the information necessary to request and

obtain an energized electrical work permit (indicate working procedures, arc flash hazard analysis, protective perimeter, protective equipment, etc.) before the beginning of the work, excluding for the exceptions indicated in standard CSA Z462 Workplace electrical safety.

- .6 The energized electrical work permit on must contain at least the following elements:
- description of the circuit and equipment and its location;
 - justification for having to do the work in an energized condition;
 - description of safe work practices to apply;
 - results of the shock hazard analysis;
 - limit of the protective perimeter against electric shocks;
 - results of the arc flash hazard analysis;
 - description of the arc flash protection boundary;
 - description of the personal protective equipment required;
 - description of the means to limit access to unqualified persons;
 - proof that an information session has been carried out;
 - approval signature of the energized electrical work (by a person in authority or by the owner).
- .7 If for the operational requirements of the occupants of the site the representative of the site requires that the Contractor performs work in an energized condition, the Contractor shall obtain all the information required to request and obtain obtain an energized electrical work permit (indicate working procedures, arc flash hazard analysis, protective perimeter, protective equipment, etc.) and have it signed by the representative of the site assigned by the Departmental representative before the beginning of the work.

1.24 ASBESTOS EXPOSURE

It is not anticipated that the work covered by the present specifications involves the manipulation of materials containing asbestos; however, if the Contractor or the Departmental representative or his agent discover materials which are susceptible of containing asbestos, the Contractor must immediately stop the work and advise the Departmental representative. If more investigation demonstrates that the materials do contain asbestos, the Contractor shall comply with the following requirements.

Prior to starting any work likely to emit asbestos dust, the Contractor must:

1. Provide a written procedure for the work, identifying the risk level of the work (low, moderate, high), as defined in section 3.23 of the *Code the sécurité pour les travaux de construction* S-2.1, r- 4, (Safety code for the construction industry). This procedure must take into account all the requirements of that section 3.23.

2. Submit certificates that demonstrate that all workers involved in the work have received training on asbestos hazards and on the procedure required in the preceding paragraph.
3. Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

1.25 FUNGAL CONTAMINATION

It is not anticipated that the work covered by the present specifications involves the manipulation of materials contaminated by mould; however, if the Contractor or the Departmental representative or his agent discover materials which are susceptible of being contaminated by mould, the Contractor must immediately stop the work and advise the Departmental representative. If more investigation demonstrates that the materials do contain mould, the Contractor shall comply with the following requirements.

Prior to starting any work where workers are likely to be in contact with materials contaminated by mould, the Contractor must:

1. Provide a written procedure for the work which respects all the requirements of the *Code de la sécurité pour les travaux de construction* S-2.1, r-4, (Safety code for the construction industry), as well as the requirements indicated in the document “*Mould Guidelines for the Canadian Construction Industry*” published by the Canadian Construction Association (<http://www.cca-acc.com/documents/electronic/cca82/cca82.pdf>).
2. Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

1.26 EXPOSURE TO SILICA

For any interior or exterior work generating silica, the Contractor must respect the following requirements, in addition to those in the *Code de sécurité pour les travaux de construction* S-2.1, r.4 (Safety code for the construction industry).

1. Work in wet environment or use tools with the inflow of water in order to reduce dustiness, if not, collect dust at the source and retain it with a high-efficiency filters not to propagate dust in the environment.
2. Clean surfaces and tools with water, never with compressed air.
3. Sand and pickle surfaces by using an abrasive containing less than 1% of silica (also called amorphous silica).
4. Install shields or other containment device to prevent silica dust from migrating toward other workers or the public.

5. Wear individual respiratory and ocular protection equipment during all the operations that could generate silica dust in accordance with the requirements of the *Code de sécurité pour les travaux de construction, S-2.1, r.4* (Safety code for the construction industry).
6. Wear coveralls to prevent contamination outside the construction site.
7. Do not eat, drink, or smoke in a dusty environment.
8. Wash the hands and the face before drinking, eating or smoking.

1.27 SANDBLASTING

Prior to starting any sandblasting work, the Contractor must:

1. Provide a written procedure of the work that meets the requirements of section 3.20. of the *Code de sécurité pour les travaux de construction, S-2.1, r.4* (Safety code for the Construction Industry).
2. Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.
3. All sanding and sandblasting work shall be done by using an abrasive containing less than 1% of silica.

1.28 LEAD-BASE PAINT REMOVAL

Prior to all work where workers are likely to handle materials containing lead-base paint or other substances containing lead, the Contractor must:

1. Provide a written procedure for the work which respects all the requirements of the *Code de sécurité pour les travaux de construction S-2.1, r- 4*, (Safety code for the construction industry), as well as the requirements indicated in the document “*Guideline for Lead on Construction Projects*” published by the Ontario Ministry of Labour (http://www.labour.gov.on.ca/english/hs/pdf/gl_lead.pdf). If there is a discrepancy between the Québec regulation and the Ontario document, the most stringent requirement shall apply.
2. Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

1.29 EXPOSURE TO ANIMAL’S FECAL DROPPINGS

Prior to all work where workers are likely to come in contact with materials contaminated by animal’s fecal droppings, the Contractor must:

1. Provide a written procedure for the work which respects all the requirements of the *Code de la sécurité pour les travaux de construction* S-2.1, r- 4, (Safety code for the construction industry), as well as the requirements indicated in the document “*Des fientes de pigeons dans votre lieu de travail: méfiez-vous*” (Pigeon droppings in your workplace: Beware” published by the CNESST (http://www.csst.qc.ca/publications/100/Documents/DC100_1331_1web2.pdf)
2. Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

1.30 RESPIRATORY PROTECTION

1. Contractor must ensure that all workers who must wear a respirator as part of their duties have received training for that purpose as well as fit testing of their respirator, in accordance with CSA Standard Z94.4 *Selection, use and care of respirators*. Submit the certificates of the fit testingS to the Departmental representative on demand.

1.31 FALL PROTECTION

1. Plan and organize work so as to eliminate the risk of fall at the source or ensure collective protection, thereby minimizing the use of personal protective equipment. When personal fall protection is required, workers must use a safety harness that complies with CSA standard CAN/CSA Z-259.10 M90. A safety belt must not be used as fall protection.
2. Every person using an elevating platform (scissors, telescopic mast, articulated mast, rotative mast, etc.) must have a training regarding this equipment.
3. The use of a safety harness is mandatory for all elevating platforms with telescopic, articulate or rotative mast.
4. Define the limits of the danger zone around each elevating platform.
5. All openings in a floor or roof must be surrounded by a guardrail or provided with a cover fixed to the floor able to withstand the loads to which it could be exposed, regardless of the size of the opening and the height of the fall it represents.
6. Everyone who works within two metres from a fall hazard of three metres or more must use a safety harness in accordance with the requirements of the regulation, unless there is a guardrail or another device offering an equivalent safety.
7. Despite the requirements of the regulation, the Departmental representative may require the installation of a guardrail or the use of a safety harness for specific situations presenting a risk of fall less than three metres.

1.32 SCAFFOLDINGS

In addition to the requirements of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), the Contractor who uses scaffoldings must respect the following requirements:

Foundation

1. Scaffoldings shall be installed on a solid foundation so that it does not slip or rock.
2. Contractors wishing to install scaffoldings on a roof, overhang, canopy or awning shall submit their calculations and loads, as well as plans signed and sealed by an engineer to the Departmental representative and obtain his authorization before beginning installation.

Assembly, bracing and mooring

1. All scaffoldings shall be assembled, braced and moored in accordance with the manufacturer's instructions and the provisions of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry).
2. Where a situation requires the removal of part of the scaffoldings (e.g., crosspieces), the Contractor shall submit to the Departmental representative an assembly procedure signed and sealed by an engineer certifying that the scaffolding assembled in that manner will allow the work to be done safely given the loads to which it will be subject.
3. For scaffoldings where the span between two supports is greater than three metres, the Contractor shall provide the Departmental representative an assembly plan signed and sealed by an engineer.

Protection against falls during assembly

1. Workers exposed to the risk of falling more than three metres shall be protected against falls at all times during assembly.

Platforms

1. Scaffolding platforms shall be designed and installed in accordance with the provisions of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry).
2. If planks are used, they shall be approved and stamped in accordance with section 3.9.8 of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry)
3. Scaffoldings of four sections (or six metres) high or more shall have a full platform covering the entire surface between the putlogs every three metres high or fraction thereof, and the components of that platform shall not be moved at any time to create an intermediate landing.

Guardrails

1. A guardrail shall be installed on every landing.
2. Cross braces shall not be considered as guardrails.

3. If the platforms are not covering the entire surface between the putlogs, the guardrail must be installed just above the edge of the platform so that there is no empty horizontal space between the platform and the guardrail.
4. Where scaffoldingS has four sections (or six metres) high or more and full platforms are required, the guardrails shall be installed on each landing at the start of work and shall remain in place until the work is completed.

Access

1. The Contractor shall ensure that access to the scaffoldingS does not compromise worker safety.
2. Where the platforms of the scaffoldingS are comprised of planks, ladders shall be installed in such a way that planks extending beyond the platform do not block the way up or down.
3. Notwithstanding the provisions of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), stairs shall be installed on all scaffoldingS that have six or more rows of uprights or is six sections (or nine metres) high or higher.

Protection of the public and occupants

1. When scaffoldingS are installed in a zone accessible to the public, the Contractor shall take the necessary measures to prevent the public from having access to them and, if applicable, to the work or storage area located in the vicinity of these scaffolding.
2. Contractor must install covered walkways, nets or other similar devices to protect workers, the public and the occupants against falling objects. The means of protection must be approved by the Departmental representative.

Engineering plans

1. In addition to those required by the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), the Departmental representative reserves the right to require engineering plans for other types or configurations of scaffoldingS.
2. A plan signed and sealed by an engineer is required for all scaffoldingS that will be covered with a canvas, a tarpaulin or any other material that has wind resistance.
3. A certificate of conformity signed by an engineer is required in all cases where an engineering plan is required for the installation and this, before anybody uses the facility. A copy of these documents must be available on the construction site at all times.

1.33 CONFINED SPACES

In addition to the requirements of the provincial regulation applicable to confined spaces, the Contractor must respect the requirements in the following paragraphs.

The Departmental representative reserves the right, depending on the nature of the risk of the confined spaces, of the work to be done and/or of the level of competence in confined spaces demonstrated by the Contractor, to require from the latter that he use the services of a firm specialized in health and safety or in confined space work to perform the analysis of the risks inherent to the confined spaces, to complete

the entry permit, to conduct surveillance of the work or for any other task related to the work in confined spaces.

Information on confined spaces existing on the construction site

1. The following presents a non-exclusive list of the confined spaces that the Contractor will likely have to access during this project:

List of confined spaces

2. The Contractor shall take into consideration each of these confined spaces and must also add to this list the confined spaces that he is likely to build/install during this project.

Person in charge of the health and safety for the work in confined spaces

1. The Contractor shall designate a person to be in charge of the health and safety for the work in confined spaces. This person shall be qualified, as defined in the article 297 of the *Règlement sur la santé et la sécurité du travail* (S-2.1, r.13) (Occupational Health and Safety Regulation). This person must be present at all times during work in confined spaces and must make sure that all the requirements of the regulation and the ones specified in this section are respected. This person must amongst other things fill out and issue the entry permit for the confined spaces.

Training

1. All persons having access to a confined space, including the person in charge and the watcher of the confined space shall have completed training on entry in confined spaces.
2. All persons who have to use supplied-air respirator to access the confined spaces shall have completed training on the use of these apparatus.
3. All persons identified as rescuers for confined spaces shall have completed training on confined spaces rescue.
4. Each training required in the preceding paragraphs must be provided by a firm specialized in health and safety or in confined spaces.
5. The training certificates of the persons mentioned above must be submitted to the Departmental representative before the beginning of the work in confined spaces.

Risk assessment of confined spaces

1. For each of the confined spaces listed at the beginning of this article, the Contractor must obtain the necessary information from the site representative and proceed to the assessment of the risk inherent to each confined space and relative to:
 - a. the prevailing internal atmosphere, namely the concentration of oxygen, inflammable gases and vapours, combustible or explosive dusts as well as the categories of contaminants likely to be present in this enclosed area or nearby;
 - b. the fact that the natural or mechanical ventilation is insufficient
 - c. The materials that are present there and that can cause the worker to sink, to be buried or to drown, such as sand, grain or a liquid;
 - d. the interior configuration;
 - e. pipes and conduits penetrating the confined space;
 - f. energies such as electricity, moving mechanical parts, heat stress, noise and hydraulic energy;
 - g. ignition sources such as open flames, lighting, welding and cutting, static electricity or sparks;
 - h. all other particular circumstances, such as the presence of vermin, rodents or insects.

These risk assessments must be done by the person in charge of the health and safety of the work in confined spaces. They must be submitted to the Departmental representative for analysis at least 10 days before the proposed date for the work in confined spaces and they must also include the following information:

- a. location of the confined space;
- b. description of the confined space;
- c. dimensions of the confined space;
- d. number, location and dimension^S of the openings;
- e. content of the confined space (material, substances, etc.)
- f. date of the assessment;
- g. name and signature of the person who conducted the assessment and the name of his employer.

The Contractor must repeat the same process for each of the confined spaces that he will build/install during this project.

Confined spaces entry permits

1. At least 5 days before the scheduled date for the work in a confined space the Contractor must submit for analysis to the Departmental representative a copy of each entry permit specific to the confined spaces where he must access. The entry permits must be completed by the person in charge of the health and safety of the work in confined spaces, and must contain the following information as a minimum:
 - a. description of the work that will be carried out and the method of work, including the materials and tools needed to do this work;
 - b. description of the risks and corresponding preventive measures according to the risk assessment inherent to the confined space done previously and according to the work to be carried out;
 - c. safety equipment that will be used to control the risks of confined spaces (e.g.: fan, gas detectors, local exhaust ventilation, personal protective equipment, etc.);
 - d. rescue procedure covering at least the following:

- e. means of communication between the supervisor of the confined space and the workers in the confined space;
 - f. lifesaving equipment specific to each confined space;
 - g. confirmation that the municipal emergency response service has been advised that work in confined spaces would be going on at this specific construction site and that they may intervene do to a confined space rescue; otherwise, the Contractor must identify the workers on the construction site that will act as rescuers in a confined space in the case where such rescuers must enter the confined space (rescue training is mandatory);
 - h. location of telephone and phone number of the municipal emergency response service (if applicable);
 - i. date of entry permit;
 - j. name of person who issued the permit and the name of his employer;
 - k. name of the confined space safety watcher and the name of his employer;
 - l. name of the workers who must enter the confined space and the name of each one's employer.
2. In cases where the site representative requires the use of a confined space entry permit specific to his site, the Contractor must comply with the requirements of that permit.

Medical surveillance

1. The Contractor must submit to the Departmental representative a medical certificate dated in the last two years for all persons who must use a supplied-air respirator. The certificate must confirm the ability of each person to use this type of apparel.
2. It is recommended that the persons who have to work in sewer collection systems or other similar systems be vaccinated against diphtheria, tetanus and hepatitis "B".

Requirements while working in confined spaces

1. Before each entry into a confined space, the person in **charge** of the health and safety for the work in confined spaces shall take readings of oxygen concentration, flammable gases and all toxic gases likely to be present and record these readings on the entry permit required earlier.
2. No worker can access the confined space if the following requirements are not respected:
 - a. the concentration of oxygen shall be greater than or equal to 19.5% and less than or equal to 23%;
 - b. the concentration of inflammable gases or vapours shall be less than or equal to 10% of the lower explosion limit;
 - c. the concentration of other gases must not exceed the standards prescribed in annex I of the *Règlement sur la santé et la sécurité du travail* (S-2.1, r.13) (Occupational Health and Safety Regulation).
3. If the oxygen and gas concentrations measured respect the regulatory values, the person in charge of the health and safety for the work in confined spaces must ensure that all preventive measures indicated on the permit are in place and then must complete the entry permit (date, time, signatures, etc.) before issuing the permit and allow entry into the confined space.

4. A permit is only valid for one work shift; the Contractor must submit a new permit for each extra shift.
5. During the work inside the confined space, the gas concentration must be measured continuously and the gas detector must be installed at ~~the level of the~~ the breathing area of the workers. If the conditions inside the confined space are such that the workers might not hear/see the detector's alarm, the Contractor must find a way for the confined space safety watcher to watch the concentration measures while maintaining the measurements at the level of the breathing zone of the workers.
6. If the work is organized in a way that the workers are scattered far away from each other in a large confined space, the Contractor needs to provide additional gas detectors.
7. The Contractor must provide the gas detectors and maintain them in good condition. He must be able to show that the gas detectors used have been calibrated and adjusted by the person in **charge** of the health and safety for the work in confined spaces or by a qualified person, in accordance with the manufacturer's recommendations. The Departmental representative can at all times have the accuracy of the measuring devices checked. In the event of the failure of a detection device, the work must be stopped immediately and all workers must leave the confined space.
8. The manufacturer's manual of the gas detectors must be available on the construction site.
9. The Contractor shall provide a ventilation system to keep concentrations of contaminants below the regulatory limits.
10. If work generating contaminants are performed (welding, use of products, etc.), the Contractor must, if needed, install an aspiration system for the contaminants so that the regulatory values of air quality can be maintained at all times.
11. If a detecting device alarm goes off, all workers shall leave the confined space. The measured levels of concentration must then be recorded on the entry permit. The Contractor shall then find the source of contamination, neutralize it, ventilate the confined space to eliminate contaminant residues and authorize access to the confined space only when concentrations of oxygen and gas have returned to normal.
12. Compressed gas cylinders or welding equipment shall not be brought into confined spaces: this equipment shall remain outside and shall not block entrances or exits; all cylinders shall be properly secured.
13. Tools and electrical devices used to work in the confined spaces shall be grounded and, when necessary, designed to be explosion-proof. All equipment must be connected to a ground fault interrupter outlet or to a step-down transformer. The Contractor shall, at his own cost, hire a qualified electrician to adjust power receptacles and/or circuit breakers that he intends to use which do not meet these criteria.
14. The Contractor shall obtain a Hot Work Permit and respect the requirements to that effect when the work to be carried out includes hot work.

15. The Contractor must assign a competent person to assume the duties of confined space safety watcher. The supervisor shall be exclusively dedicated to these duties and must constantly remain outside of the confined space as long as there is a worker in it. He must also:
 - a. ensure that the entry permit has been filled, signed and posted near the confined space;
 - b. be familiar with the work procedure specific to the confined space and ensure that it is respected;
 - c. ensure continuous communication with all the workers in the confined space and ensure that all the equipment required in case of emergency is present;
 - d. have a good knowledge of the ~~backup~~ ventilation systems and ensure their proper functioning for the duration of the work;
 - e. prevent access to unauthorized persons;
 - f. ensure that the conditions around the confined space zone is not a health or security risk for the workers inside the confined space;
 - g. initiate the emergency procedure if needed.

16. The same person may act as a confined space safety watcher and as the person in charge of the health and safety of the work in confined spaces, provided all requirements of both functions are met.

1.34 EXCAVATION WORK

In addition to the requirements of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), the Contractor who performs the digging of trenches or excavations must respect the following requirements:

1. Fill out the following form and submit it to the Departmental representative before beginning to excavation work.
2. Submit to the Departmental representative, as appropriate, the following documents:
 - a. plans and specifications, signed and sealed by an engineer, of the shoring needed to be installed for the excavation work; or
 - b. engineer's advice specifying the wall angles of the trench or excavation.



Excavation guidelines

N° _____ of _____

This directive is provided as an example by the Commission de la santé et de la sécurité du travail (CSST). It contains the main instructions that the employer should give to the person responsible for the work on the site and to the operator of the earth-moving machine.

Company name	
Project name	Project no.
Address of the site	Construction start date

Field survey

Chaining or axes : from _____ to _____ Attached plan Plan no. : _____

Working method to use

While making sure the excavation walls do not pose the risk of landslide

- dig and shore according to the plans and specifications of the engineer ;
- dig and shore using a trench box ;
- dig without shoring as long as one of the following conditions is respected:
 - rock is sound;
 - no worker goes down in the trench or excavation;
 - the walls are dug according to the engineer's advice.

Dimensions of excavation (Dig according to the following profile.)

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

	Minimum	Maximum
H Depth		
Wb Width at bottom		
Width at top		

Safety measures

Deposit the materials at a distance of at least 1.2 metre (4 feet) from top of walls.
 Do not allowed any vehicle to come closer than 3 metres (10 feet) from top of walls.

- Respect the engineer's plan concerning work in the proximity of an existing facility.
- Follow the location plan to locate the underground infrastructures.
- Install signaling devices prescribed in the traffic plan (barriers, visual references, etc.).
- Assign a flag person or more to control the flow of traffic.
- Respect the procedure prescribes for work near power lines.
- Provide protection devices for the workers, such as concrete crash barriers.

Name	Occupation	
Signature	Date	Telephone no.
Directive submitted		
<input type="checkbox"/> to the responsible of the work on the site <input type="checkbox"/> to the operator of the earth-moving machine		

DCT060464 (0111-41)

1.35 LIFTING LOADS WITH CRANE OR BOOM TRUCK

1. Unless specified otherwise, the Contractor must prepare a hoisting plan and submit it to the Departmental representative for all lifting operations done with a crane or a boom truck at least 5 days before these lifting operations begin. The hoisting plan must contain at a minimum the information listed at the end of this article.
2. The hoisting plan must be signed and sealed by an engineer for the following lifting operations:
 - a. lifting of concrete panels;
 - b. lifting mechanical/electrical equipment on a roof or on the floor of a building;
 - c. lifting of loads encroaching on the public road;
 - d. lifting large dimensionS or very heavy loads;
 - e. all other lifting operation, in accordance with the requirements of the Departmental representative.
3. In addition to the above requirements, the Contractor must plan the hoisting operations in a way as to avoid that the loads pass over the occupied zones on the site. When there is no alternative, the hoisting plan must absolutely be signed and sealed by an engineer and must guarantee the security of the occupants in that zone; the plan must also be approved by the Departmental representative. The Departmental representative can, if he deems necessary, require that the work be done at night or on weekends.
4. Upon the beginning of the work on the construction site, the Contractor must submit the list of the hoisting plans anticipated for the whole project to the Departmental representative. That list shall be updated as needed if changes occur during the work.
5. In addition to the mechanical service inspection certificate, the annual inspection certificate and the crane logbook must be aboard all cranes and boom truck cabs.
6. The entire lifting area shall be marked off to prevent the entry of non-authorized persons.
7. The Contractor shall carefully inspect all of the slings and lifting accessories and make sure that those in poor condition are destroyed and scrapped.
8. Compressed-gas cylinders shall be lifted with a basket specially designed for this purpose.

MINIMUM CONTENT OF HOISTING PLAN

- Sketch indicating at a minimum, the location of the crane, the surrounding facilities, the zone covered by the hoisting operations, the pedestrian's pathways and vehicular routes, the security perimeter, etc.
- Weight of loads
- DimensionS of loads
- List of hoisting devices and weight of each

- Total weight lifted
- Maximum height of obstacles to clear
- Height of loads lifting relative to the surface of the roof (in the case of loads to be placed on roofs)
- Use of guide cables
- Type of crane used
- Crane capacity
- Boom length
- Boom angle
- Crane's radius of action
- Deployment of stabilizers
- Percentage usage of the crane's capacity
- Verification confirmation of hoisting equipment
- Identification of the crane operator and the person responsible for the hoisting operations with date and signatures

1.36 HOT WORK

Hot work means any work where a flame is used or a source of ignition may be produced, i.e., riveting, welding, cutting, grinding, burning, heating, etc.

1. Before the beginning of each shift of work and for each sector, the Contractor must obtain a "Hot Work Permit" emitted by the person responsible for the site.
2. A working portable fire extinguisher suitable to the fire risk shall be available and easily accessible within a 5 m radius from any flame, spark source or intense heat.
3. The Contractor must appoint an individual to do continuous monitoring of the fire risks for a period of one (1) hour after the end of the shift of hot work. This individual shall sign the section for this purpose on the permit and give it to the person in charge of the construction site after the one-hour period.
4. When the hot work is done in areas where there is combustible materials or where the walls, ceilings or floors are made of or covered with combustible materials, a final inspection of the work area must be scheduled four (4) hours after the work has finished. Unless specified

otherwise by the Departmental representative, the Contractor must assign a person to carry out this monitoring.

Welding and cutting

In addition to the requirements prescribed in the preceding paragraphs, the Contractor must respect the following requirements:

1. Welding and cutting work must be carried out in accordance with the requirements of the *Code de Sécurité pour les travaux de construction, S-2.1, r.4* (Safety code for the construction industry) and CSA standard W117.2, Safety in Cutting, Welding and Allied Processes.
2. Air extraction system with filters must be used for all welding and cutting work performed inside.
3. Stop all activities producing flammable or combustible gas, vapours or dust in the vicinity of the welding or cutting work.
4. Store all compressed gas cylinder on a fireproof fabric and make sure that the room is well ventilated.
5. Store all oxygen cylinders more than 6 metres from a flammable gas cylinder (ex: acetylene) or a combustible such as oil or grease, unless the oxygen cylinder is separated from it by a wall made of non-combustible material as mentioned in the article 3.13.4 of the *Code de sécurité pour les travaux de construction, S-2, r. 6* (Safety code for the construction industry)
6. Store the cylinders far from all heat sources.
7. Not to store the cylinders close to the staircases, exits, corridors and elevators.
8. Do not put acetylene in contact with metals such as silver, mercury, copper and alloys of brass having more than 65% copper, to avoid the risk of an explosive reaction.
9. Check that welding equipment with electric arc has the necessary tension and are grounded.
10. Ensure that the conducting wires of the electric welding equipment are not damaged.
11. Place the welding equipment on a flat ground away from the bad weather.
12. Install fireproof canvas when the welding work is done in a superposition and where there is the risk of falling sparks.
13. Move away or protect the combustible materials which are closer than 15 metres from the welding work.
14. Prohibition to weld or cut any closed container.
15. Do not perform any cutting, welding or work with a naked flame on a container, a tank, a pipe or other container containing a flammable or explosive substance unless:
 - a. they have been cleaned and air samples indicating that work can be done without danger has been taken; and
 - b. provisions to ensure the safety of the workers have been made.

1.37 ROOFING WORK

Protection against fall from heights

1. Installation of guardrails is mandatory at all times; however, the installation of a warning line is allowed to define the limits of the work zones provided that all the requirements of the articles 2.9.4.0 and 2.9.4.1 of the *Code de sécurité pour les travaux de construction* (Safety code for the Construction Industry) are respected.
2. The guardrails must remain in place until the end of the project. The Departmental representative will authorize their dismantling when he can confirm that all the work, inspections and corrections have been made.
3. Workers installing guardrails must wear safety harnesses.
4. Workers installing and modifying guardrails or flashing shall wear safety harnesses in the event guardrails must be moved temporarily.
5. Workers shall wear safety harnesses when receiving material and giving directions to the crane operator next to a drop.
6. Safety harnesses shall be worn when carrying out work next to a drop where collective protection is not sufficiently safe.
7. The Contractor shall provide a fastening method and safety cable system compliant with section 2.10.12 of the *Code de sécurité pour les travaux de construction (L.R.Q., S-2.1, r.4)* (Safety code for the Construction Industry) for each construction site or location.

Lifting of materials

1. For all winch installations, the Contractor shall provide the Departmental representative with the installation method recommended by the manufacturer. If unavailable, the Contractor shall then provide an installation procedure signed and sealed by an engineer. The installation procedure must take into account load-bearing capacity, the amount, weight and location of counterweight and any other detail that may affect the capacity and stability of the device.
2. The Contractor shall carefully inspect all of the slings and lifting accessories and make sure that those in poor condition are destroyed or scrapped.
3. Compressed-gas cylinders shall be lifted with a basket specially designed for this purpose.
4. In all cases where a crane or boom truck is used, the Contractor must respect the requirements of the paragraph Lifting Loads With Crane or Boom Truck, in this section.

Protection against burns

1. Individuals assigned to the boilers shall wear long sleeves, safety glasses and a face shield when filling the boilers.
2. Individuals working with asphalt or other hot liquids shall wear gloves, long sleeves and safety glasses.

Protection against fire

1. The storage and use of propane cylinders shall comply with the standard CAN/CSA-B149.2, *Propane Storage and Handling Code*. The cylinders shall be stored outdoors, in a safe place, away from any unauthorized handling, in a storage cabinet specially designed for this purpose.

The cylinders shall be securely kept upright and locked at all times in a place where no vehicles are allowed unless the cylinders are protected by barriers or similar protection.

2. The number of propane cylinders on the roof shall not exceed the number of cylinders necessary for a day's work, and cylinders shall at all times be secured upright or held in a cart designed for this purpose.
3. All hot work (burning, heating, riveting, welding, cutting, grinding, etc.) must be done in accordance with paragraph "Hot Work" in this section.

Material and waste management

1. On the roof, light material and sheet material shall be kept in containers or be securely fastened. In the event this requirement is disregarded in the slightest way, the Departmental representative may disallow the storage of materials on the roof.
2. Waste shall be discarded as produced using a waste chute or appropriate containers. The Contractor shall provide the means to prevent waste from being carried away by the wind.
3. All waste must be removed from the roof at the end of shifts.
4. Unless otherwise authorized by the Departmental representative, all waste bins must be placed at least 3 m from any structure or building.

Protection of occupants and the public

1. Contractor must install covered passageways, nets or other devices above the entrances and the exits of the building to protect the workers, the public and the occupants against falling object. The means of protection must be approved by the Departmental representative.
2. A safety perimeter on the ground must be placed under the work zone in order to protect the workers, the public and the occupants.
3. The ground construction site, material handling area and boiler area shall be clearly sealed off to prevent occupants or the public from accessing the construction site and areas.
4. Before installing any device that may emit gas or fumes, the Contractor shall receive authorization from the person in charge of the construction site, who shall make sure that there is no risk of gas or fumes infiltrating the building's ventilation system.

1.38 STEEL STRUCTURE ERECTION OR DISMANTLING WORK

- .1 In addition to respecting section 3.24 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry), the Contractor must also respect the requirements described in the following paragraphs.
- .2 Contractor must submit the following documents to the Departmental representative before the beginning of steel structure erection work:
 - .1 erecting procedures in accordance with article 3.24.10 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry);
 - .2 rescue procedures for the release of a worker suspended in a safety harness within a maximum of 15 minutes; procedures must be adapted to the construction

- site and in accordance with article 3.24.4 of that same code; the procedure must be accompanied by a written confirmation that it has been tested;
- .3 statement from an engineer that the anchor rods have been installed in accordance with the anchoring plan as required by the article 3.24.12 of that same code;
 - .4 hoisting procedures in cases where the lifting is done in one of the ways described in the article 3.24.15 of that same code;
 - .5 name of the individual identified as rescuer and his rescue training certificate;
 - .6 name of the individual identified as first-aid attendant and his first-aid training certificate.
- .3 The Contractor must make sure that the following documents are available for consultation on construction site at all times:
- .1 Steel structure manufacturer's erection plan in accordance with the requirements of article 3.24.9 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry);
 - .2 Column anchor rodS's anchoring plan in accordance with the requirements of article 3.24.11 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry).

1.39 WORK NEAR BODIES OF WATER

1. For all work done near a body of water (such as work above water, work on a wharf, work on the edge of a watercourse, etc.), the Contractor must respect the requirement of the following paragraphs in addition to those of *Code de sécurité pour les travaux de construction* (Safety code for the Construction Industry).
2. The Contractor must plan his work in a way to implement safety measures to prevent any worker from falling in the water. The use of these measures should be favoured over the wearing of a life jacket.
3. Submit the following documents to the Departmental representative before the beginning of the work:
 - a. description of the body of water;
 - b. description of the work done next to this body of water;
 - c. plan of transportation on water adapted to the work and to the characteristics of the body of water;
 - d. rescue plan adapted to the work and to the characteristics of the body of water;

Each of the document listed above must contain at a minimum the information required in section 11 of the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry).

If there is the possibility that all or part of the work can be done during the winter, the safety measures included in the documents required above must be adapted accordingly.

4. The Contractor must submit to the Departmental representative the certificate of training required in article 11.2 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry) for the following individuals:
 - a. the person assigned to prepare the documents required in the preceding paragraph; and
 - b. each person responsible for the transport or rescue operations
5. If the rescue plan stipulates the use of a vessel, the Contractor must submit to Departmental representative the competency card or certificate for the individuals in the rescue team for his work, issued by Transport Canada.
6. The Contractor must include in his weekly inspection checklist the devices required in the articles 11.4 and 11.5 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry).
7. Ensure that a rescue vessel moored and in the water is available at each place where a worker may fall in the water. However, a vessel may serve more than one workplace on the same construction site provided the distance between any of these workplaces and the vessel is less than 30 m.
8. Where the construction site is a wharf, a pier, a quay or any similar structure, a ladder with at least two (2) rungs below the surface of the water shall be installed on the front of the structure every 60 m.

1.40**INTERIOR USE OF INTERNAL COMBUSTION ENGINES**

1. In addition to respecting article 3.10.17 of the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry), the Contractor must also respect the requirements described in the following paragraphs.
2. The use of a gas-powered equipment inside a building is prohibited even if the building is provided with openings.
3. The use of other equipment powered by an internal combustion engine inside a building must be submitted to the approval of the Departmental representative.
4. For the use of any piece of equipment powered by an internal combustion engine inside a building, even if the building is provided with openings, the Contractor must install a ventilation system able to maintain the concentrations of toxic gases below the regulatory values. The stale air shall be exhausted outside the building.
 - a. Before using equipment powered by an internal combustion engine, the Contractor must plan and write the following:
 - b. number of fans to install;
 - c. power of the fans;
 - d. location of the fans;
 - e. dimensions of the openings that will be open during the work.

5. During the operation of equipment with internal combustion engine, the Contractor must measure the concentrations of carbon monoxide and nitrogen oxides in the work area and at the breathing area of the workers; the concentration levels measured must be recorded in a register every 30 minutes that must be available for consultation.
6. If work is in an occupied building, the Contractor must also measure the concentrations of carbon monoxide and nitrogen oxides in the rooms next to the work area and the concentration levels measured must be recorded in a register every 30 minutes.
7. If the carbon monoxide or nitrogen oxides detector alarm goes off during the work, the Contractor must stop the work and take the corrective measures required before resuming the work.
8. A portable fire extinguisher must be available at all times in the work area during the use of equipment with internal combustion engines.
9. The equipment must be maintained at a safe distance from all combustible material.
10. The storage of fuel for any equipment with internal combustion engine is prohibited inside a building.

1.41 TEMPORARY HEATING

1. In addition to respecting section 3.11 of the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry), the Contractor must also respect the requirements described in the following paragraphs.
2. A portable fire extinguisher must be available at all times near the heating units, no matter what type of heating is used.
3. The heating units must always be used in accordance with the manufacturer's specifications.
4. If applicable, the canvas or tarpaulins used next to the heating units must be solidly fixed so as not to be projected on the heaters, on the pipes connected to the heaters or on any other heat source.
5. The gas cylinders must be installed in a way that they are protected from vehicule and other equipment traffic.
6. For the use of heating units other than electric, the Contractor must install a carbon monoxide detector in the work area, next to the heating units and/or the workers, throughout the course of the heating period. The Contractor must immediately apply the corrective measures required to the heating units if the detector's alarm goes off.
7. The Contractor must ensure a minimum surveillance of the heating units outside the hours of work (nights and weekends). He must submit a surveillance plan to the Departmental representative before the use of the heating units.

1.42 WORK NEAR OVERHEAD POWER LINES

- .1 When there is an overhead power line in the work zone and that the Contractor chooses to apply paragraph b) of article 5.2.2 of the *Code de sécurité pour les travaux de construction* (2.1, r.4) (Safety code for the Construction Industry), a copy of the agreement with the electrical power company and a copy of the work process, required in the article 5.2.2 b), must be submitted to the Departmental representative before the beginning of the work in relation to these documents.

1.43 DIVING OPERATIONS

In accepting this contract, the Contractor agrees to satisfy the following requirements:

1. Compliance with all the requirements of the *Règlement sur la santé et la sécurité du travail* (S-2.1, r.13) (Regulation respecting occupational health and safety), more precisely section XXVI. I, entitled *Travail effectué en plongée* (Underwater Work). Compliance, furthermore, with the latest editions of standards CAN/CSA Z275.2 – *Occupational Safety code for Diving Operations*, CAN/CSA Z275.1 – *Hyperbaric Chambers* and CAN/CSA Z275.4 – *Competency Standard for Diving Operations*. In the event of conflict between these requirements, the most stringent requirement shall apply.
2. In addition to the above, in cases where construction work is involved, compliance with the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry).
3. Before starting the work, submit to the Departmental representative the following documents, as per the *Règlement sur la santé et la sécurité au travail* (S-2.1, r.13) (Regulation respecting occupational health and safety):
 - a. the professional diving training certificate of each member of the dive team OR a document recognizing the skills of those persons in accordance with the *Competency Standard for Diving Operations*, CAN/CSA Z275.4-02, as per section 312.8 of the Regulation;
 - b. the workplace first-aid training certificate of each member of the dive team;
 - c. the medical certificate of each member of the dive team;
 - d. for each dive included in this contract, a dive plan containing the following information, in addition to that required under the *Règlement sur la santé et la sécurité au travail* (Regulation respecting occupational health and safety):
 - i. the thermal protection to be used;
 - ii. the repetitive dive factor;
 - iii. the no-decompression limit;
 - iv. the circumstances in which the dive must be terminated;
 - v. the procedures to be followed to ensure that machinery, equipment or devices that could create a hazard have been locked out;
 - vi. the decompression table to be used, as required;
 - e. notification confirming that a system for communicating with the *Service d'assistance médicale pour les urgences en plongée* (Medical assistance service for diving emergency) is available at the diving station at all times.

4. The Contractor shall take into account the following specific characteristics of the worksite, and adapt its dive plan accordingly:

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5. Where the dive takes place at one of the following locations, provide the Departmental representative confirmation that the authorities concerned have been notified:
- a. upstream or downstream from a hydraulic structure or submerged water line;
 - b. in marine waterways;
 - c. in port facilities.
6. If the dive station is more than 2 metres above the water, provide the Departmental representative:
- a. a drawing of the equipment used to transport the worker through the air-water interface, if a device other than a stage is used for that purpose;
 - b. a drawing of the device used to hoist the stage or other device, unless that device is a crane or boom truck.
7. If the dive is carried out from a vessel, provide the Departmental representative the following documents:
- a. proof of qualification of the vessel operator;
 - b. the vessel's certificate of compliance from Transport Canada.
8. Before starting the work, carry out an underwater rescue simulation at the site, as required under section 312.31 of the *Règlement sur la santé et la sécurité du travail* (S-2.1, r.13) (Regulation respecting occupational health and safety).
9. On a daily basis, complete and provide to the Departmental representative a checklist confirming the presence and condition of the equipment required at the dive site as per the dive plan.
10. Ensure that all other documents required under section XXVI of the *Règlement sur la santé et la sécurité du travail* (S-2.1, r.13) (Regulation respecting occupational health and safety) are available at the construction site at all times (diving logbook, diver's logbook, etc.).

1.44 HEALTH AND SAFETY SUBORDINATION AGREEMENT

Project: _____ **Address:** _____

EXTERNAL CONTRACTOR

I hereby agree to submit to the authority of (name of the Principal Contractor's business) _____, which is the Principal Contractor for the project indicated above during the entire duration of our work on the construction site. Accordingly, I confirm that I have reviewed the Principal Contractor's prevention program, and I agree to:

- inform my employees of the content of the Principal Contractor's prevention program and ensure that its content are complied with at all times;
- apply the prevention program that is specific to the activities that we carry out under this project;
- inform the Principal Contractor of my actions or dealings on the construction site and obtain the Principal Contractor's agreement before the start of work; and
- follow the health and safety directives provided by the representative of the Principal Contractor on the construction site and, depending on requirements, attend training sessions and health and safety meetings organized by the representative of the Principal Contractor.

Name of representative: _____

Name of business: _____

Description of work to be done on the construction site: _____

Approximate dates of work (start-end): _____

Signature: _____ Date: _____

PRINCIPAL CONTRACTOR

I hereby agree to allow the business (name of external contractor) _____ to perform the work under this project indicated above and, as Principal Contractor, to take the necessary steps to protect the health and safety of workers on the construction site. Should the Contractor repeatedly refuse or fail to comply with my directives, I agree to inform PWGSC's Departmental representative of this and to provide documentary evidence of my actions or dealings with the Contractor.

Name of representative: _____

Name of the Principal Contractor's business: _____

Signature: _____ Date: _____

Submit a completed and signed copy to PWGSC's Departmental representative

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

ANNEX A4 COMMISSIONING STANDARDS

RS 8 COMMISSIONING OF THE FACILITY

(Applicable to deconstruction of the existing building (decommissioning), construction and fit-out of the new building, construction of the new parking lot and services lanes, and site work (commissioning))

The construction project will be carried out in construction management mode based on a series of separate construction packages. Commissioning and decommissioning must factor in this particularity.

To comply with the requirements of the Gold-level LEED-NC certification, the Consultant must retain the services of a Commissioning Manager from a firm other than that of the Consultant and Sub-Consultants in engineering.

The Commissioning Manager represents the interests of the Department Representative and the Client Departments. He or she is responsible for all commissioning activities during the project's development, execution and post-construction periods.

During this step, in order to successfully complete the commissioning services, the Commissioning Manager, the PWGSC Commissioning Coordinator, and the Construction Manager's Commissioning Agent must collaborate closely with the Consultant's Design Professionals in order to produce coordinated drawings, reports and manuals in accordance with Contract Documents.

The requirements under the Gold-level LEED NC Gold evaluation system must be met.

RS 8.1 General Requirements

8.1.1 Glossary

Consultant: Entity responsible for project, including Design Professionals.

Consultant's Design Professionals: Professionals responsible for the design of a project's drawings and specifications.

Commissioning Manager: A commissioning professional. Must be a resource external to the Consultant's firm. This resource must not have been involved in the design of the project.

8.1.2 Composition, Duties and Responsibilities of the Commissioning Team

Department Representative to maintain overall responsibility for project management and is sole point of contact for members of Commissioning Team.

The project's Commissioning Team consists of the following collaborators:

- **PWGSC Commissioning Coordinator (Quality Assurance)**

The Coordinator supervises the execution of all commissioning-related activities so as to deliver a fully operational project. He or she is assisted by the PWGSC Design Quality Review Team, which will periodically review the site to observe work progress. His or her responsibilities include, but are not limited to:

- Review of the commissioning documents from an operational perspective;
- Approval of the following: performance, reliability, durability of operation, accessibility, maintainability, and operational efficiency under all conditions of operation;

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- Quality monitoring for commissioning activities, training supervision, approval of commissioning documents.
- **Commissioning Manager**
The Manager's responsibilities include, but are not limited to:
 - Organization of commissioning and meetings;
 - Development of commissioning documentation;
 - Drafting of minutes of meetings and the commissioning report;
 - Monitoring of commissioning activities;
 - Review of the following: performance, reliability, durability of operation, accessibility, maintainability, and operational efficiency under all conditions of operation;
 - Witnessing and certifying the accuracy of select reported results;
 - Witnessing testing, adjusting and balancing operations and related testing, and select certification;
 - Approval of the Building Management Manual;
 - Development and implementation of the final Commissioning Plan;
 - Verifying performance of installed systems and equipment;
 - Approval of Training Plan.
- **Consultant's Design Professionals**
The resources' responsibilities include, but are not limited to:
 - Participation in commissioning activities and meetings;
 - Participation in development of commissioning documentation;
 - Review of the following: performance, reliability, durability of operation, accessibility, maintainability, and operational efficiency under all conditions of operation;
 - Certification and approval of selected reported results;
 - Certification of testing, adjusting and balancing operations and related testing.
 - Preparation of the Building Management Manual, in accordance with the instructions of the Commissioning Manager;
 - Participation in the development and implementation of the final Commissioning Plan;
 - Participation in verification of performance of installed systems and equipment;
 - Development of Training Plan.
- **Construction Manager**
The Construction Manager's team includes its Subcontractors and suppliers. This team must carry out construction/installation in accordance with the requirements in the Contract Documents. Responsibilities include, but are not limited to:
 - Full collaboration and participation in commissioning activities;
 - Testing;
 - Performance of testing, adjusting and balancing operations;
 - Performance of commissioning activities;
 - Delivery of training and provision of commissioning documentation;
 - Development of the Building Management Manual;

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- Designation of the Construction Manager's Commissioning Agent who will collaborate with the Commissioning Manager, the Consultant's Design Professionals, and the PWGSC Commissioning Coordinator for administration and coordination matters.
 - **Construction Manager's Commissioning Agent**
The Agent performs the commissioning activities indicated in the specifications. His or her responsibilities include, but are not limited to:
 - Organization of commissioning and meetings;
 - Implementation of final Commissioning Plan;
 - Demonstration of operation of equipment and systems;
 - Implementation of Training Plan;
 - Witnessing testing and certifying accuracy of reported results;
 - Testing;
 - Witnessing testing, adjusting and balancing operations and related testing, and certification;
 - Preparation and submission of test reports;
 - Monitoring of static verification and performance control records with Subcontractors;
 - Development of the Building Management Manual.
 - **PWGSC Property Manager**
The Manager plays a key role during the operations phase and afterward. Responsibilities include:
 - Acceptance of the facility;
 - Day-to-day operation and maintenance of the facility.
- 8.1.3 General Instructions**
- The Commissioning Manager must:
 - Provide commissioning services for the project to ensure that the planning, design, installation, testing, optimization, and operating and maintenance conditions of the finished work, systems and equipment are in accordance with project requirements, the Basis of Design and any other requirement set out in the Contract Documents for construction.
 - Bear general responsibility for commissioning, production of reports and commissioning documentation.
 - Compile the commissioning data and prepare a report for the PWGSC Commissioning Coordinator.
 - Regularly transmit an update of the log of commissioning issues to the PWGSC Commissioning Coordinator.
 - Assemble the final commissioning documentation, transmit the final Commissioning Plan and manual to the PWGSC Commissioning Coordinator and the Construction Manager's Commissioning Agent for review and acceptance, and recommend acceptance or rejection of the project's finished work, systems, equipment and assemblies.
 - The designation of a PWGSC Commissioning Coordinator and a Commissioning Manager does not permit the Consultant's Design Professionals to waive their professional responsibilities as outlined in the contract, including on-site supervision and reviews to ensure that the finished work conforms to the requirements, to the project's design intent and Contract Documents, and to the applicable regulations, codes and standards.

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

8.1.4 Services Required During the Planning Phase

- The Commissioning Manager must:
 - Examine the documentation on the project requirements, including the commissioning requirements and Statement of Work document prepared for it and for the Construction Manager's Commissioning Agent by the Consultant's Design Professionals, as well as the Commissioning Plan and the commissioning specifications for the model/pre-design phase.
 - Propose recommendations for improving functionality, efficiency, operability, maintenance capacity and savings.
 - Notify the Department Representative of all necessary special tests to be added to the project.
 - Examine the scope of commissioning with the PWGSC Commissioning Coordinator and the Construction Manager's Commissioning Agent.
 - Examine the operation and maintenance requirements and the project requirements.
 - Support the Project Team and the Commissioning Team during investigations and when preparing the design and recommendation options (IAR).

8.1.5 Services Required During Design Phase

- The Commissioning Manager must:
 - Integrate the requirements and activities of the commissioning process, the Commissioning Plan and the commissioning specifications, and commissioning forms.
 - Examine the operation and maintenance problems that need to be considered in the design phase.
 - Prepare and review the project's Contract Documents to coordinate the required interfaces among systems, equipment and assemblies.
 - Review or draft the commissioning specifications.
The commissioning specifications must include detailed descriptions of the responsibilities of all the parties, including the Construction Manager, Subcontractors, manufacturers and testing contractors, for each of the commissioning activities; details on the commissioning process; and reporting and documentation requirements, including formats requested:
 - alerts relating to coordination problems;
 - the commissioning issues log and a description of how shortcomings were resolved;
 - pre-functional checklists and start-up requirements;
 - the performance testing process;
 - the specific requirements and procedures of the performance tests;
 - requirements relating to test equipment and instrumentation;
 - the acceptance criteria for each applicable system, piece of equipment and assembly.
 - Respond promptly to comments made by the Commissioning Team during design review (review of drawings and specifications) or when there are other issues.
 - Develop or update the Commissioning Plan for the design phase. Submit it for review by the PWGSC Commissioning Coordinator and by the Construction Manager's Commissioning Agent. Include the Commissioning Plan in section 01 91 13.13 of the specifications.
 - Prepare the commissioning sections (017800, 017900, 017900.13, 019113, 019113.13, 019113.16, 019200) for all commissioned equipment.

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- Ensure that the operation and maintenance of systems and equipment are described in detail in the project's Contract Documents to ensure that the commissioning is properly applied and executed.
- Ensure that the project's design documents and Contract Documents include all devices, elements and instruments required for the execution of commissioning and for satisfactory documentation on the operation of each applicable piece of equipment, system and assembly.
- Examine, and where necessary incorporate, the comments of the PWGSC Commissioning Coordinator and the Construction Manager's Commissioning Agent made in reviews of the preliminary drawings and specifications.
- Ensure that all drawings are to scale.
- Provide drawings in A2 format to the PWGSC Commissioning Coordinator and the Construction Manager's Commissioning Agent for the 99% issuance and for construction.
- Submit the drawings and specifications to the PWGSC Commissioning Coordinator and the Construction Manager's Commissioning Agent or comment at each issuance. A minimum of 10 working days must be given for review.
- Inform the PWGSC Commissioning Coordinator and the Construction Manager's Commissioning Agent of any change during the design/construction process (including Change Orders).
- The PIPVF (Product Information and Performance Verification Form) test forms and installation checklists (ICL) must be prepared by the professional responsible for design, inserted in the specifications and adapted to the project. Coordinate with the PWGSC Commissioning Coordinator and the Construction Manager's Commissioning Agent for review and include all comments in the documents.
- Design commissioning forms specific to the project, systems, equipment and assemblies, including (as necessary):
 - pre-functional checklists,
 - start-up checklists,
 - procedures and report templates for functional performance testing,
 - procedures and report templates for integrated systems testing.

These requirements apply to all project-specific systems and equipment that are new or have been modified, or have been connected to new or modified systems. Attach forms to the submissions under the specifications section (01 91 13.16) of the commissioning forms.
- Verify and confirm that the testing, adjusting and balancing (TAB) specifications and the specifications for performance and field quality control of other systems and equipment are satisfactory and exhaustive.
- Make sure that requirements for maintenance space are respected: leave enough space to access equipment for maintenance purposes. Safe access to equipment.
- CMMS requirements:
 - The Commissioning Manager must identify the CMMS numbers on equipment affected by the project and show them in the drawings.
 - Equipment must be labelled by the Construction Manager according to PWGSC standards and requirements for rating plates. CMMS standards, requirements and forms are to be incorporated in the specifications by the Commissioning Manager.

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- Specify that labels produced must follow the rating plates standards. Include a copy of the standards in the specifications.
- Procedures for the update of single-line electrical diagrams (where applicable):
 - The Commissioning Manager is responsible for ensuring that changes to single-line diagrams are made by the Design Professionals.
 - The Commissioning Manager must recommend approval of the corrected final drawings to the Department Representative.
 - The Commissioning Manager must ensure that the Design Professionals have incorporated the changes to the single-line diagrams to the CAD version.
- Training: the Commissioning Manager must ensure that the Construction Manager is responsible for providing training on the renovated facilities to operational personnel. Indicate all training sessions and content of required training in the specifications. Indicate in the specifications that the Construction Manager must provide a Training Plan for prior approval. The Commissioning Manager must ensure that the Design Professionals have detailed the content of the Training Plan in their specifications.

8.1. 6 Services Required in the Construction, Acceptance and Closeout Phases

- The Commissioning Manager must:
 - Attend the work assessment visit / the pre-bid meeting. Present the project's commissioning process and requirements to the Construction Team. Answer questions about commissioning from the PWGSC Commissioning Coordinator and the Construction Manager's Commissioning Agent.
 - Coordinate and direct commissioning activities in a logical, sequential and effective manner using uniform protocols and forms, centralized documentation, clear and regular communications, and consultations with all necessary parties. Update time frames, schedules and technical expertise.
 - Coordinate commissioning with the Construction Manager and the Construction Manager's Commissioning Agent to ensure that commissioning activities are included in the Construction Manager's main schedule.
 - Where applicable, revise the Commissioning Plan for the construction phase that was developed during design, including the scope of work and schedule.
 - Examine the submissions and applicable Shop Drawings of the Construction Manager from the perspectives of commissioning, integration, performance, operation and maintenance. Examine the installation, operation and maintenance (IOM) manuals, directives and start-up checklists, and any other relevant documentation from the equipment manufacturer. Identify issues or problems. Submit forms and comments from the Shop Drawings review to the PWGSC Commissioning Coordinator and the Construction Manager's Commissioning Agent.
 - Revise, adapt and update the test procedures in the Commissioning Plan and the commissioning forms (pre-functional, start-up, functional performance tests and integrated systems tests) based on modifications made to the system and equipment during the construction and acceptance phase, particularly those prescribed by inquiries, job site directives and change notices from the Design Professionals.

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- Jointly with the Construction Manager, coordinate the integration of commissioning activities into the project's construction schedule.
- Organize a commissioning coordination meeting with the Construction Manager's Commissioning Agent, the Construction Manager, its Subcontractors and others involved in the commissioning (contractor in charge of call-ups, testing, adjusting and balancing contractors, manufacturer's representatives, specialized testing contractor, and others as necessary) and the PWGSC Commissioning Coordinator. Chair the meetings and prepare and distribute minutes.
- Perform site visits and inspection to review component, equipment and system installations in preparation for the completion of the Pre-Functional and Installation Verifications and Checklists.
- Monitor and evaluate the execution of inspections and pre-functional and installation tests by the Construction Manager. Ensure that pre-functional and installation test reports are accurate and exhaustive.
- Identify any shortcomings and problems and determine the corrective action to take. Prepare checklists and final reports using approved forms, and confirm that equipment and systems are ready for start-up. Submit reports to the PWGSC Commissioning Coordinator for review and approval.
- Perform the following pre-functional tasks:
 - Witness sufficient pressure tests on piping and flushing to confirm that appropriate procedures have been followed. Include the test documentation in the commissioning records.
 - Ensure that installation checklists have been duly executed by examining their completion on periodic site visits.
 - Ensure that registration forms for pre-functional systems tests have been duly completed by examining their completion on periodic site visits.
 - Verify and comment on water balancing reports through selective job site inspections and by consulting final reports. Approval and final acceptance of these reports are the responsibility of the design professional.
- Monitor and witness start-up verifications of systems selected for commissioning by the Construction Manager, the manufacturer's representative or the specialized testing contractor, as the case may be. Ensure that start-up reports are accurate and complete. Identify any shortcomings and problems and determine the corrective action to take. Prepare final start-up reports using start-up reports, data, results and adjustments provided by the Construction Manager and confirm appropriate operation or preparedness of equipment or systems for functional performance testing (FPT).
- Monitor and witness FPT and integrated systems testing (IST) of systems and assemblies carried out by the Construction Manager. Supervise and coordinate members and participants of the Commissioning Team when tests are being carried out. Compile and verify all results, data and other relevant information generated by the testing. Prepare FPT and IST reports for commissioning using approved forms. Document shortcomings and action to be taken in light of the FPTs and ISTs. Recommend acceptance or rejection of the commissioning of each system or piece of equipment. Submit the duly completed FPT and IST reports to the Commissioning Coordinator for review and approval.

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- Regularly examine the Construction Manager's drawings (annotated "as built") to verify their accuracy relative to the facilities. Report any discrepancy or problem to the PWGSC Commissioning Coordinator.
- Review and comment on the progress reports and log of commissioning issues.
- Review and comment on commissioning test reports, data and results. Confirm that tests and their results conform to the project requirements, the Basis of Design, and the Contract Documents.
- Participate in the training of operation and maintenance personnel and/or users by presenting the project's conceptual design, Basis of Design, and operation and maintenance directives.
- Review, comment on and accept the Construction Manager's documentation (which may include as-built drawings, diagrams and schedules).
- Review and comment on the Construction Manager's data and its operation and maintenance manual. Examine completeness, accuracy and updates, including modifications made in the course of the project.
- Review equipment warranties to ensure that the responsibilities of operational personnel are clearly defined.
- Review and comment on the commissioning plan and the final commissioning manual.
- Validate the project's as-built drawings. Submit these to the PWGSC Commissioning Coordinator and the Construction Manager's Commissioning Agent for review and comment. The as-built drawings must be approved by the Design Professionals.
- Make a recommendation to the Department Representative for acceptance or rejection of the finished work, system and equipment.
- Prepare the final report on the commissioning process. The report must be organized as follows and include:
 - A summary report with a list of the members of the Commissioning Team and the participants, roles and responsibilities, a brief description of the building and project, a summary of the project's requirements and the Basis of Design, and an overview of the scope and the commissioning and test methods. For each system and piece of equipment commissioned, the report must include an assessment by the Commissioning Manager concerning the adequacy of systems and equipment in conforming to the project requirements, the Basis of Design and the Contract Documents in the following fields:
 - Specifications of equipment installed;
 - Installation of equipment and systems;
 - Operation of systems and equipment, functional performance, efficiency, and optimization;
 - Adequacy of operation and maintenance, operational state;
 - Documentation requested in the specifications relating to operation, maintenance, data and performance records, etc.
 - Operators' training documents and comments on their quality.
 - Final update and status of logs of commissioning issues. All shortcomings, problems and non-conformities must be specifically classified. Each item must correspond to the test, inspection or specific trend log report for which it is identified and

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

documented. Include recommendations for corrective action, improvements, optimization, system and equipment operating parameters, performance and efficiency, future action, changes to the commissioning process, recommissioning, etc.

- Assemble all final commissioning documents and prepare the final commissioning manual. Submit the manual to the PWGSC Commissioning Coordinator for review and approval. Documents for the final commissioning manual must be gathered in searchable electronic format (PDF) and must include:
 - the final commissioning report;
 - the project requirements document;
 - the Basis of Design (BOD);
 - the design schematics;
 - the construction drawings;
 - the as-built or record drawings;
 - the single-line as-built diagrams;
 - the schedules of as-built products and equipment;
 - the commissioning specifications;
 - the commissioning reports (PF, S-U, TAB, FPT, IST, controls, DDC trend log reports, data logger reports, others as applicable);
 - the operator training files;
 - the equipment forms for the Computerized Maintenance Management System (CMMS);
 - any other report or correspondence relevant to the project;
 - the systems and equipment manuals:
 - a set of applicable Shop Drawings (including consignments and forms and approvals examined);
 - the installation, operation and maintenance manuals;
 - the performance indicator data records (amended to be considered commissioned, if necessary);
 - any other relevant document, brochure, data sheet or technical information from the manufacturer;
 - equipment warranties; and
 - system operational manuals / standard operating procedures (SOP).
- Notes regarding requirements for development and use of commissioning forms (PF, S-U, FPT, IST)
 - Pre-Functional (PF) Inspections/Verifications and Start-Up (S-U) Checklists
 - When available from equipment manufacturers, the manufacturer's installation, operation and maintenance (IOM) instructions and its installation verification and start-up checklists are acceptable and must be used. As deemed necessary by the Commissioning Manager, supplemental verifications and additional data could be required for specific project conditions, and such verifications and data must be documented on same or separate forms. Functional Performance Testing (FPT) and Integrated Systems Testing (IST). The Functional Performance Test (FPT) must include and cover the operation of the system and elements through each written sequence of operation and the other modes and sequences, including start-up, shutdown, idle, manual, organization, the various alarms, power outages,

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

security alarm in the event of shock, and links to other systems or equipment. The sensors and levelers must be calibrated during pre-functional verification by the construction contractors doing the installation, and spot-checked by the Commissioning Agent during the functional test.

- If possible, testing of respective HVAC equipment and systems must be conducted during seasons requiring heating and air conditioning. However, some overwriting of control values to simulate conditions is allowed. The FPT must be conducted using conventional manual methods, the control system's trend logs, and, if considered appropriate or required, the data loggers. The FPT must be conducted in order to provide a high level of confidence in the system's operation, as deemed appropriate by the Commissioning Manager.
- The FPT procedures and reports must allow for full examination and analysis of performance, operational parameters and sequence of the systems and equipment.

RS 8.2 Regulatory Requirements

8.2.1 Requirements Relating to Codes, Standards, Policies, Guidelines, Design and Construction Documents

The Commissioning Manager is required to perform the work in accordance with all applicable codes, statutes and regulations in effect at the time of project implementation. The Commissioning Manager is responsible for formally notifying the PWGSC Commissioning Coordinator if he or she receives any directive that contravenes a code, law, regulation, statute or any other mandatory or legal requirement in effect.

8.2.2 PWGSC Departmental Policy (DP) 039: Policy on the Use of the National Master Specification (NMS)

- The last update of the NMS must serve as the source document for drafting sections of the specifications dealing with commissioning in project manuals covering all future construction and renovation work performed by or for PWGSC.
- When preparing specifications sections concerned with commissioning, the Commissioning Manager must use the latest and most current release of the National Master Specification (NMS) to the maximum extent to which that version is applicable, in accordance with the departmental policy and subject to the Commissioning Manager's overriding responsibility for the content of the construction project specifications. The NMS must be amended or supplemented as necessary to produce a project manual that is adapted to the particular circumstances of the project and free from all conflict or ambiguity.
- The Commissioning Manager is responsible for obtaining the NMS User's Guide from an authorized supplier, and an up-to-date version of the NMS specification sections needed to prepare the project specifications. The NMS User's Guide is also available from the NMS Secretariat office.

8.2.3 Computerized Maintenance Management System (CMMS)

All work performed under the construction contract must meet the requirements set out in PWGSC's CMMS.

- CMMS inventory records must be provided for all major elements and systems.

Solicitation No. - N° de l'invitation EE474-200945/A	Amd. No. - N° de la modif.	Buyer ID - Id de l'acheteur qcm039
Client Ref. No. - N° de réf. du client EE474	File No. - N° du dossier QCM-9-42096	Project No.- N° du projet

- Before removing or replacing elements or systems as part of the project, note and submit their respective CMMS sequence numbers to the PWGSC Commissioning Coordinator.
- Collect and record all CMMS data for all new or moved equipment that is installed, replaced, removed or decommissioned from an existing equipment inventory.
- Inventory records must include all data on the product, including its serial and model number, the description of the equipment, and its location.
- Provide the PWGSC Commissioning Coordinator with fully completed inventory data records for all new equipment two (2) weeks before requesting approval, so as to identify the proposed elements.
- All CMMS inventory records must be added to the operation and maintenance manual provided by the Construction Manager and its Subcontractors.
- The CMMS is applicable to all major elements or systems. Minor elements such as switches, thermostats, etc. need not be inventoried in CMMS. The PWGSC Commissioning Coordinator must respond to any requests for clarification from construction contractors.
- The specifications must hold the Construction Manager responsible for providing the PWGSC Commissioning Coordinator with all necessary CMMS data and inventory records.

RS 8.3 Requirements for Commissioning

8.3.1 Mechanical, Electrical, Architectural, Physical Security and Accessibility Systems

The commissioning program, services and documentation must adhere to the following standards, policies and guidelines, if required by the scope of the work.

- CSA Z320-11 – Building Commissioning Standard and Check Sheets
- ASHRAE Guideline 0 – The Commissioning Process
- ASHRAE Guideline 1 – The HVAC Commissioning Process
- ASHRAE 202 – Commissioning Process for Buildings and Systems
- PWGSC Commissioning Manual, CP.1, 4th edition, November 2006
- PWGSC Commissioning Guidelines, CP.3 to CP.13
- BCA – Manual, samples and templates.
- PECl – Commissioning plan and commissioning specifications template
- PECl – Document templates and samples
- PECl – Sample functional tests and checklists
- CAN/CSA-B651-12 - Accessible Design for the Built Environment

8.3.2 Fire Safety and Protection

The commissioning program, services and documentation for systems fire safety and protection must also adhere to the standards.

- CAN/ULC S1001-11 Integrated Systems Testing of Fire Protection and Life Safety Systems and Fire Protection Commissioning.

RS 8.4 Variances

8.4.1 Table 1: Variances with CSA Z320-11

The scope of the Commissioning Agent's services must comply with CSA Z320-11, Building Commissioning, ASHRAE Standard 202-2013, Commissioning Process for Buildings and Systems, including the variances listed in Table 1 below, and the reference guide for LEED BD+C, version V4, EA Credit: Enhanced Commissioning (achievement of Option 1: Enhanced Systems Commissioning).

Solicitation No. - N° de l'invitation
EE474-200945/A
Client Ref. No. - N° de réf. du client
EE474

Amd. No. - N° de la modif.
File No. - N° du dossier
QCM-9-42096

Buyer ID - Id de l'acheteur
qcm039
Project No.- N° du projet

Commissioning of built works managed by RPB and/or by RP contractors must comply with CSA Z320-11: Building Commissioning Standard & Check Sheets, with variances as listed in Table 1 below. Note that the section and subsection numbers indicated in Table 1 refer to sections and subsections in CSA Z320-11.

CSA Z320-11 Section	CSA Z320-11 Subsection	Variances
1.2 Specific systems	1.2.1 General	In addition to the requirements listed in this section, commissioning must apply to all built works, including bridges, dams, and engineering assets. It must not be limited to the building enclosure.
3 Definitions	Systems Operation Manual	An additional clarification should be added to the definition of Systems Operation Manual: The term "systems operation manual" is equivalent to the PWGSC term "Standard Operating Procedure".
3 Definitions	Owner	An additional clarification should be added to the definition of Owner: The Crown, or an entity representing the Crown, is considered to be the Owner.
4.2 Pre-design phase		In addition to the requirements listed in this Section 4.2, the Owner's Project Requirements must meet all the requirements of Section 6.2.3 of ASHRAE Standard 202-2013 Commissioning Process for Buildings and Systems, henceforth referred to as ASHRAE Standard 202.
4.2 Pre-design phase	4.2.1 (b) Establishment of Basis of Design	In addition to the requirements of Subsection 4.2.1(b), the Basis of Design must meet all the requirements of Section 8: Basis of Design, ASHRAE Standard 202.
4.2 Pre-design phase	4.2.3 Commissioning plan	In addition to the requirements listed in section 4.2.3, include the following items in the Commissioning Plan: Identification of all systems and sub-systems to be commissioned. Identification of all deliverables. The requirements of Section 7: Commissioning Plan, ASHRAE Standard 202

Solicitation No. - N° de l'invitation
EE474-200945/A
Client Ref. No. - N° de réf. du client
EE474

Amd. No. - N° de la modif.
File No. - N° du dossier
QCM-9-42096

Buyer ID - Id de l'acheteur
qcm039
Project No.- N° du projet

CSA Z320-11 Section	CSA Z320-11 Subsection	Variations
4.3 Design phase	4.3.1 General	<p>Prepare commissioning specifications.¹</p> <p>Prepare Training Plan.¹</p> <p>Prepare preliminary commissioning manual.¹</p> <p>Perform Design Review, meeting the requirements of Section 10, ASHRAE Standard 202.</p>
4.4 Construction Phase	4.4.1 General	<p>In addition to the requirements listed in section 4.4.1, include the following item:</p> <p>Perform Commissioning Submittal Review meeting the requirements of Section 11 ASHRAE Standard 202.</p>
4.4 Construction Phase	4.4.2 Pre-construction	<p>In addition to the requirements listed in section 4.4.2, include the following items:</p> <p>Prepare commissioning Schedule.¹</p> <p>Prepare installation/start-up checklists.</p>
4.4 Construction Phase	4.4.4 Static verification	<p>In addition to the requirements listed in section 4.4.4, include the following item:</p> <p>Obtain certificates of authenticity for equipment.¹</p>
4.5 Functional Performance Testing	4.5.3 Implementation	<p>In addition to the requirements listed in section 4.5.3, include the following item:</p> <p>Functional performance tests must be documented according to Section 13: Issues and Resolution Documentation of ASHRAE Standard 202.</p>
4.7 Facility turnover activities	N/A	<p>In addition to the requirements listed in section 4.7, include the following item:</p> <p>Facility turnover activities must also be required where a project rather than an entire facility is being turned over.</p>
4.9 Final documentation	4.9.1 General	<p>In addition to the requirements listed in section 4.9.1, include the following item:</p> <p>The final documentation must be retained in a document archive.¹</p>

Solicitation No. - N° de l'invitation
EE474-200945/A
Client Ref. No. - N° de réf. du client
EE474

Amd. No. - N° de la modif.
File No. - N° du dossier
QCM-9-42096

Buyer ID - Id de l'acheteur
qcm039
Project No.- N° du projet

CSA Z320-11 Section	CSA Z320-11 Subsection	Variations
4.9 Final documentation	4.9.3 Additional commissioning documentation	In addition to the requirements listed in section 4.9.3, include the following items: Interim certificate of acceptance ¹ Final certificate of completion ¹ Deferred commissioning test reports ¹ System and environmental checks report ¹ Final commissioning report ¹
4.11 Training and Education	4.11.1	In addition to the requirements listed in section 4.11.1, include the following item: Meet the requirements of Section 15.2 Training Requirements of ASHRAE Standard 202.
4.13 Record drawings (as built)	N/A	In addition to the requirements listed in section 4.13, include the following item: Record drawings are required whenever the built work being commissioned is connected to or impacts the operation of the base building systems.
4.14 Manuals	4.14.2 Systems operation manual	In addition to the requirements listed in section 4.14.2, include the following items: The systems operation manual must indicate both normal and emergency modes of operation. ¹ The systems operations manual must include Life Safety Compliance Report. ¹
5.1 Architectural systems	5.1.3.4 Functional performance testing (interior space)	In addition to the requirements listed in subsection 5.1.3.4, include the following item: The following additional system must be part of the commissioning process: <ul style="list-style-type: none"> • Sound masking, as per design documents¹

Solicitation No. - N° de l'invitation
EE474-200945/A
Client Ref. No. - N° de réf. du client
EE474

Amd. No. - N° de la modif.
File No. - N° du dossier
QCM-9-42096

Buyer ID - Id de l'acheteur
qcm039
Project No.- N° du projet

CSA Z320-11 Section	CSA Z320-11 Subsection	Variances
5.4 Mechanical systems	5.4.3.4 Functional performance testing	<p>In addition to the requirements listed in subsection 5.4.3.4, include the following items:</p> <p>The following additional tests are to be performed, as per design documents:</p> <ul style="list-style-type: none">• Duct pressure test• Duct leakage test• Indoor air quality test
Annex A (informative) – General guidelines	N/A	This annex is adopted as a mandatory requirement.
Annex B (informative) – Architectural systems guidelines (informative)	N/A	The architectural testing protocols listed in Table B.1 are the minimum mandatory testing requirements.



Contract Number / Numéro du contrat EE474200945
Security Classification / Classification de sécurité UNCLASSIFIED

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

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



Contract Number / Numéro du contrat EE474200945
Security Classification / Classification de sécurité UNCLASSIFIED

PART A (continued) / PARTIE A (suite)

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS? No / Non Yes / Oui
If Yes, indicate the level of sensitivity:
Dans l'affirmative, indiquer le niveau de sensibilité :

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

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

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

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

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

Special comments:
Commentaires spéciaux : _____

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

10. b) May unscreened personnel be used for portions of the work?
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail? No / Non Yes / Oui
If Yes, will unscreened personnel be escorted?
Dans l'affirmative, le personnel en question sera-t-il escorté? No / Non Yes / Oui

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

INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS

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

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

PRODUCTION

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

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

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

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



Contract Number / Numéro du contrat EE474200945
Security Classification / Classification de sécurité UNCLASSIFIED

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

For users completing the form **manually** use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.

Les utilisateurs qui remplissent le formulaire **manuellement** doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form **online** (via the Internet), the summary chart is automatically populated by your responses to previous questions.

Dans le cas des utilisateurs qui remplissent le formulaire **en ligne** (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

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

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

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

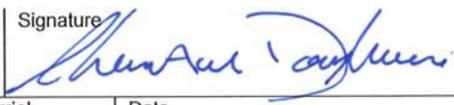
12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED? No Yes
 La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE? Non Oui

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



Contract Number / Numéro du contrat EE474200945
Security Classification / Classification de sécurité UNCLASSIFIED

PART D - AUTHORIZATION / PARTIE D - AUTORISATION

13. Organization Project Authority / Chargé de projet de l'organisme			
Name (print) - Nom (en lettres moulées) dassylva, chantal	Title - Titre gestionnaire de projets	Signature 	
Telephone No. - N° de téléphone 418-649-2797	Facsimile No. - N° de télécopieur 418-649-2788	E-mail address - Adresse courriel chantal.dassylva@tpsgc-pwgsc.gc.ca	Date 2019/07/19
14. Organization Security Authority / Responsable de la sécurité de l'organisme			
Name (print) - Nom (en lettres moulées) Maheux, Marc	Title - Titre SO	Signature	
Telephone No. - N° de téléphone 613-998-5021	Facsimile No. - N° de télécopieur 613-949-2331	E-mail address - Adresse courriel marc.maheux@tpsgc-pwgsc.gc.ca	Date
15. Are there additional instructions (e.g. Security Guide, Security Classification Guide) attached? Des instructions supplémentaires (p. ex. Guide de sécurité, Guide de classification de la sécurité) sont-elles jointes?			<input type="checkbox"/> No / Non <input type="checkbox"/> Yes / Oui
16. Procurement Officer / Agent d'approvisionnement			
Name (print) - Nom (en lettres moulées)	Title - Titre	Signature	
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel	Date
17. Contracting Name (print) Anik Farrell - CSO 613-946-5194 anik.farrell@tpsgc-pwgsc.gc.ca	matière de sécurité	Title - Titre	Signature
Telephone No. - N° de téléphone	Facsimile No. - N° de télécopieur	E-mail address - Adresse courriel	Date