



**REQUEST FOR PROPOSAL (RFP)**  
**ENGINEERING SERVICES**  
**Sir John A. Macdonald (SJAM) Parkway Bridges**  
**Ottawa, ON**

NCC FILE NO.  
NO DE DOSSIER DE LA CCN:

**AL1760**

ADDRESS ENQUIRIES TO: Allan Lapensée TEL: 613-239-5678 ext/poste 5051 Courriel: <a href="mailto:allan.lapensee@ncc-ccn.ca">allan.lapensee@ncc-ccn.ca</a>	INVITATION DATE/DATE DE L'APPEL D'OFFRES: August 31, 2018
	BID CLOSING/CLÔTURE DE L'OFFRE: October 15, 2018 at 3 p.m. EDT
RETURN TO: →	National Capital Commission Security Office on the 2 <sup>nd</sup> floor 40 Elgin Street Ottawa, ON K1P 1C7 Submission to refer to NCC tender file # AL1760

**This page of these RFP instructions is to be dated, signed and returned with your proposal, thereby acknowledging having read, understood and accepted the Request for Proposal which includes the Project Brief the General & Supplementary Conditions, and any/all other attachments referred to herein**

We hereby OFFER to sell and/or supply to the National Capital Commission upon the terms and conditions set out herein, the supplies and/or services listed above and on any attached sheets at the submitted price(s).		
Contractor's Name and Address :	Print Name :	Date :
Tel: Fax: E-mail:	Signature: _____	

<b>ADDENDUM ACKNOWLEDGEMENT:</b> I/We acknowledge receipt of the following addenda and have included for the requirement of it/them in my/our tendered price.	_____ Bidder to enter number of addenda issued (i.e. #1, #2, #3 etc.), if any.
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1. Submit duplicate technical proposals and one price proposal to provide services to the National Capital Commission (referred to as the "Commission" or the "NCC") according to Appendix D - Submission Requirements and Evaluation (SRE). Also complete, sign and attach to your technical proposal the first page thereby acknowledging having read, understood and accepted the Request for Proposal which includes the Project Brief the General & Supplementary Conditions, and any/all other attachments referred to herein including addendum(s).
2. Questions and requests for clarification from proponents will be accepted no later than fourteen (14) calendar days before bid closing date and time. Throughout the RFP bidding process, the NCC shall endeavour to provide responses to inquiries (by the issuance of addenda) deemed relevant by the NCC and received in writing by the Contracting Authority. Only information provided in addenda shall be considered to be an integral part of the RFP and any resulting contract. Your questions and requests for clarifications must be submitted in writing and addressed to Allan Lapensée at [allan.lapensee@ncc-ccn.ca](mailto:allan.lapensee@ncc-ccn.ca).
3. A debriefing of a Proponent's Technical Proposal will be provided, if requested to the NCC Project Manager identified in the letter of notification of contract award, within 15 days of receipt of this notice. The debriefing will include an outline of the reasons the submission was not successful.
4. The NCC is a Federal Crown Corporation subject to the Federal Goods and Services Tax (GST), the Ontario Harmonized Sales Tax (OHST), and the Quebec Sales Tax (QST). The successful firm will be required to indicate separately, with the request for payment, the amount of GST, OHST and QST, to the extent applicable, that the Commission will pay. These amounts will be paid to the successful Contractor who will be required to make the appropriate remittances to Revenue Canada and the respective provincial governments. The successful firm will also be requested to complete & sign the attached Supplier Direct Deposit & Tax information form, and, annex a void cheque for Electronic Funds Transfer (EFT) validation purposes.
5. Order of Precedence : In the event of any discrepancy or conflict in the contents of the following documents, such documents shall take precedence and govern in the following order:
  - a. any amendment or variation of the contract documents that is made in accordance with the General Conditions (appendix A);
  - b. any amendment issued prior to tender closing;
  - c. Security Requirements (appendix C);
  - d. Supplementary Conditions (appendix B);
  - e. General Conditions (appendix A);
  - f. Submission Requirements, Evaluation of Proposals and Financial Proposal (appendix D);
  - g. Terms of Payment & Insurance (appendix F);
  - h. Project Brief (appendix E) and its appendices G to M;

Later dates shall govern within each of the above categories of documents.

6. In order to avoid any misunderstanding and be fair to all firms, please note that proposals received after the closing time and date will not be accepted.

7. The Commission reserves the right to not accept the lowest or any of the proposals submitted, to cancel the Request for Proposal, and/or to reissue the Request for Proposal in its original or revised form. The Commission also reserves the right to negotiate with the successful proponent and/or any/all proponents.
8. Facsimile or e-mail transmittal of proposals are not acceptable.
9. Proposals will be held in strict confidence. There will not be a public opening of the proposals submitted for this project. Notwithstanding the foregoing, proponents are advised that as a Crown Corporation, the Commission is subject to the provisions of the Access to Information Act (ATI Act). Information submitted by third parties will only be exempted from disclosure if the records or part of them qualify for an exemption under the ATI Act.
10. This Request for Proposal and any contract resulting there from is to be interpreted, construed, governed by, and the relation between parties is to be determined in accordance with the laws of the Province of Ontario and such Federal laws applicable therein.
11. The Commission shall not be obligated to reimburse or compensate any proponent, its sub-contractors or manufacturers in Request for Proposal way for any costs incurred in connection with the preparation of a response to this Request for Proposal. All copies of proposals submitted in response to this Request for Proposal shall become the property of the Commission and will not be returned.
12. The successful Contractor shall indemnify and save harmless the Commission from and against all claims, damages, costs and expenses sustained or incurred by the Commission resulting from any action or legal proceeding on infringement, made, sustained, brought, prosecuted, threatened to be brought or prosecuted, by any person that was under the direction and control of the Contractor during the term of the resulting contract and which person is claiming or claims a moral right, as set out under the Copyright Act. The obligation to indemnify under this clause survives termination of the resulting contract and will remain in force for the duration of the copyright in the work created under the resulting contract. This obligation to indemnify relative to alleged moral rights infringement(s) is in addition to the Contractor's other obligations to indemnify and save harmless which are set out in the Commission General Conditions for Professional and Consulting Services.

Supplier No. / N° du fournisseur

New supplier / Nouveau fournisseur       Update / Mise à jour

**SUPPLIER-DIRECT DEPOSIT PAYMENT AND TAX INFORMATION FORM  
FOURNISSEUR-FORMULAIRE DE PAIEMENT PAR DÉPÔT DIRECT ET RENSEIGNEMENTS AUX FINS DE L'IMPÔT**

For NCC use only / À l'usage de la CCN seulement

**PART 'A' - IDENTIFICATION / PARTIE 'A' - IDENTIFICATION**

Legal name of entity or individual / Nom légal de l'entité ou du particulier	Operating name of entity or individual (if different from Legal Name) / Nom commercial de l'entité ou du particulier (s'il diffère du nom légal)
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Former Public Servant in receipt of a PSSA Pension / Ancien fonctionnaire qui reçoit une pension en vertu de la LPPF	<input type="checkbox"/> Yes / Oui	<input type="checkbox"/> No / Non
An entity, incorporated or sole proprietorship, which was created by a Former Public Servant in receipt of a PSSA pension or a partnership made of former public servants in receipt of PSSA pension or where the affected individual has a controlling or major interest in the entity. / Une entité, constituée en société ou à propriétaire unique, créée par un ancien fonctionnaire touchant une pension en vertu de la LPPF, ou un partenariat formé d'anciens fonctionnaires touchant une pension en vertu de la LPPF, où les entités dans lesquelles ils détiennent le contrôle ou un intérêt majoritaire.	<input type="checkbox"/> Yes / Oui	<input type="checkbox"/> No / Non

Address / Adresse	Telephone No. / N° de téléphone :	Fax No. / N° de télécopieur :
Postal code / Code postal	( )	( )

**PART 'B' - STATUS OF SUPPLIER / PARTIE 'B' - STATUT DU FOURNISSEUR  
IMPORTANT : CHOOSE ONLY ONE OF THE FOLLOWING/CHOISIR SEULEMENT UNE DES OPTIONS SUIVANTES:**

(1) Sole proprietor / Propriétaire unique	<input type="checkbox"/>	If sole proprietor, provide: / Si propriétaire unique, indiquez :	Last Name / Nom de famille	First name / Prénom	Initial / Initiale
(2) Partnership / Société de personnes	<input type="checkbox"/>	(3) Corporation / Société	<input type="checkbox"/>		

Business No. (BN) / N° de l'entreprise (NE) -	<b>OR / OU</b>	SIN / NAS -
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GST/HST / TPS et TVH	QST / TVQ (Québec)
Number / Numéro : Not registered / non inscrit <input type="checkbox"/>	Number / Numéro : Not registered / non inscrit <input type="checkbox"/>

Type of contract / Genre de contrat		
Contract for services only / Contrat de services seulement <input type="checkbox"/>	Contract for mixed goods & services / Contrat de biens et services <input type="checkbox"/>	Contract for goods only / Contrat de biens seulement <input type="checkbox"/>
Type of goods and/or services offered / Genre de biens et / ou services rendus :		

**PART 'C' - FINANCIAL INSTITUTION / PARTIE 'C' - RENSEIGNEMENTS SUR L'INSTITUTION FINANCIÈRE**

**Please send a void cheque with this form / Veuillez, s.v.p., envoyer un spécimen de chèque avec ce formulaire**

Branch Number / N° de la succursale	Institution No. / N° de l'institution :	Account No. / N° de compte :
Institution name / Nom de l'institution :		Address / Adresse :
Postal Code / Code postal :		

**PART 'D' - DIRECT DEPOSIT PAYMENT NOTIFICATION / PARTIE 'D' - AVIS DE PAIEMENT PAR DÉPÔT DIRECT**

E-mail address / Adresse courriel :

**PART 'E' - EMAIL ADDRESS TO SEND CONTRACTS / PARTIE 'E' - ADRESSE COURRIEL POUR ENVOYER LES CONTRATS**

E-mail address / Adresse courriel :

**PART 'F' - CERTIFICATION / PARTIE 'F' - CERTIFICATION**

I certify that I have examined the information provided above and it is correct and complete, and fully discloses the identification of this supplier.	Je déclare avoir examiné les renseignements susmentionnés et j'atteste qu'ils sont exacts et constituent une description complète, claire et véridique de l'identité de ce fournisseur.		
Where the supplier identified on this form completes part C, he hereby requests and authorizes the National Capital Commission to directly deposit into the bank account identified in part C, all amounts payable to the supplier.	Lorsque le fournisseur indiqué sur ce formulaire remplit la partie C, par la présente, il demande et autorise la Commission de la capitale nationale à déposer directement dans le compte bancaire indiqué à la partie C, tous les montants qui lui sont dus.		
Name of authorized person / Nom de la personne autorisée	Title / Titre	Signature	Date
Telephone number of contact person / Numéro de téléphone de la personne ressource : ( )			

**IMPORTANT**

Please fill in and return to the National Capital Commission with one of your business cheque unsigned and marked « VOID » (for verification purposes).	Veuillez remplir ce formulaire et le retourner à la Commission de la capitale nationale avec un spécimen de chèque de votre entreprise non signé et portant la mention « ANNULÉ » (à des fins de vérification).
Mail or fax to: Procurement Services National Capital Commission 202-40 Elgin Street Ottawa, ON K1P 1C7 Fax: (613) 239-5007	Poster ou télécopier à : Services de l'approvisionnement Commission de la capitale nationale 40, rue Elgin, pièce 202 Ottawa (Ontario) K1P 1C7 Télécopieur : (613) 239-5007

**SUPPLIER – DIRECT DEPOSIT PAYMENT AND TAX INFORMATION FORM**

**FOURNISSEUR – FORMULAIRE DE PAIEMENT PAR DÉPÔT DIRECT ET RENSEIGNEMENTS AUX FINS DE L'IMPÔT**

**Supplier Tax Information**

Pursuant to paragraph 221(1) (d) of the *Income Tax Act*, NCC must declare form T-1204, contractual payments of government for services, all payments made to suppliers during the calendar year in accordance to related service contracts (including contracts for mixed goods and services).

The paragraph 237(1) of the *Income Tax Act* and the article 235 of the Income Tax Regulations require the supplier to provide all necessary information below to the organization who prepares the fiscal information forms.

Questions: Sylvie Monette, Accounts Payable Supervisor  
(613) 239-5678 ext. 5156 or [sylvie.monette@ncc-ccn.ca](mailto:sylvie.monette@ncc-ccn.ca)

**Direct deposit payment information**

All amounts payable by NCC to the supplier will be deposited directly into the account you identified in part C. A NCC payment advice notice will also be sent to you by e-mail detailing the particularities of the payment to the address identified in part D.

Until we process your completed form, we will still pay you by check.

You must notify the NCC of any changes to your financial institution, branch or account number. You will then have to complete a new form.

The account you identified has to hold Canadian funds at a financial institution in Canada.

**The advantages of direct deposit payment**

Direct deposit payment is a convenient, dependable, safe and timesaving way to receive your invoice payment. Direct deposit payment is completely confidential.

There are fewer risks of direct deposit payment being lost, stolen, or damaged as may happen with cheques.

Funds made by direct deposit payment will be available in your bank account on the same day that we would have mailed your cheque.

**Renseignements sur les fournisseurs aux fins de l'impôt**

En vertu de l'alinéa 221(1) (d) de la *Loi de l'impôt sur le revenu*, la CCN est tenu de déclarer, à l'aide du formulaire T-1204, Paiements contractuels de services du gouvernement, tous paiements versés aux fournisseurs pendant une année civile en vertu de marchés de services pertinents (y compris les marchés composés à la fois de biens et de services).

Le paragraphe 237 (1) de la *Loi de l'impôt sur le revenu* et l'article 235 du Règlement de l'impôt sur le revenu obligent les fournisseurs à fournir toutes les informations demandées ci-dessous à l'organisme qui prépare les formulaires de renseignements fiscaux.

Questions : Sylvie Monette, Superviseure aux comptes payable  
(613) 239-5678 poste 5156 ou [sylvie.monette@ncc-ccn.ca](mailto:sylvie.monette@ncc-ccn.ca)

**Renseignements sur le paiement par dépôt direct**

Tous les montants versés par la CCN au fournisseur seront déposés directement dans le compte identifié à la partie C. Un avis de paiement de la CCN détaillant les particularités du paiement par dépôt direct vous sera envoyé par courriel à l'adresse courriel identifiée à la partie D.

Nous continuerons à vous payer par chèque jusqu'à ce que nous ayons traité votre formulaire.

Vous devez aviser la CCN de tout changement d'institution financière, de succursale ou de numéro de compte. Vous devrez donc remplir un nouveau formulaire.

Le compte que vous désignez doit être un compte en monnaie canadienne, détenu dans une institution financière au Canada.

**Avantages du paiement par dépôt direct**

Le paiement par dépôt direct est une méthode pratique, fiable et sécuritaire, qui permet de gagner du temps dans la réception de vos paiements de factures. Le paiement par dépôt direct est entièrement confidentiel.

Avec les paiements par dépôt direct, il y a moins de risques de perte, de vol ou de dommage, comme cela peut se produire dans le cas des chèques.

Les paiements effectués par paiement par dépôt direct sont versés dans votre compte le jour même où nous aurions posté votre chèque.

**GC1 Interpretation**

## 1.1 In the contract

- 1.1.1 “contract” means the contract documents referred to in the Articles of Agreement and every other document specified or referred to in any of them as forming part of the Contract, all as amended by agreement of the parties;
- 1.1.2 “invention” means any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter
- 1.1.3 “Contractor” means the person contracting with the NCC to provide or furnish all requirements for the execution of the Work under the Contract;
- 1.1.4 “work”, unless otherwise expressed in the contract, means everything that is necessary to be done, furnished or delivered by the Contractor to perform the Contractor’s obligations in accordance with the Contract;
- 1.1.5 “NCC” means the National Capital Commission
- 1.1.6 “NCC Representative” means the person designated in the Contract, or by written notice to the Contractor, to act as the Representative of the NCC for the purposes of the Contract and includes a person, designated and authorized in writing by the NCC Representative to the Contractor.
- 1.1.7 “prototypes” includes models, patterns and samples;
- 1.1.8 “technical documentation” means designs, reports, photographs, drawings, plans, specifications, computer software, surveys, calculations and other data, information and material collected, computed, drawn or produced, including computer print-outs.

**GC2 Successors and Assigns**

- 2.1 The contract shall ensure to the benefit of and be binding upon the parties hereto and their lawful heirs, executors, administrators, successors and assigns.

**GC3 Assignment**

- 3.1 The contract shall not be assigned in whole or in part by the Contractor without the prior written consent of the NCC. Any assignment made without that consent is void and of no effect.
- 3.2 No assignment of the contract shall relieve the Contractor from any obligation under the contract or impose any liability upon the NCC.

**GC4 Time of the Essence**

- 4.1 Time is of the essence of the contract.
- 4.2 Any delay by the Contractor in performing the Contractor’s obligations under the contract which is caused by an event beyond the control of the Contractor, and which could not

have been avoided by the Contractor without incurring unreasonable cost through the use of work-around plans including alternative sources or other means, constitutes an excusable delay. Events may include, but are not restricted to: acts of God, acts of local or provincial governments, fires, floods, epidemics, quarantine restrictions, strikes or labour unrest, freight embargoes and exceptional weather conditions of extreme violence or intensity.

- 4.3 The Contractor shall give notice to the NCC immediately after the occurrence of the event that causes the excusable delay. The notice shall state the cause and circumstances of the delay and indicate the portion of the work affected by the delay. When requested to do so by the NCC Representative(s), the Contractor shall deliver a description, which is satisfactory to the NCC Representative of work-around plans including alternative sources and any other means that the Contractor will utilize to overcome the delay and endeavor to prevent any further delay. Upon approval in writing by the NCC Representative of the work-around plans, the Contractor shall implement the work-around plans and use all reasonable means to recover any time lost as a result of the excusable delay.
- 4.4. Unless the Contractor complies with the notice requirements set forth in the contract, any delay that would constitute an excusable delay shall be deemed not to be an excusable delay.
- 4.5 Notwithstanding that the Contractor has complied with the requirements of GC4.3, the NCC may exercise the right of termination contained in GC8.

#### **GC5 Indemnification**

- 5.1 The Contractor shall indemnify and save harmless the NCC from and against all claims, losses, damages, costs, expenses, actions and other proceedings, made, sustained brought, prosecuted, threatened to be brought or prosecuted, in any manner based upon, occasioned by or attributable to any injury to or death of a person or damage to or loss of property arising from any willful or negligent act, omission or delay on the part of the Contractor, the Contractor's servants or agents in performing the work or as a result of the work.
- 5.2 The Contractor shall indemnify the NCC from all costs, charges and expenses whatsoever that the NCC sustains or incurs in or about all claims, actions, suits and proceedings for the use of the invention claimed in a patent, or infringement or alleged infringement of any patent or any registered industrial design or any copyright resulting from the performance of the Contractor's obligations under the contract, and in respect of the use of or disposal by the NCC of anything furnished pursuant to the contract.
- 5.3 The Contractor's liability to indemnify or reimburse the NCC under the contract shall not affect or prejudice the NCC from exercising any other rights under law.

#### **GC6 Notices**

- 6.1 Where in the contract any notice, request, direction, or other communication is required to be given or made by either party, it shall be in writing and is effective if delivered in person, sent by registered mail, by facsimile or electronic mail, addressed to the party for whom it is intended at the address mentioned in the contract. Any notice, request, direction or other communication shall be deemed to have been given by registered mail, when the postal receipt is acknowledged by the other party; by facsimile or electronic mail 24 hours after was

transmitted. The address of either party may be changed by notice in the manner set out in this provision.

#### **GC7 Canadian Labour and Materials**

- 7.1 The Contractor shall use Canadian labour and material in the performance of the work to the full extent to which they are procurable, consistent with proper economy and the expeditious carrying out of the work.

#### **GC8 Termination or Suspension**

- 8.1 The NCC may, by giving written notice to the Contractor, terminate or suspend the work with respect to all or any part or parts of the work not completed.
- 8.2 All work completed by the Contractor to the satisfaction of the NCC before the giving of such notice shall be paid for by the NCC in accordance with the provisions of the contract and, for all work not completed before the giving of such notice, The NCC shall pay the Contractor's costs as determined under the provisions of the contract and, in addition, an amount representing a fair and reasonable fee in respect of such work.
- 8.3 In addition to the amount which the Contractor shall be paid under GC8.2, the Contractor shall be reimbursed for the Contractor's cost of and incidental to the cancellation of obligations incurred by the Contractor pursuant to such notice and obligations incurred by or to which the Contractor is subject with respect to the work.
- 8.4 Payment and reimbursement under the provisions of GC8 shall be made only to the extent that they are established to the satisfaction of the NCC Representative, that the costs and expenses were actually incurred by the Contractor, that the same are fair and reasonable and are properly attributable to the termination or suspension of the work or the part thereof so terminated.
- 8.5 The Contractor shall not be entitled to be reimbursed any amount which, taken together with any amounts paid or becoming due to the Contractor under the contract, exceeds the contract price applicable to the work or the particular part thereof.
- 8.6 The Contractor shall have no claim for damages, compensation, loss of profit, allowance or otherwise by reason of or directly or indirectly arising out of any action taken or notice given by the NCC under the provisions of GC8 except as expressly provided therein.

#### **GC9 Termination due to Default of Contractor**

- 9.1 The NCC may, by written notice to the Contractor, terminate the whole or any part of the work if:
- (i) the Contractor becomes bankrupt or insolvent, or a receiving order is made against the Contractor, or an assignment is made for the benefit of creditors, or if an order is made or resolution passed for the winding up of the Contract, or the Contractor takes the benefit of any statute for the time being in force relating to bankrupt or insolvent debtors, or



- (ii) the Contractor fails to perform any of the Contractor's obligations under the contract, or, in the NCC's view, so fails to make progress as to endanger performance of the contract in accordance with its terms.
- 9.2 In the event that the NCC terminates the work in whole or in part under GC9.1, the NCC may arrange, upon such terms and conditions and in such manner as the NCC deems appropriate, for the work to be completed that was so terminated, and the Contractor shall be liable to the NCC for any excess costs relating to the completion of the work.
  - 9.3 Upon termination of the work under GC9.1, the NCC may require the Contractor to deliver and transfer title to the NCC, in the manner and to the extent directed by the NCC, any finished work which has not been delivered and accepted prior to such termination and any materials or work-in-process which the Contractor has specifically acquired or produced for the fulfillment of the contract.  
  
The NCC shall pay the Contractor for all such finished work delivered pursuant to such direction and accepted by the NCC Representative, the cost to the Contractor of such finished work plus the proportionate part of any fee fixed by the said contract and shall pay or reimburse the Contractor the fair and reasonable cost to the Contractor of all materials or work-in process delivered to the NCC pursuant to such direction. The NCC may withhold from the amounts due to the Contractor such sums as the NCC determines to be necessary to protect the NCC against excess costs for the completion of the work.
  - 9.4 The Contractor shall not be entitled to be reimbursed any amount which, taken together with any amounts paid or becoming due to the Contractor under the contract, exceeds the contract price applicable to the work or the particular part thereof.
  - 9.5 If, after the NCC issues a notice of termination under GC9.1, it is determined by the NCC that the default of the Contractor is due to causes beyond the control of the Contractor, such notice of termination shall be deemed to have been issued pursuant to GC8.1 and the rights and obligations of the parties hereto shall be governed by GC8.

**GC10 Records to be kept by Contractor**

- 10.1 The Contractor shall keep proper accounts and records of the cost of the work and of all expenditures or commitments made by the Contractor including the invoices, receipts and vouchers, which shall at reasonable times be open to audit and inspection by the NCC who may make copies and take extracts therefrom.
- 10.2 The Contractor shall afford facilities for audit and inspection and shall furnish the NCC with such information it may from time to time require with reference to the documents referred to herein.
- 10.3 The Contractor shall not dispose of the documents referred to herein without the written consent of the NCC, but shall preserve and keep them available for audit and inspection for such period of time as may be specified elsewhere in the contract, in the absence of such specification, for a period of three years following completion of the work.

**GC11 Ownership of Intellectual and Other Property including Copyright**

- 11.1 Technical documentation and prototypes produced by the Contractor in the performance of the work under the contract shall vest in and remain the property of the NCC, and the

Contractor shall account fully to the NCC in respect of the foregoing in such manner as the NCC shall direct.

- 11.2 Technical documentation shall contain the following copyright notice:  
HER MAJESTY THE QUEEN IN RIGHT OF CANADA (YEAR)  
as represented by the National Capital Commission
- 11.3 Technical information and inventions conceived or developed or first actually reduced to practice in performing the work under the contract shall be the property of the NCC. The Contractor shall have no rights in and to the same. The Contractor shall not divulge or use such technical information and inventions, other than in performing the work under the contract, and shall not sell other than to the NCC any articles or things embodying such technical information and inventions.
- 11.4 The Contractor agrees to execute any further assignments or agreements as may be requested by the NCC for the purpose of registering the NCC's right of ownership recognized hereunder with the Industrial Design, Trademarks, Patents or Copyright Offices. The Contractor also agrees to arrange for any employees of the Contractor or any agent or sub-contractor of the Contractor who may be considered the author of any work which shall become the property of the NCC pursuant to this section, to sign a release form in a form satisfactory to the NCC, waiving the author's moral rights with respect to claiming authorship of the work and/or restraining the NCC's use, or modification of the work.

#### **GC12 Conflict of Interest**

- 12.1 The Contractor declares that the Contractor has no pecuniary interest in the business of any third party that would cause a conflict of interest or seem to cause a conflict of interest in carrying out the work. Should such an interest be acquired during the life of the contract, the Contractor shall declare it immediately to the NCC Representative(s).

#### **GC13 Contractor Status**

- 13.1 This is a contract for the performance of a service and the Contractor is engaged under the contract as an independent contractor for the sole purpose of providing a service. Neither the Contractor nor any of the Contractor's personnel is engaged by the contract as an employee, servant or agent of the NCC. The Contractor agrees to be solely responsible for any and all payments and/or deductions required to be made including those required for Canada or Quebec Pension Plans, Unemployment Insurance, Worker's Compensation, or Income Tax.

#### **GC14 Warranty by Contractor**

- 14.1 The Contractor warrants that the Contractor is competent to perform the work required under the contract in that the Contractor has the necessary qualifications including the knowledge, skill and ability to perform the work.
- 14.2 The Contractor warrants that the Contractor shall provide a quality of service at least equal to that which contractors generally would expect of a competent contractor in a like situation.

#### **GC15 Amendments**

- 15.1 No amendment of the contract nor waiver of any of the terms and provisions shall be deemed valid unless effected by a written amendment.

**GC16 Entire Agreement**

- 16.1 The contract constitutes the entire agreement between the parties with respect to the subject matter of the contract and supersedes all previous negotiations, communications and other agreements relating to it unless they are incorporated by reference in the contract.

**GC1 Hours and Place of Work**

- 1.1 When the Work is to be carried out in the NCC's offices, the Contractor shall, in the interests of co-ordination, adopt the same hours of work as the NCC's employees.

**GC2 No Additional Remuneration**

- 2.1 It is understood and agreed that the Contractor shall act as an independent Contractor and that he shall not be entitled to any payment or remuneration other than that provided for in clause 3.1 of the contract and set out in greater detail in the Terms of Payment of the present contract.

**GC3 Compliance with Legal Requirements**

- 3.1 The Contractor himself shall be solely responsible for complying with all federal and provincial laws and municipal by-laws applicable within the context of the services provided by him under the present contract.

**GC4 Responsibility of the NCC**

- 4.1 The NCC Representative shall provide the support, counsel, directives, instructions, acceptances, decisions and information that he shall consider necessary or appropriate in connection with this contract.

**GC5 Ownership of Documents**

- 5.1 All documents submitted or prepared by the Contractor under the terms of the contract shall become the property of the NCC, which shall become the owner of the copyright.
- 5.2 All documents and records, and the information contained therein, provided to the Contractor related to or for the purposes of this Contract shall be treated as confidential. The Contractor shall take all necessary steps to ensure that the documents and records, or any information contained therein, are not copied, provided to, discussed, or disclosed in any manner whatsoever, to any person or entity, other than the NCC, unless expressly authorized by the NCC. The Contractor shall ensure that only its authorized employees are given access to the said documents or records and that these employees treat these documents and records, and the information contained therein, as confidential.
- 5.3 As may be directed in writing by the NCC upon the expiry, termination or completion of the Contract, the Contractor shall either return to the NCC forthwith all documents or records provided to it by the NCC or destroy all documents and records, together with satisfactory proof of such destruction.
- 5.4 The NCC shall have unrestricted access to all documents and records provided to the Contractor during the term of the Contract.

**GC6 Copyright**

- 6.1 In accordance with section 12 of the Copyright Act, copyrights for all reports or documents prepared by the Contractor shall belong to the NCC from the date of its first publication, during the remainder of that calendar year and for a period of fifty (50) years from the end of that calendar year.

**GC7 Ownership of Inventions**

- 7.1 Pursuant to paragraph GC11.3 of the general conditions, the Contractor shall have no other claim than that which may be granted to him by the NCC, and he may not apply for a patent in connection with any inventions unless he has the written consent of the NCC.

### **GC8 Managers, Employees, Agents and Sub-contractors**

- 8.1 The Contractor shall take all reasonable measures and precautions to ensure that his managers, employees, agents and sub-contractors comply with the terms of the present Contract. Without limiting the general nature of the above, contractors shall include in all subcontracts arising from this contract, clauses which are similar to the general conditions and to these supplementary conditions, such clauses to be formulated in terms that are not less favorable to the NCC than their counterparts in the said general and supplementary conditions. The Contractor shall comply with these conditions and take any other actions required by the NCC in order to fulfill the terms of the present clause.

### **GC 9 Use of NCC Geometrics' Database**

- 9.1 The Contractor may request through the NCC Representative the use of the NCC owned database containing information on topography, underground services, certain building surveys, etc, for the purposes of this Contract.
- 9.2 The Contractor by using the NCC database acknowledges that it is owned by the NCC and no ownership rights are conferred. The Contractor will use the database only for the Contractor's own internal operations relating to approved NCC assignments.
- 9.3 The Contractor may adapt the data in their copy of the database or create derived works from such data provided such adapted data or derived works are used for the Contractor's own internal operations described in clause 9.2.
- 9.4 The use of the NCC owned database is granted on a royalty-free basis and therefore no fee is payable to the NCC.
- 9.5 The NCC makes no warranties, either expressed or implied, as to any matter, including without limitation, the condition, quality or freedom from error of the database or any part of the database or its fitness for any purpose.
- 9.6 The Contractor agrees to indemnify and save harmless the NCC from and against all claims, demands, suits, losses, costs, expenses (including reasonable legal fees) and damages arising out of or related to the Contractor's use of the database.
- 9.7 Upon expiration or early termination of the Contract, all rights and privileges granted to the Contractor for use of the database will immediately terminate and the Contractor shall immediately return all copies of the database and all related material including any derived works to the NCC, or provide proof to the NCC that all copies of the database and related material have been destroyed

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## SECURITY REQUIREMENTS

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### Security Requirements

The NCC complies with Treasury Board's *Policy on Government Security* and consequently, it will require that the contractor's personnel submit to a personal security screening process (Security Clearance Form TBS/SCT 330-60E). The NCC may also perform a credit check when the duties or tasks to be performed require it or in the event of a criminal record containing a charge/offence of a financial nature.

*Personal information associated with these clearances is retained in the following information bank: Personnel Security Screening \_ PSU 917.*

The NCC reserves the right to not award the Contract until such time as the contractor's personnel core employees have obtained the required level of security screening as identified by the NCC's Corporate Security. In this case the level of security required will be **(Reliability-Site Access-Secret)\***

***\*For operation needs, with advice or assistance from NCC Corporate Security, the security level can be upgraded (Confidential, Secret or Top Secret) on the basis of the sensitivity of the information and assets that need to be accessed.***

### Additional information

As part of their personal screening, individuals may be required to provide evidence of their status as a Canadian citizen or permanent resident as well as any other information/documentation requested by the NCC's Corporate Security in order to complete the screening.

The NCC reserves the right to refuse access to personnel who fail to obtain the required level of security screening.

The NCC reserves the right to impose additional security measures with respect to this contract as the need arises.

When warranted by a Security threat and risk assessment (TRA) or any type of Security Assessment, physical security safeguards can be recommended by NCC Corporate Security to reflect changes in the threat environment or for operational purposes.

The NCC also reserves the right to request that the Contractor submit to a *Designated Organization Screening* and/or *Facility Security Clearance* – depending on the nature of the information it will be entrusted with.

### Company Security Representative

The contractor shall appoint one Company Security Representative (CSR) as well as one alternate (for companies who have more than five employees).

Selection criteria for the CSR and the alternate are the following:

- They must be employees of the contractor's firm;

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## SECURITY REQUIREMENTS

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- They must have a security clearance (the NCC will process the clearances once the individuals have been identified).

### Responsibilities of the Company Security Representative

The CSR's responsibilities are the following:

- Act as liaison between the NCC's Corporate Security and the contractor to ensure coordination;
- In collaboration with the NCC's Corporate Security, identify the contractor's personnel who will require access to NCC information/assets/sites **as well as any recurring subcontractors** (and their employees) who will require similar access and may not be supervised by the contractor at all times during such access. Ensure that accurate and complete Personnel Security Screening documentation is submitted to the NCC's Corporate Security for the employees/subcontractors who have been identified;
- Ensure that employees/subcontractors, upon notification of having been granted a Security status (**Reliability-Site Access-Secret**), sign the *Security Screening Certificate and Briefing Form* and return to the NCC's Corporate Security;
- Ensure that only persons who have been security screened to the appropriate level and who are on a "need-to-know basis" will have access to information and assets;
- Maintain a current list of security screened employees/subcontractors;
- Ensure proper safeguard of all information and assets, including any information/assets entrusted to subcontractors;
- If a Security incident or suspected breach of security occurs, prepare and submit to the NCC an occurrence report as soon as possible.

### Access to site

Unless otherwise indicated, all visits to "secure" sites (official residences) shall be coordinated with, and approved through NCC Corporate Security.

### References

[Security of Information Act](#)

[Access to Information Act](#)

[Privacy Act](#)

[Policy on Government Security](#)



NATIONAL CAPITAL COMMISSION  
COMMISSION DE LA CAPITALE NATIONALE

# **Appendix D**

## **Submission Requirements, Evaluation of Proposals and Financial Proposal**

### **ENGINEERING SERVICES**

for bridges on the  
Sir John A. Macdonald Parkway

**SOLICITATION NUMBER: AL1760**





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## SUBMISSION REQUIREMENTS and EVALUATION (SRE)

### SRE 1 PROPOSAL REQUIREMENTS

#### 1.1 Submission of Proposals

Proponents are to submit Proposals following a two-envelope procedure in which the technical aspects of their Proposal are submitted in one sealed envelope and the proposed price in a second sealed envelope.

#### 1.2 Format of Proposals

##### 1.2.1 Technical Proposal

1. The use the following format when preparing the technical Proposal:
  - a. Submit one printed original, and four copies of the Proposal. If there is a discrepancy between the wording of any copy and the original printed copy, the wording of the original printed copy will have priority over the wording of any copy;
  - b. Paper size should be 216mm x 279mm (8.5" x 11");
  - c. Minimum font size should be 11 points or greater;
  - d. Minimum left, right, top, and bottom margins should be 12 mm;
  - e. Double-sided submissions are preferred;
  - f. One 'page' means one side of a 216mm x 279mm (8.5" x 11") sheet of paper;
  - g. 279mm x 432 mm (11" x 17") foldout sheets for spreadsheets, organization charts etc. will be counted as two pages; and
  - h. The order of the Proposal should follow the order established in the SRE 5 – RATED REQUIREMENTS section;
2. The maximum number of pages (including text and graphics) to be submitted for each rated requirement is indicated within each criterion description. Where a maximum page limit applies, all pages in excess of the indicated limit will not be evaluated; and
3. Other Proposal documents including cover letter, table of contents/index, section dividers not containing technical information, licencing and certification documents, Proponent team identification documents; the declaration and acceptance form, and signed front-page of the RFP solicitation are not part of the Proposal page limitation.
4. In selecting the Key Individuals defined SRE 5.3 , the Proponent should refer to paragraph 5) of TP5.13, "Key Individuals", located in in the RFP Appendix F, and consider the fee reduction



**Appendix D - Submission Requirements, Evaluation of Proposals and Financial Proposal**

Solicitation Number: AL1760

imposed by the NCC for substitution of Key Individuals within the first twelve months of the resulting contract.

**1.2.2 Price Proposal**

Submit an original, duly completed and signed PRICE PROPOSAL FORM in a separate, sealed envelope as prescribed in SRE ANNEX B – PRICE PROPOSAL FORM of this Submission Requirements and Evaluation section.

**SRE 2 BASIS OF SELECTION**

2.1 Technical Proposals (envelope 1) will be evaluated as follows:

Rated Technical Criterion	Evaluation Scale	Weight Factor	Rating	Available Points
1	Achievements of the Proponent	3.0	0 - 10	30
3	Achievements of Key Individuals	3.0	0 - 10	30
4	Understanding of the Project	1.0	0 - 10	10
5	Management of Services	3.0	0 - 10	30
<b>TOTAL TECHNICAL RATING</b>				<b>100</b>

- 2.2 To be considered further, proponents must achieve a minimum Total Technical Rating of eighty (80) points out of the one hundred (100) points available as specified in paragraph 2.1) of SRE 2 - BASIS OF SELECTION;
- 2.3 No further consideration will be given to Proponents not achieving the minimum of points 80 points. The Proponent’s Total Technical Rating is multiplied by the percentage to establish the Technical Score, as indicated in paragraph 3.1) of SRE 3 - CALCULATION OF TOTAL SCORE.
- 2.4 All Price Proposals (envelope two) corresponding to responsive Proposals which meet the requirements of paragraph 2.4) of SRE 2 - BASIS OF SELECTION, having achieved the minimum number of points required, will be opened.



**Appendix D - Submission Requirements, Evaluation of Proposals and Financial Proposal**

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**SRE 3 CALCULATION OF TOTAL SCORE**

3.1 The Total Score of a Proponent’s Response will be established as follows:

Total Technical Rating x 70%	=	Technical Score (Points)
+ Total Price Rating x 30%	=	Price Score (Points)
<hr/>		
Total Score	=	Maximum 100 Points

3.2 Price Score: The lowest overall fee will receive 30 points, the maximum score a proponent can achieve under the Fee Proposal evaluation. Other overall fee proposals will be awarded points on a proportional basis. For example, if the lowest overall fee proposed by a proponent is \$ 100,000 and another proponent’s fee submission is \$ 120,000, the \$ 120,000 fee proposal would be awarded 25 points ( $\$ 100,000 / \$ 120,000 \times 30 \text{ points} = 25 \text{ points}$ ).

3.3 The Proponent receiving the highest Total Score is the entity that the NCC evaluation team will recommend for the provision of engineering services. In the case of a tie, the proponent with the higher Technical Score will be selected.

**SRE 4 MANDATORY REQUIREMENTS**

Failure to meet the mandatory requirements will render the Proposal non-compliant and no further evaluation will be carried out.

4.1 Submit before the bid closing time and date deadline

4.2 Complete in its entirety and sign the Financial Proposal Form of Appendix D. Also complete, sign the first page of the RFP and attach to your technical proposal thereby acknowledging having read, understood and accepted the Request for Proposal which includes the Project Brief the General & Supplementary Conditions, and any/all other attachments referred to herein including addendum(s)



**Appendix D - Submission Requirements, Evaluation of Proposals and Financial Proposal**

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**SRE 5 RATED REQUIREMENTS**

**5.1 Achievements of Proponent**

Describe the Proponent's accomplishments, achievements and experience on projects in a maximum of two pages per project.

Select a maximum of four structural engineering bridge projects where construction has reached substantial completion or have been completed within the last 10 years. Only the four projects listed in sequence will receive consideration and any others will receive none as though not included. Clearly indicate the bridge program and the project scale, budget, and timeline. Joint Venture (JV) submissions are not to exceed the maximum number of projects and one of the projects submitted must demonstrate past experience working in the same JV capacity. The Proponent must clearly illustrate experience and core competencies pertinent to:

- a. Structural engineering for bridge rehabilitation, preferably replacement;
- b. Geotechnical engineering, site characterization, analysis and scope implementation;
- c. Environmental engineering, site characterization, hazardous materials/water management and removal;
- d. Landscape architecture master plan design, implementation and NCC ACPDR presentation and approvals;
- e. Working with the Contractor, or preferably with a Construction Manager;
- f. Management from pre-design to completion including project management of the design team;
- g. Degree of complexity including sequencing of demolition and rehabilitation or replacement;
- h. External stakeholder involvement and approval processes;
- i. Cost and schedule compliance to original project baseline; and
- j. Insurance claims, if applicable and why.

Information that should be supplied:

1. A clear indication of how the project is comparable/relevant to the project in this RFP;
2. Project title, location, bridge program, scale, year started and year completed, construction budget, extent of involvement (services provided), and project delivery method;
3. Project description, intent and complexity. Narratives should include a discussion of the structural engineering approach to meet the intent of the project, design challenges and resolutions, and if there were insurance claims related to the project design or implementation;
4. Client references and title or role on project– name, company name and phone number of client contact at working level (i.e. having a direct knowledge of project);
5. Names of key personnel responsible for project delivery and brief description of their role and responsibility on project; and
6. Awards received.

The Proponent must possess direct knowledge on the submitted projects. Past project experience from entities other than the Proponent will not be considered in the evaluation unless these entities form part of a joint venture (JV) Proponent. Proponents should indicate those projects which were carried



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out in JV and the responsibilities of each of the involved JV entities in each project and percentage of the responsibilities of each JV entity.

**5.2 Achievements of Key Individuals**

Describe in a maximum of two-pages per person the experience and performance of Key Individuals to be assigned to this project regardless of their past association with the current proponent firm. This is the opportunity to emphasize the strengths of the individuals on the team, to recognize their past responsibilities, commitments and achievements. Key Individuals should include the following as a minimum, if multiple functions are proposed to be performed by one Key Individual, it should be identified here:

- a. Senior Structural Engineer – bridge design;
- b. Intermediate Structural Engineer – bridge design;
- c. Senior Geotechnical Engineer;
- d. Intermediate Geotechnical Engineer;
- e. Senior Environmental Engineer;
- f. Intermediate Environmental Engineer; and
- g. Senior Landscape Architect.

Senior personnel above should have at least 15 year experience in their field of expertise. Intermediate personnel above should have at least 7 year experience in their field of expertise.

Information that should be supplied for each Key Personnel:

1. Individuals name and title;
2. Professional accreditation details (province, year, status, etc.)
3. A description of expertise and experience (with number of years) relevant to the project in this RFP;
4. A demonstration of the ability, capacity and completeness of the team by showing roles, responsibilities and degree of involvement of individual on past projects that will corroborate the person's experience and expertise; and
5. Special accomplishments / achievements / awards.
6. Curriculum vitae.

**5.3 Understanding of the Project**

The Proponent should demonstrate understanding of the project objectives, constraints and the issues that will affect the design, delivery and implementation of the project in this RFP, in a maximum of eight pages.

Information that should be supplied:

1. Demonstrate an understanding of the professional services, interaction with other stakeholders, deliverables and related timelines required for the project in this RFP;



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2. Demonstrate an understanding of the functional and technical requirements, significant issues, challenges and constraints; and
3. Demonstrate an understanding of the implementation strategy;

**5.4 Management of Services**

The Proponent should describe in a maximum of four pages the following elements:

1. Team make-up with roles and responsibilities of the Key Individuals and narrative explaining the rationale; and reporting relationship
2. Management approach and methodology for:
  - a. Communications by type within the Design Team and the CM, NCCR and other stakeholders;
  - b. Scope analysis, validation, and coordination;
  - c. Quality control of design workflow and production, coordination and integration of design disciplines, document standards, and document review process and duration;
  - d. Time management and scheduling for design production and float quantification, allocation and authorization against contract time baseline;
3. Work plan by required service stage with a breakdown of all activities and deliverables with scheduling. Include a narrative describing the work plan and its deliverables, and indicate how the Proponent will address changes to the work plan during the implementation of the project.

Information that should be supplied:

1. Confirm the makeup – profile and organization chart of the Proponent team, including the names of personnel and their role and responsibilities on the project;
2. Management approach and methodology, including resolution of design issues and technical problems, as well as risk management;
3. List of services;
4. Work Plan - detailed breakdown of required service activities and deliverables with a detailed estimate of levels of effort at each design stage (disciplines, personnel classification, quantity of hours, etc) and how changes will be addressed.
5. Time management and scheduling of services.

**5.5 Evaluation Grid**

The NCC evaluation board members will evaluate the strengths and weaknesses of the Proponent's response to the evaluation criteria detailed within SRE 5.1, 5.2, 5.3 and 5.4 of Clause 5. The evaluation board members will rate each criterion with a value from 0 to 10. Table below shows an example of evaluation rating.



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NON RESPONSIVE 0	INADEQUATE 2	WEAK 4	ADEQUATE 6	GOOD 8	STRONG 10
<p>Did not submit information</p> <p>Sample project outside time limit.</p>	<ul style="list-style-type: none"> <li>Substantially below the desired minimum understanding.</li> <li>Bidder lacks qualifications and experience.</li> <li>Team is doubtful to meet requirements.</li> <li>Sample projects or Required Services generally not related to this project's needs.</li> <li>Little management capability to meet performance requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Fails to meet the desired minimum understanding.</li> <li>Bidder does not have minimum qualifications and experience.</li> <li>Team does not cover all components or overall experience is weak.</li> <li>Sample projects or response to Required Services marginally related to this project's needs.</li> <li>Below acceptable management capability, adequate performance is unlikely.</li> </ul>	<ul style="list-style-type: none"> <li>Just meets a minimal understanding.</li> <li>Bidder has minimum qualifications and experience.</li> <li>Team just capable of filling minimum components and might meet requirements.</li> <li>Sample projects or response to Required Services somewhat related to this project's needs.</li> <li>Minimum management capability, adequate performance may be possible.</li> </ul>	<ul style="list-style-type: none"> <li>Has a good understanding.</li> <li>Bidder is reasonably qualified and experienced.</li> <li>Good team – some members have previously worked together and are likely to meet requirements.</li> <li>Sample projects or response to Required Services closely related to this project's needs.</li> <li>Good management capability, effective performance is likely.</li> </ul>	<ul style="list-style-type: none"> <li>Has a strong understanding.</li> <li>Bidder is highly qualified and experienced.</li> <li>Strong team – many members have worked together on comparable projects and are very likely to meet requirements.</li> <li>Sample projects or response to Required Services directly related to this project's needs.</li> <li>Strong management capability, should ensure very effective results.</li> </ul>





**Appendix D - Submission Requirements, Evaluation of Proposals and Financial Proposal**

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**SRE ANNEX A - TEAM IDENTIFICATION**

The prime consultant and other members of the architectural and engineering team must be licensed in the province of Ontario to provide the necessary professional services to the full extent that may be required by provincial or territorial law.

**1. Prime Consultant (Proponent – Structural Engineer):**

Firm or Joint Venture Name:

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.....

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

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**2. Key Sub Consultants / Specialists:**

**2.1 Geotechnical Engineer:**

Firm or Joint Venture Name:

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

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**2.2 Environmental Engineer**

Firm or Joint Venture Name:

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

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**2.3 Landscape Architect**

Firm or Joint Venture Name:

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

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**2.4 Other Subconsultants\***

Firm or Joint Venture Name:

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.....

Personnel and provincial professional licensing status and/or professional accreditation:

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.....

\*Add lines as required.

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## **SRE ANNEX B – PRICE PROPOSAL FORM**

### **A INSTRUCTIONS**

1. Proponents must complete and submit this Price Proposal Form in a **separate sealed envelope** (envelope two) by the Bid Closing prescribed on the first page of the RFP or as amended by addenda and according to paragraph 1.2.2 of SRE 1, “Proposal Requirements”, with the Name of Proponent, NCC Solicitation Number, and the words “PRICE PROPOSAL FORM” typed on the outside of the envelope.
2. Proponents must consider the requirements prescribed in section B1 - All-Inclusive-Fees in determining their proposed fees in section B2 for evaluation by the NCC.
3. Failure to insert an all-inclusive Unit Fee for each item as listed in section B2 – Fees will render the Proponent’s Price Proposal non-responsive.
4. The Proponent must complete and sign the Declaration in section B2. Failure to do so will render the Proponent’s Price Proposal non-responsive.
5. Proponents shall not alter this form except to identify themselves, add additional personnel if required, complete their proposed unit fees, and establish the Total Proposed Fees of a resulting contract. Removing, adding, or altering the wording in this Price Proposal Form will render the Proponent’s Price Proposal non-responsive.
6. Any condition or qualification placed upon the Proposal will render the Proponent’s Proposal non-responsive.
7. In the case of a calculation error, the all-inclusive-unit fee per item shall prevail and be used by the NCC to determine the Proponent’s total fee of a resulting contract.



**Appendix D - Submission Requirements, Evaluation of Proposals and Financial Proposal**

Solicitation Number: AL1760

**Solicitation Identification: Engineering Services**

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

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

**B1 Fees**

Proponents shall calculate an all-inclusive-fee, which includes the cost for:

1. Disbursements Included in the Fees:
  - a. The base rate of pay, wages or salaries;
  - b. Vacation pay;
  - c. Benefits which includes:
    - i. welfare and/or social assistance contributions;
    - ii. pension contributions;
    - iii. union dues;
    - iv. training and industry funds contributions; and
    - v. other applicable benefits and costs, if any, that can be substantiated by the Contractor;
  - d. Statutory and legislated requirements, assessed and payable under statutory authority, which includes:
    - i. Employment Insurance contributions;
    - ii. Canada Pension Plan or Quebec Pension Plan contributions;
    - iii. Workplace Safety and Insurance Board, Worker's Compensation
    - iv. Board or Commission de la santé et de la sécurité du travail premium;
    - v. Public Liability and Property Damage insurance premiums; and
    - vi. Health tax or insurance premiums;
  - e. Incentive remuneration/Profit sharing;
  - f. Sick pay;
  - g. Computers and standard computer software (as well as peripheral devices but excluding printing devices);
  - h. Cellular telephones, monthly charges, long distance charges, data charges, cases and protective carriers, chargers;
  - i. Stationery/miscellaneous offices supplies;
  - j. E-mail addresses/servers;
  - k. Short-term disability / parental or maternity leave;
  - l. Training costs;
  - m. Professional associations;
  - n. Travel/lodging; Travel and travel related expenses to and from and within the National Capital Region (e.g. Gatineau, Ottawa and surrounding areas), including:
    - i. travel time
    - ii. travel fare



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- iii. mileage
- iv. parking fees
- v. lodging
- vi. meals
- vii. taxi charges
- o. Site parking or arrangements in lieu thereof;
- p. Local and head office overheads;
- q. Reproduction and delivery costs of drawings, CADD files, specifications and other technical documentation specified in the Statement of Work;
- r. Standard office expenses such as any photocopying, computer costs, internet, cellular phone costs, long distance telephone and fax costs, including that between the Consultant's main office and branch offices and between the Consultant's offices and other team members' offices;
- s. Courier and delivery charges for deliverables specified in the Statement of Work;
- t. In-house computer work station;
- u. Plotting charges;
- v. Presentation materials;
- w. Rental of office space.
- x. Translation of all tender documents; and
- y. Profit.

2. Disbursements not included in the Fees:

The following disbursements are not to be included in the Fees. When pre-approved by the NCC PM they will be reimbursed to the consultant at actual cost or as described below:

- a. Extraordinary reproduction and delivery costs of drawings, documents, presentation material, CADD files, specifications and other Technical Documentation, to comply with NCC requests;
- b. Extraordinary transportation costs for material samples and models additional to that specified in the Statement of Work;
- c. Fees for approvals and permits to conduct field investigations and material testing;
- d. Other extraordinary disbursements provided they are:
  - i. reasonably incurred by the Consultant
  - ii. related to the services required

In all such cases, extraordinary requirements should be described and estimated, if their need is only identified, formalized and approved in writing in advance by the NCC PM.



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**B2 FINANCIAL PROPOSAL**

All-inclusive Unit Fees to provide services in accordance with the Statement of Work:

				<b>A</b>	<b>B</b>	<b>C = A x B</b>
		<b>Fee Arrangement Type</b>	<b>Unit</b>	<b>Quantity</b>	<b>All Inclusive Unit Fee</b>	<b>Extended total</b>
1.1	Pre-Design	Fixed Fee	Lump Sum	1		
1.2	50% Schematic Design	Fixed Fee	Lump Sum	1		
1.3	90% Schematic Design	Fixed Fee	Lump Sum	1		
1.4	100% Schematic Design	Fixed Fee	Lump Sum	1		
1.5	Tendering	Fixed Fee	Lump Sum	1		
2.1	Site Services during Construction	Time Based Fee	hours	2500		
2.2	Site Services during post-construction / warranty period	Time Based Fee	hours	120		
					<b>Subtotal:</b>	
					<b>TVH (13%):</b>	
					<b>Total (\$Cad):</b>	



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FOR INFORMATION PURPOSES ONLY. FIXED FEES TAKE PRECEDENCE			
1.1	Pre-Design Services		
	For each of the disciplines -		
	Personnel classification	Hourly Rate	Hours
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
1.2	50% Schematic Design Services		
	For each of the disciplines -		
	Personnel classification	Hourly Rate	Hours
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____



**Appendix D - Submission Requirements, Evaluation of Proposals and Financial Proposal**

Solicitation Number: AL1760

1.3	90% Schematic Design Services		
	For each of the disciplines -		
	Personnel classification	Hourly Rate	Hours
	_____	_____	_____
	_____	_____	_____
1.4	100% Schematic Design Services		
	For each of the disciplines -		
	Personnel classification	Hourly Rate	Hours
	_____	_____	_____
	_____	_____	_____
1.5	Services during Tendering		
	For each of the disciplines -		
	Personnel classification	Hourly Rate	Hours
	_____	_____	_____
	_____	_____	_____





SJAM Parkway Bridges – Engineering Services

August 31, 2018

**Appendix D - Submission Requirements, Evaluation of Proposals and Financial Proposal**

Solicitation Number: AL1760

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I, the undersigned, being a principal of the Proponent, confirm that all the pricing elements prescribed in this SRE ANNEX B – PRICE PROPOSAL FORM were properly and completed considered in establishing the total proposed fee for the Services required for the Project.

Name of Bidder / Consultant :	
Signature :	
Title :	
Date :	



NATIONAL CAPITAL COMMISSION  
COMMISSION DE LA CAPITALE NATIONALE

## **Appendix E – PROJECT BRIEF**

### **ENGINEERING SERVICES**

**for bridges on the**

**Sir John A. Macdonald Parkway**

**SOLICITATION NUMBER: AL1760**



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## **1 PROJECT DESCRIPTION**

### **1.1 Intent of Contract**

The Services of a Consultant will be engaged to support the NCC Project to replace the LeBreton Flats exit bridge and rehabilitate the Canadian Pacific Railway (CPR) bridge, which are located along the Sir John A. Macdonald (SJAM) parkway between LeBreton Flats and Tunney Pasture. In general, the scope of the Consultant's Services includes detailed investigation and analysis of Project requirements, validation of design and implementation options, detailed concept design options and support to obtain necessary approvals, numerous Design Packages for competitive tender, and supervision of the construction work. The NCC has retained a Construction Manager (CM) who will work collaboratively with the Consultant and the NCC Representative (NCCR) in the development and analysis of implementation options, their sequencing and cost, and delivery of the approved solutions. The Consultant must respect and apply the NCC's high quality standards throughout all aspects of design planning and production, ensuring ongoing and timely quality control of the Consultant's work product.

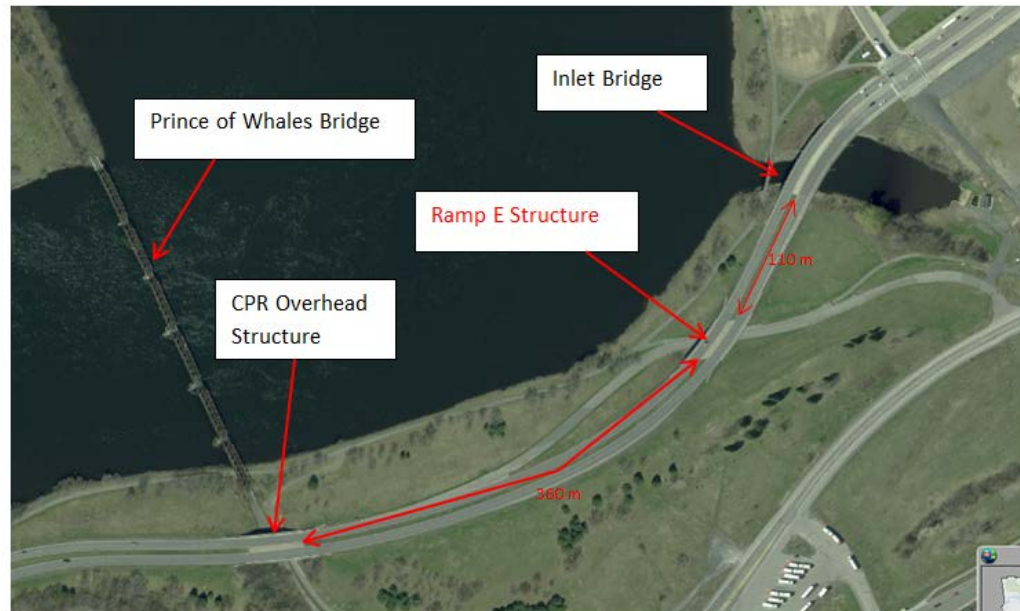
### **1.2 Terminology**

Specific defined terms used in this Project Brief (PB) are capitalized and defined in the Contract and in PB Annex C - Terminology. Words that are not uppercase or italicized have standard definitions.

### **1.3 Project Information**

#### **1.3.1 Abstract**

The NCC, a Crown corporation reporting to Parliament through the minister of Canadian Heritage, is the largest landowner in Canada's Capital Region. It is the steward of more than 10 percent of the region's land mass. NCC infrastructure serves citizens and visitors every day across the region, and it helps to define the symbolic, natural and cultural heritage of Canada's Capital Region. The replacement of the LeBreton Flats exit (ramp E) and rehabilitation of the CPR overhead bridge are one of many projects within the NCC's deferred maintenance program. Located just west of downtown Ottawa along a highly used public transportation corridor, the bridges are significant infrastructure elements of the SJAM parkway, which serves as an open buffer area between adjacent City of Ottawa central and west-end neighbourhoods and the Ottawa River. The two bridges provide north-south pathways for pedestrians to and from the LeBreton Flats area and potentially a light rail commuter service to the City of Gatineau over the Prince of Wales bridge. The bridges and SJAM parkway will continue to serve as a transition zone between the Ottawa River and its public pathways and the proposed significant redevelopment of LeBreton Flats and the Bayview areas south of the SJAM parkway.



**Figure 1** - Location of the LeBreton Flats exit (Ramp E) and CPR overhead bridges along the SJAM parkway.

### 1.3.2 Background

The LeBreton exit (Ramp E) and CPR overhead bridges were built respectively in 1966 and 1967. They are distanced 360 meters from each other and about 45 meters away from natural high-water line of the Ottawa River. The site contains contaminated soils and groundwater, methane and some imported backfill. Groundwater monitoring wells are in place. The NCC monitors methane in the wells annually but the groundwater has not been sampled since 2012. Adjacent to the Ottawa River, the bridges are near the river's natural flood plain where wildlife, trees and other vegetation are abundant. The Ramp E bridge is 37.2 meters long and 24.1 meters wide. It is composed of 2-span skewed (45 degrees) post-tensioned solid reinforced concrete frame with one eccentric V-shape and moderately inclined piers, with a slight curve and skew of 45-degrees. The concrete deck slab comprises longitudinal and transversal post-tensioned cables. The structure includes post-tensioned piles. There is a middle concrete median and concrete sidewalk aprons on both the north and south sides of the bridge. Four 3.5-meter-wide vehicle lanes serve both eastbound and westbound traffic. One wide-road lane and a pathway are underneath the bridge. Neither are in use.



**Figure 2** - LeBreton Flats exit (Ramp E) bridge, west elevation



**Figure 3** - LeBreton Flats exit (Ramp E) bridge, east elevation





The CPR overhead bridge is 24.9 meters long and 24.1 meters wide. It is composed of three spans of a solid and continuous reinforced concrete frame, has slightly inclined piers, and a slight curve with a skew of 18 degrees. The arch-type structure is typical of many SJAM parkway and pathway bridge structures.

There is a middle concrete median and concrete sidewalk aprons on both the north and south sides of the bridge. An abandoned rail track and new pathway are underneath the bridge. The railway track leads to the closed Prince of Wales Bridge, built in 1882, crossing the Ottawa River to the City of Gatineau, Quebec.



**Figure 4** – CPR overhead bridge, north elevation





Both bridges carry four lanes of vehicular traffic: two westbound and two eastbound. Pedestrians and cyclists use nearby pathway beside the Ottawa River during the week; however, the SJAM parkway westbound lanes are closed in the summer each Sunday to allow traffic-free access for cyclists.

The condition of both bridges is at the stage where life-cycle repairs or replacement are necessary to stop further component deterioration and remain in-service. Both bridges receive partial rehabilitation in 2006.

In 2010 it was discovered during the rehabilitation the SJAM parkway Parkdale Avenue bridge that the steel single-box vehicular railings, which are similar to many SJAM parkway structures, had major deficiencies due to rusty or broken anchor bolts that anchor the railing posts to the concrete deck of the bridge, although thick layers of paint made the problem not readily visible. A permanent solution to replace the railings and comply with code requirements could not be found so temporary concrete jersey barriers were installed in 2013 until complete bridge rehabilitation is undertaken.

In 2015, City of Ottawa Light Rail Transit office (LRT) requested the NCC grant SJAM parkway access for empty OC Transpo buses to detour them during the LRT construction. A structural evaluation study confirmed that the Ramp E bridge could not support the proposed service load imposed by bus traffic and could barely support the original design of a 36-ton service load due to construction defects at inception.

The Ramp E study noted that “a major deficiency is the superstructure deformation due to the settlement of falsework during initial construction, resulting in sag of more than 200 mm in the longer north span; no documentation is available of the method of compensation for the road profile. Consequently, there is uncertainty regarding any additional dead load due to profile corrections (asphalt padding or concrete overlay), the effective deck thickness and most critically, the location of the post-tensioning tendons, which complicated the study. Following cores analysis, it was concluded that while the local effects of increased asphalt thickness (additional dead load) are countered by the increased deck thickness (additional moment capacity), the global effects of the increased dead load (due to asphalt padding and thicker deck) include larger negative bending moments over the pier. The study results indicate that the structure is overstressed for all bus loading cases with unladen or full buses. The overstress occurs in both the positive moment region (mid-span) of the north east quadrant and the negative moment region over the pier.”

The Ramp E bridge was temporarily strengthened by the LRT team in 2015 with a steel shoring pier at the bridge’s mid-span. The shoring is temporary and must be certified in December 2018 as it was erected on crew piles in clay soil, which will settle and not provide sufficient support over time.

Like the Parkdale Avenue bridge, the steel railings of the CPR overhead bridge are deficient. The bridge’s deteriorated bearing supports of spanning frame are areas of concern and require further investigation and analysis to determine the best value-for-money solution.



### 1.3.3 Ramp E Replacement Options

The NCC developed and analyzed the life-cycle benefits of the options for the Ramp E bridge replacement or rehabilitation as outlined below.

The Consultant is required to consider the Ottawa River shoreline and 2018 Linear Park master plan, which was adjusted to reflect the idea of a gateway entrance and transition area to the Ottawa River and LeBreton redevelopment area. A key master plan decision was the SJAM parkway Ramp E bridge span and wide-road and pathway below it. An amendment to the Linear Park master plan will be required if Project requirements contradict the approved plan.



**Figure 5** – Approved 2018 Linear Park master plan indicating transition gateway from LeBreton Flats to Ottawa River area.



### **1.3.3.1 Do Nothing**

This option was rejected for further consideration as bridge components are deteriorated and may constitute a safety hazard to public, which will eventually result the closure of SJAM parkway.

### **1.3.3.2 Undertake Repairs**

Although a minimal investment today could potentially give 10-years of reliable service, this option was also discounted. It is likely that after more than 60 years of service the bridges should be replaced.

### **1.3.3.3 Full Ramp E Bridge Replacement – Pedestrian Tunnel Below**

Undertaking a full replacement of the Ramp E bridge would reinstate the SJAM parkway integrity and provide rudimentary access to the Ottawa River with a pedestrian tunnel about 35-40-meter-long and 4-meter wide. This option would not integrate well with the proposed LeBreton Flats redevelopment and 2018 Linear Park master plan. The tunnel would not be used for about 5 years and could potentially limit the developer, Rendez-Vous LeBreton, from implementing its design concepts.

Bridge replacement would provide a similar roadway configuration, remove the westbound on-ramp to the SJAM parkway and, except for the pedestrian tunnel, block the underside of the new bridge.

### **1.3.3.4 Full Ramp E Bridge Replacement – Wide-Road Gateway Below**

Undertaking a full replacement of the Ramp E bridge and providing a wide-road gateway to the Ottawa River would integrate well with the proposed LeBreton Flats redevelopment and Linear Park master plan. Bridge replacement would provide a similar roadway configuration, retain the westbound on-ramp to the SJAM parkway, and reinstate the 2-lane road and pathway underneath the bridge. Modifications to the bridge inclined piers may be required for this option.

Although more expensive, the open-span below the bridge provides a welcome experience for the public as opposed to a tunnel experience in the above option. The existing westbound on-ramp to the parkway will be preserved as an additional egress for emergency or other use for the planned, crowded major event site in LeBreton Flats. The wide-road gateway may not be used for a period of 5 years when LeBreton redevelopment is near completion.

### **1.3.3.5 Inlet Bridge Extension**

The developer Rendez-Vous LeBreton proposed “the possibility of extending the span of the Inlet Bridge currently flying over Nepean Bay in order to access the river and parkway from the site, instead of rebuilding the one in place just to the west at LeBreton Exit Bridge. This could improve the views and experience on the [LeBreton] site better than where the current bridge [the NCC] are planning to rebuild, particularly from the future public plaza spaces”.



The proposed road and pathway would be only 1.1 meters above the normal water line and 0.7 meters above the natural high-water line, which presents a potentially significant risk. The Inlet bridge was built lower to match the elevation of LeBreton Flats boulevard, which is 3 meters lower than the Ramp E bridge. This option was deemed impracticable and rejected for further consideration as there is no real benefit of a new road and pathway underneath the Inlet bridge.

**1.3.3.6 NCC Preferred Option**

The full Ramp E bridge replacement-wide-road gateway option is the preferred by the NCC. However, cost is a significant factor. The same SJAM parkway scope but with the pedestrian tunnel below and simplified embankments may be selected should detailed investigation determine Project implementation cost exceed the NCC’s budget. Corrective work related to the CPR overhead bridge would be undertaken at the same time to limit the traffic impact to one construction period.

**1.3.4 Cost**

The NCC’s construction budget for the preferred Ramp E replacement option and rehabilitation of the CPR overhead bridge is \$11M combined. The actual construction cost will depend on the NCC’s priorities and requirements resulting from its internal approval processes.

**1.3.5 Milestones**

Key Project activities and milestones with corresponding time frames are listed below. The Design Team is to resource the Schematic Design and Design Package production to achieve the milestone dates below, providing Services as indicated throughout this Project Brief.

<b>Project Milestones</b>	<b>Date</b>
Consultant appointment	November 1, 2018
Pre-design	January 2019
50% Schematic Design (SD)	End of March 2019 or better
90% Schematic Design (SD)	End of May 2019 or better
100% Schematic Design (SD) NCC approval	End of June 2019 or better
NCC FLUDA - Level 2 approval	End of July 2019 or better
Substantial performance (52 weeks after FLUDA approval)	July 2020 or better
Completion (including 24-month warranty period)	July 2022



## **1.4. Project Implementation**

### **1.4.1 Overview**

With the support of the CM, the NCC intends to optimize critical decision making to prioritize Project approval and design, allowing construction to start early when possible and in a streamlined sequence. The CM will provide ongoing Project scope, time, Cost, risk, and related analysis to the NCCR in consultation with the Consultant.

The Consultant is required to define technical investigation requirements and small Design Packages (DPs) for the CM to tender and obtain critical information to advance design concepts. With the Project option concept selected and approved, the CM will further define the scope and sequencing of the Consultant's DPs to the NCCR and Design Team, for the Design Team to plan their tasks and activities accordingly. The CM is required to, when requested by the NCCR, implement fast track Project delivery, using multiple, simultaneous DPs.

The Consultant and CM are required to implement the Project through a holistic, prioritized, integrated, coordinated, and managed design process, and the sequential tendering and construction of multiple DPs. The CM may have to tender DPs based on partially complete information of a holistic design that appropriately balances quality, Cost, and time and risk management issues.

Design Team decisions will require substantiated assessment of the viability of the design proposal and cost and schedule benefit established by the CM. The CM, if and when requested by the NCCR, will provide design-assist services. The CM will participate in Project meetings and workshops, provide bid-ability and constructability advice, define, and manage construction work and DP phasing and sequencing in accordance with the Project milestones and construction budget approved by the NCC.

The Consultant and CM are required to provide an experienced, on-site team with the ability and to respond to evolving situations and coordinate and integrate ongoing construction operations with the design production.

### **1.4.2 Design Coordination**

Successful design prioritization, coordination and integration with construction operations are overarching requirements for the Project. The Consultant will coordinate and integrate all functional, technical, and operational requirements into the Project Schematic Design (SD) and Design Packages (DPs).

The CM is required to collaborate with the Design Team throughout the design process, providing suggestions and recommendations for alternative materials, construction sequencing, physical constructability and tenderability of the Project scope. These collaboration and integration processes require an ongoing synergy of Project Team skills to manage Project Costs, always remaining within the approvals prescribed of the Project.



### 1.4.3 Schematic Design

SD development requires a significant level of coordinated effort that involves both the entire Design Team and the CM. The information collected through investigative work is to be used to formulate the development of design options for the Project.

#### 1.4.3.1 50% Schematic Design

The 50% SD submission will give the NCC the opportunity to provide feedback to the Design Team and revalidate NCC priorities. The 50% SD encompasses the preferred design options and implementation options for temporary roadways and pathways. Detailed investigations will have been completed and information from ongoing investigations will be available to inform design options. Demolition scenarios of the Ramp E bridge are to consider the placement of existing longitudinal and transversal post-tensioned cables, post-tensioned piles and location of the three inclined piers, which could make the safe removal of the bridge more complicated. Ecological characterization and tree survey of the area must assess and determine species at risk and permitting requirements.

The structural schematic design analysis will commence with the approval of the structural modelling framework and pre-design analysis. Structural design options will incorporate investigation and materials testing information related to the geotechnical design report (GDR).

The implications of Ramp E full bridge replacement versus a phased approach to replacement are to be detailed. The implications of these scope and implementation options will have a significant impact on the CM's construction cost and schedule.

A value engineering (VE) process, including monthly Project control workshops, will be undertaken by the CM, Design Team and the NCCR to determine the cost-benefit of each scope and implementation option. Subject matter workshops will provide the Design Team and CM essential information to refine and integrate system concepts, construction estimates and scheduling impacts.

The expected outcome of the VE process is to maximize Project value by optimizing the design to remove unnecessary risks and their related costs, while improving function, quality and sustainability.

Further, the 50% SD submission will include several other well-advanced elements of the Project, including:

- a) A comprehensive strategy for temporary roads and pathways, including required detours, signage and way finding for the public. The strategy will focus on the transition of the site to and from construction operations over course of the Project and its various stages; and
- b) A comprehensive strategy to manage the impacts of vehicles and the experience of cyclists and pedestrians, and, impacts to the NCC's identity and reputation that will result due to the work and the necessary blocking off and fencing that will occur in the LeBreton Flats area.

Following the VE process, a preferred design option will be identified by the NCCR. Concurrently, the Consultant will be responsible for formal presentations of the 50% SD options to the NCC's Advisory





Committee on Planning, Design and Realty (ACPDR) to obtain their preferred direction for the Project, including the identified preferred structural option and implementation strategy.

Consult with the City of Ottawa and obtain their input and direction regarding Project planning and temporary requirements, municipal services and related matters. Incorporate information and requirements provided by the NCCR related to the Project Environmental Assessment information

Comments provided by the ACPDR will be integrated by the Design Team in consultation with the CM and to the satisfaction of the NCCR into the subsequent submissions. Failure to obtain an ACPDR positive endorsement of the preferred structural option and implementation strategy at this point will result in a delay to Project implementation.

Following the VE and other workshops, DP development will commence for:

- a) Site preparation and environmental protection;
- b) Temporary shoring, bracing and underpinning;
- c) Structural demolition;
- d) Temporary roadways and pathways;
- e) Temporary signage and way finding; and
- f) Other site requirements.

The DPs will be adjusted to take into account NCC comments and will be further refined at 100% SD.

#### **1.4.3.2 100% Schematic Design**

At 90% SD, the preferred design option, site impacts, and implementation strategy will be presented for workshop discussions and to confirm Environmental Assessment information. Review the preferred design option and implementations requirements with the City of Ottawa.

Results of the workshops, City of Ottawa discussions, and Environmental Assessment requirements will provide final direction for the 100% SD submission and approval processes. Information from on-going investigations will be incorporated into the submission. Ongoing input from the CM is required to ensure feasibility of the design solutions.

The Consultant will be responsible for formal presentations of the 100% SD to the ACPDR, for NCC board approval. This approval will allow for the start of major construction by the CM. The CM will complete the pre-qualification process in advance of the NCC approval.

Comments provided by the ACPDR will be integrated by the Design Team in consultation with the CM and to the satisfaction of the NCCR into Construction Document Work Packages. Failure to obtain an ACPDR positive recommendation for NCC Board approval of the 100% SD may result in a construction delay of approximately three to four months.

Following the 100% SD, the DPs initiated after 50% SD, will integrate the recommendations, approval comments or conditions of the NCC and authorities having jurisdiction.

A detailed Design Development stage is not envisioned for this Project. Rather, the direct production and implementation of prioritized Design Packages will rapidly advance the Project.



#### **1.4.4 Design Packages/Tender Strategy**

The Design Team is required to maintain full design production of identified DPs throughout the SD approval processes.

After the NCC's approval of the CM's procurement plan, the CM will pre-qualify of subcontractors and suppliers who are competent and capable of carrying out the work of the Project. This prequalification process will occur concurrently with or in advance of the submission of substantively advanced DPs.

Tendering by the CM of the CM's subcontracts will coincide with the completion of each DP. With the advance written approval of the NCCR, the CM may bid competitively and transparently on certain DPs.

Below is a preliminary list of DPs which the CM may expand or further subdivide in consultation with the Consultant, as appropriate to the approved scope of the Ramp E and CPR overhead bridges. The preliminary categories include:

- a) Site preparation and environmental protection;
- b) Soil/rock excavation, management and removal;
- c) Ground water management;
- d) Site infrastructure and possible municipal and civil work;
- e) Substructure and superstructure, including cast-in-place concrete, rebar, expansion joints, etc.;
- f) Guardrails and steel railings, miscellaneous metals;
- g) Site backfill and grading;
- h) Roadway reconstruction (asphalt, curbs, painting, etc.);
- i) Landscaping; and
- j) Related work.

The CM will take a lead role to identify all submissions and their timing in order for the Design Team to prioritize their efforts. The CM may split DPs into multiple tender packages as required to optimize the Project schedule.

#### **1.4.5 Work Restrictions Plan**

The CM will develop the work restrictions plan in collaboration with the Design Team and the NCCR. The purpose of this plan is to identify the restrictions, constraints and requirements that will be imposed on the construction in order that stakeholder approval is received before start of construction. Once stakeholder approval is received, the CM and the Design Team will work together to incorporate the approval requirements into the DPs. The CM will inform its subcontractors and suppliers of the constraints and requirements, including those that impose a cost and schedule impact.

The constraints and requirements within the CM's approved work restrictions plan will include, but are not limited to:

- a) Environmental control;
- b) Traffic control;
- c) Demolition and shoring, underpinning and excavation requirements sequence





- d) Repair and reconstruction sequence;
- e) Testing, performance verification requirements and processes; and
- f) Construction safety.



## 2 OBJECTIVES

The Consultant and the CM are required to consider the following NCC objectives in the design and implementation of Project.

### 2.1 Integrated Design and Collaborative Project Delivery

Develop a common vision for the Project through an integrated and collaborative delivery approach. Deliver the Project with an integrated design and construction solution to a high standard of design excellence. Provide balanced solutions to all Project elements and challenges.

### 2.2 Cost Management Objectives

Deliver the Project within the limits of its authorized funding, and, while substantiating the viability and cost benefits of design options, respect and enhance each bridge asset and their associated landscape. Reuse existing infrastructure to the extent possible.

### 2.3 Time Management Objectives

Organize, prioritize and deliver the Project within the established time limits, permitting the full use and function as intended, proactively prioritizing the design and construction work and managing resources to achieve the prescribed milestones.

### 2.4 Quality Objectives

Deliver the Project and meet the quality objectives appropriate for each asset; and, provide a quality management plan for Design Services which addresses the technical aspects of the design and its production so the efficient performance of all Design Services and built components and systems of the Project will be verified against the intended design performance and the design life-cycle analyses.

### 2.5 Sustainable Development Objectives

Deliver the Project using integrated design principles addressing sustainable development. Employ strategies to address the environmental, economic and societal social values and their impact on every Project decision. Deliver an enhanced, healthy, livable work environment; and, provide appropriate design solutions with effective systems, components and technologies that support ongoing use by the public while meeting the operational and functional requirements.

### 2.6 Security Objectives

Incorporate physical security requirements as required into the design and construction in a balanced, integrated, layered approach, alleviating a risk to accessibility or visual distraction from the character defining elements of the NCC assets and their surroundings.



## **2.7 Health and Safety Objectives**

Deliver the Project and the related work processes to prove the full protection of the applicable occupational health and safety regulations, and to ensure the health and safety of all persons, federal employees and private sector workers. Responsibly deliver and adhere to the provisions identified in the Canada Labour Code, provincial Acts and Regulations, and provide such provisions to all persons both working within and/or visiting a public facility or site.

## **2.8 Codes and Standards Objectives**

Observe codes, regulations, by-laws, and decisions of authorities having jurisdiction. Observe national model Codes, Acts, and Standards. Identify other jurisdictions appropriate to the Project and include those jurisdictional requirements into the Project scope.



### **3 SCOPE**

The scope of this Project includes:

- a) An investigation program to confirm Site and materials condition and composition;
- b) Temporary structures, roads and pathways as required;
- c) Replacement of the Ramp E bridge;
- d) Rehabilitation of the CPR overhead bridge; and
- e) Landscaping.

Working in collaboration with the NCCR and CM, the Consultant is required to define the scope of the Project using value for money principles, balancing the need for capital investment while maintaining asset life cycle, always considering the perspective of Canadians at large.

In planning and designing the work of the Project, the Consultant is required to consider common Project scope elements, which include investigation work, temporary work, accessibility requirements and security requirements.

#### **3.1 Investigation Work**

The Consultant along with the NCCR and CM is required to establish a Project-specific strategy and program of necessary investigations required to for the Project. The purpose of investigation work is to gather all information required by the Consultant to advance the design, reduce Project risk, and to:

- a) Confirm the condition and configuration of bridge structures and materials and surrounding Site conditions;
- b) Test and determine the content, type, location, and approximate quantity of designated substances located in and around the Project site and subsurface, updating or validating any existing NCC information;
- c) Confirm the geology, hydrogeology and soil and groundwater quality of the Site to develop the Project design and excavation, dewatering, or subsurface remediation requirements;
- d) Confirm the condition and placement of civil and municipal infrastructure in and around the Site;
- e) Complete legal, topographic and, if required, archeological surveys; and
- f) Undertake other investigations as necessary.

Investigation Work will typically be ongoing concurrent with the pre-design and Schematic Design stages of the Project. The Consultant is required to prepare a preliminary inspection plan in coordination with the NCCR and CM.

#### **3.2 Temporary Work**

The Consultant along with the NCCR and CM is required to define temporary work requirements and prepare DP documentation, including interim requirements to modify temporary work in transitional periods between DPs or as necessary to ensure the safety and security of the work, Project Site and the



public. Services related to temporary work include, but are not limited to:

- a) Temporary protection installation, ongoing Monitoring, adjustment, and removal of roadways, pathways, and bridge components and systems;
- b) Heat control should winter construction be required;
- c) Maintaining operational capacity of existing civil/municipal systems;
- d) Structural bracing, underpinning and supports; and
- e) Isolation and clean-up of spaces and areas adjacent to the site affected by the Project.

### 3.3 Accessibility

The accessibility scope of the Project includes an integrated approach of asset stewardship and public use. The NCC is committed to making its facilities accessible to persons with disabilities. The principal governing regulations, policies and standards are the *Canada Occupational Health and Safety Regulations* (COHS), Treasury Board's *Policy on the Management of Real Property*, Treasury Board's *Accessibility Standard for Real Property*, the *Accessible Design for the Built Environment* (Canadian Standards Association (CAN/CSA B651-12 and its supplements)) and the *National Building Code of Canada* (NBCC)).

If it is not possible to integrate accessibility standards in the design of the Project the Consultant is to consult with the NCCR in advance of making such decisions, ensuring the proposed intervention meets the intent of the regulations or provides an alternate solution acceptable to the NCCR.

### 3.4 Geotechnical

The scope includes:

- a) Site characterization and detailed assessment of the Ramp E area;
- b) Rock removal, stabilization and ongoing Monitoring as required,
- c) Design and site Services coordinated with civil, municipal, environmental, and structural investigations and their Design Services.

### 3.5 Environmental

The scope includes:

- a) Site characterization and detailed assessment of the entire Project area and ongoing Monitoring of all environmental and construction worker protection and permitting requirements;
- b) Identification, planning, Monitoring, and removal of hazardous and non-hazardous soil/rock or water, including requirements for on-site water treatment before discharge municipal sewer systems;
- c) Development of waste reduction and sustainable strategies and plans, and
- d) Auditing and management of solid/soil waste and waste water.



### **3.6 Civil / Municipal**

The scope includes:

- a) Assessment of the condition, capacity and limitations of the existing City of Ottawa watermain and sewer infrastructure;
- b) Design of solutions if temporary works are required to ensure ongoing watermain and sanitary sewer stability and operation;
- c) Iron works located in cleared accessible areas;
- d) Storm collection systems which rely on gravity; and
- e) New roadways and pathways that integrate with the modified landscape.

### **3.7 Structural**

The scope includes:

- a) Investigation and evaluation of capacities and materials with respect to intended use;
- b) Localized engineered repairs or replacement of CPR overhead bridge assemblies, neoprene compression seals or expansion joints, and all 14 Lubrite plate-bearing-type supports to restore/upgrade structural materials or component integrity, and;
- c) Replacement of the entire Ramp E bridge superstructure with new assemblies, concrete abutments, approaches, wing and ballast walls, drains, waterproofing and wearing surface to suit new bridge configuration. Assessment and possible reconfiguration or replacement of Ramp E foundation piles. Reinstatement of roadway and/or pathway underneath the bridge deck. New bridge deck capacity is to be increased to 640kN, with a life-cycle of at least 80 years;
- d) Replacement of steel guardrails on both bridges with either Massachusetts SS10-50, England, or the NCC preferred Wyoming type as installed on the Sir George-Étienne Parkway;
- e) All temporary structural work required as part of construction and construction phasing including specific requirements for sequencing of demolition and temporary bracing; and
- f) Structural component and systems monitoring during construction.

### **3.8 Landscape architecture**

The detailed design and implementation of the landscape aspects of the Linear Park landscape master plan within and adjacent to the construction Site is to address: protection, demolition, excavation, modification of bridge structures, roadways and pathways, installation of new and reused pavements, drainage, planting and sodding and removal and reinstallation. This includes:

- a) Accommodation of current and future vehicle, cyclist and pedestrian traffic;
- b) Enhancement of the health, safety and security of the public;
- c) Enhancement of universal accessibility for all persons accessing and using pathways;
- d) Sustainable and long-lasting materials that are easily maintained and durable for Canada's four-



- season climate; and
- e) Protection and enhancement of views from LeBreton Flats and the Ottawa River.



## 4 CHALLENGES

The Consultant is to consider and proactively work with Project Team to identify and resolve challenges identified below and as they inevitably arise throughout the Contract.

### 4.1 Project Management Challenges

The Consultant is to consider that:

- a) The Project Team may be comprised of numerous internal NCC staff and external consultants;
- b) NCC staff have differing levels of project delivery experience;
- c) NCC project approval processes may sometimes be onerous and lengthy;
- d) The Consultant's project management of the Design Team and all Design Services is essential to achieve Project objectives; and
- e) Collaboration with the CM and NCCR requires the Consultant's ongoing leadership to gain efficiencies.

### 4.2 Implementation Challenges

The Consultant is to consider that:

- a) Municipal, provincial, or federal priorities change over time, which could impact the Design Team's level of effort and the Project sequencing;
- b) The public's dependence on and use of the SJAM parkway and nearby pathway infrastructure is significant and the sequencing of the work must maximize infrastructure access and minimize loss of use, including cyclists summer use of the parkway on Sunday-Bike-Days;
- c) As a minimum, two SJAM parkway vehicle lanes are to be open for use at all times;
- d) Temporary roadways, if cost effective, may shorten the duration of construction and overall impact on the public;
- e) Safety barriers and related measures are essential to protect the public;
- f) The identity and reputation of the NCC is paramount as the Project will be highly scrutinized by the public and media. The management and implementation of the Project have the potential to undermine the reputation of the NCC. Specific risks that the Design Team and the CM need to consider in Project planning, development, delivery and ongoing coordination of the NCCR are:
  - i. How the natural environment is managed and cared for;
  - ii. How persons accessing and entering a Site are cared for as per health, safety, security and accessibility;
  - iii. How Cost efficiencies are procured over the short-term and long-term for the better operation and management of the asset;
  - iv. How sight lines to and from the Ottawa River are preserved or enhanced; and
  - v. How overall public use is enhanced.





## **5 CONSULTANT SERVICES**

The Consultant must take into account the Project description, objectives, scope, challenges, Project team organization, and reference information in providing the required Services as described in the subsequent sections of this Project Brief and its appendices.

The Consultant, as an expert in matters of design planning and implementation, must:

- a) Provide comprehensive and continuous design planning, analysis, management and implementation Services throughout the Contract until the completion of warranty activities and the DR has approved/signed the Certificate of Completion. The Consultant's Services include any warranty related inspections and repairs required after the issuance of the Certificate of Substantial Performance;
- b) Submit deliverables to the NCCR for review and approval at various intervals as stated within each Project Brief section;
- c) Actively participate with the CM and the NCCR to establish and maintain a collaborative Project culture, placing decision making for the Project first; and
- d) Immediately notify the NCCR and CM in writing of any potential increases or decreases in the scope of work that could affect the ability to meet Project objectives.

All monthly plans, reports, or their updates must accompany each Consultant's invoices for Services rendered for the period in question. The invoice will not be due and payable until the completed monthly plans/updates are submitted to the NCCR.

The Consultant must provide integrated Design Services listed in this section and defined throughout the Project Brief, including:

### **5.1 Engineering Services**

- a) Structural, with specialty in bridge replacement and rehabilitation;
- b) Geotechnical;
- c) Environmental, including industrial hygiene; and
- d) Civil/Municipal; and

### **5.2 Other Services**

- a) Landscape architecture; and
- b) Transportation and traffic.

### **5.3 Licensing, Certification, or Authorization**

The Consultant and all members of the Proponent's Engineering team must be licensed, certified and/or authorized to provide the necessary professional services to the full extent that may be required by provincial law in the province of Ontario.



## 6 PROJECT TEAM ORGANIZATION

The Project Team is required to manage and implement the Project in a collaborative manner. All Project Team members are required to work cooperatively at every stage of the design and construction process to ensure a successful result. All team members are responsible for establishing and maintaining a professional and cordial relationship.

### 6.1 NCC Team

#### 6.1.1 NCC Representative

The NCC Representative (NCCR) is the Chief, Project Management, or an approved delegate. As the Technical Authority for this Contract, the NCCR is responsible for all technical matters related to this Contract.

#### 6.1.2 NCC Design Management Team

The NCC design management team is comprised of NCC engineers, landscape architects, and technical and administrative staff. The NCC internal team may be supplemented with external professionals through various standing offer agreements. The design management team will perform a challenge function of the intent and quality of the Design Team's design, reviewing and critiquing the Design Team's work product.

### 6.2 Construction Manager

The CM will discuss technical matters with the NCCR and the Consultant. The CM will be part of the integrated Project Team and is required to:

- a) Provide technical support, services and work to the NCC in accordance with the terms and conditions of the CM's contract;
- b) Lead the construction team that is composed of its own forces and all subcontractors and suppliers retained by the CM;
- c) Act as constructor in charge of the construction Site(s);
- d) Establish and enforce Site health and safety rules for all individuals working on the Site, including members of the Project Team;
- e) Ensure that all individuals, before gaining access to the Site, participate in a Site training and orientation program;
- f) Provide all necessary personnel to perform the services and duties for the Projects, either by assignment of CM qualified staff or by engagement of services contracted directly by the CM;
- g) Ensure continuity of personnel and maintain a dedicated working team for the life of the Project;



- h) Receive and review all Project related documentation provided by the NCCR and update all future CM deliverables related to scope, budget, and schedule;
- i) Provide ongoing Cost, time, risk, procurement, administrative, and security services;
- j) Work constructively to ensure a collaborative and cooperative team approach with knowledgeable and timely input and contribution to all Project Team members;
- k) In cooperation with the Consultant, ensure at all times the design solution and construction is maintained within the accepted construction estimate for the Project;
- l) In cooperation with the Consultant, ensure at all times the design solution and construction can, and is, undertaken within the fixed schedule objectives of the Project;
- m) Provide ongoing design management services and, when requested by the NCCR, design-assist services; and
- n) Organize and attend meetings and workshops with Project Team members or, as needed, separate meetings with the NCCR.

### 6.3 Consultant

The Consultant is required to discuss technical matters with the NCCR and the Construction Manager. The Consultant will be part of the integrated Project Team and is required to:

- a) Prepare and complete the integrated design for the Project by effectively project managing the Services of all design disciplines, subconsultants, and specialists;
- b) Conduct, record and issue minutes of design and other Project meetings;
- c) Provide input to the CM on prequalification criteria for subcontractors and suppliers;
- d) Work with the CM to define the DP's and establish the format and scope of the DP's;
- e) Prepare and assemble DP's for tendering by the CM;
- f) Input to CM's Cost planning, Cost estimating and Cost control of construction;
- g) Manage the design quality, design cost and design time of the Design Team's Services;
- h) Develop and update a risk register for the Project from the Design Team's perspective;
- i) Provide on-site Services for investigations and during construction for ongoing Monitoring, quality control and responding to site conditions/issues, including Services related to the preparation of changes, verification of the CM's work progress and recommendation to the NCCR of acceptance of the CM's work;
- j) Cooperate with the CM and the NCCR;
- k) Participate in design related actions to ensure that the Project remains on track and identifying means to recover from cost overruns or schedule delays if they occur;
- l) Define testing and commissioning procedures and performance expectations and confirm that performance requirements have been met;
- m) Verify operating manuals, and ensure that record Drawings and Specifications and as-built Drawings and Specifications are updated and accurate based upon Site observations and information provided by the CM;
- n) Participate in construction meetings organized by the CM;



- o) Provide design-related training for NCC operations staff; and
- p) Provide post-construction Services.



## 7 REFERENCE INFORMATION

Attached in the Appendices are the:

1. 1966-67 as-built bridge drawings and borehole information;
2. As-built of 2005 rehabilitation; and
3. Sketches of the temporary shoring system for LeBreton Exit Bridge. Related technical note will be provided during design implementation.

The NCCR will provide the Consultant the following information after Contract award:

- a) Photos of existing bridges and sites;
- b) Basic survey plan for LeBreton Exit Bridge by NCC Geomatics Team;
- c) Soil, groundwater and methane sampling data;
- d) Structural Evaluation Report for both bridges by Morrison Hershfield dated January 2015, evaluating bridge capacities for detour of OC Transpo buses during LRT construction.
- e) Study sketches of railings/guardrails replacement for the SJAM CPR Overhead Bridge;
- f) The NCC's standard plan sheet, size A1, quantity as required, standard title sheet, standard legend and index sheet in hard copy and/or in "AutoCAD" format;
- g) 2006 railing study;
- h) City of Ottawa infrastructure: <https://ottawa.ca/en/city-hall/planning-and-development/engineering-services> ; and
- i) Federal Land Use and Design Approval: <http://ncc-ccn.gc.ca/doing-business/federal-land-use-design-transaction-approvals> .



## **8 DESIGN MANAGEMENT AND ADMINISTRATION SERVICES**

### **8.1 Project Administration**

#### **8.1.1 Meetings and Workshops**

Meetings, workshops and presentations all require advance preparation and follow-up actions by the Consultant. Meetings, workshops and presentations will occur as per table 8.1.6.

#### **8.1.2 Design Meetings**

The Consultant must co-chair Project design meetings with the NCCR to review and discuss the activities of the Design Team. These meetings will occur initially at the downtown Ottawa NCC offices, then at the Project Site as determined by the NCCR in consultation with the CM and Consultant.

The Consultant must prepare and deliver the agenda, notice to invites and minutes. The Consultant must issue final meeting minutes within 2 Working Days of meeting. The Consultant must create and maintain a database containing meeting action items and issues. The top five risks from this database will accompany the final minutes of each meeting.

Attendance at these meetings will vary in accordance with the stage of Project design and usually include the Consultant, NCCR, CM, NCC's Design Management Team, or any entity or person contracted or employed by the Consultant for the specific Services as identified by the Consultant and according to the matter in question. The CM will prepare in advance of each meeting and be able to discuss in an open manner all Project related matters that affect the CM's ability to support the Project development or complete the Project as approved.

The purpose of these meetings is to:

- a) Monitor design progress against the approved scope and construction Cost estimates, and construction schedule;
- b) Ensure clear and efficient communication between all participants;
- c) Ensure effective design and DP prioritization and coordination;
- d) Identify opportunities or problem issues, assigning responsible individuals and dates for resolution; and
- e) Ensure effective quality management, including integration of approval body requirements.

#### **8.1.3 Construction Meetings**

The CM will chair Project construction meetings during the construction stage of the Project, held either on the Project Site or at the NCC Offices as agreed to by the NCCR.

The CM will prepare and deliver the agenda, notice to invites and minutes. The CM will issue the final meeting minutes within 2 Working Days.

The CM will create and maintain a database of action items and issues. This database forms part of the



CM's risk management services. The top five risks from this database are to accompany the final minutes of each meeting.

Attendance at these meetings will vary in accordance with the stage of Project construction and usually include the Consultant, NCCR, CM, other Project Team members if required, or any entity or person contracted or employed by the Consultant or CM for the specific matter in question.

The purpose of these meetings is to:

- a) Monitor the progress and administration of the prioritized construction against the approved Project scope, construction Cost estimate and construction schedule;
- b) Ensure efficient communication between all participants;
- c) Ensure effective construction coordination with Site and building operations;
- d) Ensure effective and efficient Site coordination of all design disciplines and subcontractors and suppliers;
- e) Identify opportunities or problem issues, assigning responsible individuals and dates for resolution; and
- f) Ensure effective quality management.

#### **8.1.4 Submission Meetings**

The Consultant must chair submission meetings with the NCCR associated with the Schematic Design presentation for NCC FLUDA approval. The intent of these meetings is to review the Consultant's draft presentation, provide feedback to fine-tune the presentation before the Consultant presents its presentation formally to the ACPDR. Submission meetings usually occur in the NCC Offices and include the Consultant and disciplines relevant to the presentation, the NCCR and other NCC team members.

#### **8.1.5 Workshops**

Various workshops will occur throughout the Contract, tailored to the stage of Project development. Project control workshops will occur routinely throughout the Contract. The Consultant must attend these workshops with the NCCR and be able to discuss in an open manner Project matters that affect the CM or delivery of the Project. Workshops include, but are not limited to:

- a) Subject Matter Workshops: These workshops are for technical design matters and Project challenges. The Consultant must issue final workshop minutes within 2 Working Days of workshop, update the database containing action items and issues, and append the top five risks identified at the workshop to the final workshop minutes. Individual subject matter workshops may include:
  - i. Landscape architecture;
  - ii. Structural design and systems;
  - iii. Environmental clean-up;
- b) Constructability Workshops: These workshops are for construction related matters as they relate to the design progress or Site conditions. The Design Team disciplines relevant to the discussion topics must attend these workshops. Workshop discussion points could include materials selection, work





sequencing, temporary roadways, design prioritization, design completion status, design coordination, tender-ability, tender sequencing, or other matters that could influence the ability to build the work. The CM will chair and take a leading role in conducting these workshops, which forms part of the CM's design management services. The CM will prepare and deliver the workshop agenda, notice to invites and minutes. The CM will issue final workshop minutes within 2 Working Days of workshop, update the database containing action items and issues, and append the top five risks identified at the workshop to the final workshop minutes.

- c) Project Control Workshops: These workshops are to address Project control matters (Cost and schedule) for the Project. The primary workshop objectives are to promote open discussion of Project control issues between the Design Team and the CM, and to ensure the Design Team and CM have the same basis on understanding for Project Cost elements (inclusions, exclusions, assumptions, and basis of costing), schedule activities (design and construction), and activity durations.

The Design Team must attend these meetings. The CM will chair and take a leading role in conducting these workshops, which forms part of the CM's cost and time management services. The CM will prepare and deliver the workshop agenda, notice to invites and minutes. The CM will issue final workshop minutes within 2 Working Days of workshop, update the database containing action items and issues, and append the top five risks identified at the workshop to the final workshop minutes;

- d) Risk Management and Lessons Learned Workshops: These workshops are to address program and Project related risks and provide a form for ongoing learning and improvement of the NCC project delivery processes. The NCCR will chair and organize these workshops, prepare and deliver the workshop agenda, notice to invites and minutes. Workshops will typically be a half Working Day and may be combined with other meetings or workshops. Workshop discussion topics may include topics such as short, mid and long-term opportunities and risks, the cumulative effect of opportunities and risk, lessons learned at different Project stages, and ways to reduce or eliminate workflow processes; and
- e) Value Engineering Workshops: These workshops are to address complex matters related to excessive Project Cost or time. The goal of these workshops is to find alternative ways or means of obtaining value for money, while respecting the general intent of the Project scope. The NCCR will chair and organize these workshops, prepare and deliver the workshop agenda, notice to invites and minutes. The Design Team and CM must actively participate at these workshops. The length of these workshops will be determined on a case-by-case basis but are usually one to three Working Days per workshop.





**8.1.6 Frequency of Meetings and Workshops**

	Pre-design stage	SD stage	DP stage	Construction and commissioning stages
<b>Meetings:</b>				
Design Meetings	Weekly		Until all DPs are awarded	
Construction Meetings	None		Every two weeks until Project completion	
Submission Meetings	None	4	None	None
<b>Workshops:</b>				
Subject Matter Specific Workshops	To be determined			
Constructability Workshops	Monthly		Every DP submission	As required
Project Control Workshops	Monthly			
Risk Management and Lessons Learned Workshops	Every 6 months			
Value Engineering Workshops	None	To be determined	None	None

**8.1.7 Project Response Time**

The Design Team must be available to attend meetings or respond to inquiries within one-half Working Day, when practical.

**8.1.8 Media**

The Design Team and any entity or person contracted or employed by the Design Team are forbidden to respond to any requests for information, interview, or questions directly or indirectly from the media pertaining to any aspect of the Project, or any aspect of the NCC’s real property program, unless specifically requested to do so by the NCCR. The Design Team is required to direct such inquiries to the NCCR without providing a response to the inquiry.



### **8.1.9 Security of Information**

The Design Team and any entity or person contracted by or employed by the Design Team are forbidden to discuss issues pertaining to any Project, or the overall NCC real property program, including, but not limited to, a Project's layout, design, content and security provisions, except as they relate to the direct provisions of Services and work under this Contract.

The Design Team is required to take all necessary steps to ensure that documents and records, or any information, are not copied, provided to, discussed, or disclosed in any manner whatsoever, to any person or entity, other than NCC personnel possessing the appropriate security level and authorization, unless expressly authorized by the NCC.

The Contractor is responsible for ensuring all information is properly marked, stored and disposed of according to its security level. Security levels are identified based on potential injury level and if the information is of National or non-Nation interest.

### **8.1.10 Local Office**

The Design Team is required to use an office in the National Capital Region as a base of operation to provide all administrative management Services required in this Contract. The office is required to be fully operational for the start of the Contract and remain as such throughout the duration of the Contract. The office location must allow the Contractor to satisfy all of the operational requirements of the Contract.

## **8.2 Design Management**

### **8.3.1 Design Management Planning**

The Consultant must prepare a Design Management Plan (DMP) governing the Consultant's and the Consultant's team activities. Specific to this Contract, the DMP must define the standard(s), approach(s) and methodology (ies) for:

- a) Communications by type within the Design Team and the CM, NCCR and other stakeholders, including durations for turn-around/response;
- b) Scope analysis, validation, coordination; and definition within DPs;
- c) Quality control of design workflow and production, coordination and integration of design disciplines, clash/interference detection review, document and report standards, submittal validation, turnaround times, and inspection and performance verification;
- d) Fee management, reassessment, time authorization against Contract amount Baseline;
- e) Time management for design production, activity durations, and Float quantification, allocation and authorization against Contract time Baseline;



**8.3.1.1 Design Management Planning Deliverables**

The Consultant must:

- a) Submit a draft DMP to the NCCR for review within 20 Working Days of the Contract award, or as agreed by the NCCR;
- b) Revise and resubmit a final DMP within 15 Working Days of reviewing the NCCR’s review comments; and
- c) Update the DMP and submit to the NCCR as and when required to reflect any change.

**8.3.2 Design Management Implementation**

The Consultant must perform the Services required to implement the approved DMP as described in section 8.3.1 throughout the duration of the Contract.

**8.3 Design Approvals**

**8.3.1 Authorities Having Jurisdiction - Federal**

A list of authorities and their federal jurisdiction is included below.

Authority	Federal Government Jurisdiction
NCC	Real property Project approval; Federal Land Use and Design Approval (FLUDA) – LEVEL 2; and <i>Canadian Environmental Assessment Act 2012 (CEAA 2012)</i> ;
Environment Canada and Climate Change	<i>Species at Risk Act (2002)</i> ; and The Federal Policy on Wetland Conservation (1991).

**8.3.2 Authorities Having Jurisdiction - Other**

A list of other authorities and their jurisdiction is included below. This NCC Project will have to comply with the jurisdictional requirements of other authorities. The Design Team must observe codes, regulations, by-laws, and decisions of all authorities having jurisdiction. In the case of overlap, the Design Team must apply the most stringent requirement. All Design Services must comply with the applicable Ontario construction health and safety Acts and Regulations, in addition to the related Canada Occupational Safety and Health Regulations.

Ontario Provincial Authority	Jurisdiction
Ministry of Labour (MOL)	Employment Standards; Construction Safety; Designated Substance Management; Workers Compensation; and Ontario Construction Health and Safety Act and Regulations



Ministry of the Environment and Climate Change (MOECC)	<i>Environmental Protection Act</i> : 3R Regulations; Building discharges into the air, water and ground; and Transportation and disposal of designated substances, including contaminated soils, water, asbestos, lead, etc.
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Local Municipalities	Jurisdiction
	Planning and Design Submissions for information about existing and future utilities.;

### 8.3.3 Federal and Provincial Authorities

As defined in the Canadian Environmental Assessment Act 2012 the NCC is a Responsible Authority. The NCC will fulfill its obligations as a Responsible Authority to ensure that the project will not cause significant adverse environmental effects on federal land.

In support of the NCCR, and to meet the NCC’s Responsible Authority obligations, the:

- a) Design Team must facilitate and participate in any discussion or negotiation required to obtain Project approvals with federal and provincial authorities and ensure that the technical and legal compliance of Project designs follow the said approvals and conditions; and
- b) The CM will ensure that all work and construction operations comply with said approvals and conditions.

All communication with federal and provincial authorities will be through the NCCR. The NCCR will deal with federal and provincial approval fees on a case-by-case basis and may request the CM to pay such fees as a disbursement to the CM’s Contract.

### 8.3.4 Municipal Authorities

On behalf of the NCC, the Design Team must prepare and provide to the CM all documentation for building and other permits necessary for approval by municipal authorities. The CM will manage the building permit application process itself. All communication with the municipal authority related to permits and permit payment will be through the CM. The CM will involve the Design Team and together participate in any discussion or negotiation necessary to obtain permits and assist in resolving issues before the tender of each DP. Submissions by the CM will begin with the Schematic Design when Site plan approval is required or well advance DPs for construction permits, with subsequent filings as required by the municipal authority and for design revisions in response to reviews.

The CM will apply for interim and final use or occupancy permits and resolve all outstanding issues relating to permit approval. The CM will also provide municipal authorities access to the Site as and when they require access and obtain reports of their findings, which are to be given to the NCCR for review and handling as necessary.

The Design Team must address and respond to all issues by municipal officers through the CM including:



- a) Purpose of review and approval: to obtain Site plan and building code compliance (permits);
- b) Submission format: Drawings, Specifications, oral presentations for Site plan applications, SD and advanced DP design submissions;
- c) Submission schedule: SD for Site plan approval; advanced DPs for building permit approval; and
- d) Expected turnaround time: from four weeks to three months.

**8.4 Contract Deliverables**

Where submissions include summaries, reports, Drawings, Specifications, presentations and schedules, the Consultant must provide six hard copies along with an electronic copy in editable native format and Portable Document Format (PDF), unless otherwise specified.

All reports, Drawings, Models, data, simulation and analysis outputs and other graphical material must be submitted to the NCCR in both PDF and an editable, non-PDF format (original software of operation).

**8.4.1 Acceptable Electronic Format**

Electronic format for deliverables means:

<b>Deliverable</b>	<b>Acceptable Format</b>
Written reports and studies	MS Word
Consultant Fee updates	MS Excel
Presentations	MS PowerPoint and/or MS Visio
Drawings	DWG (such as Autodesk Auto-CAD 2015)
Design Schedules	Microsoft Project or Primavera P6 or newer
Change management and daily logs	MS Word
Organizational Charts	Adobe Illustrator or MS Visio
National Master Specifications (NMS)	MS Word

**8.4.2 Writing Style**

The Design Team must use a writing style that presents information a logical, objective, clear and concise manner. The Design Team must write reports so that the reviewer can easily locate references and respond to related information contained in the report. Reports will include the following sections:

- a) A cover page indicating the Project title, nature of the report, Consultant’s Contract number and author name, NCC Contract name and reference number, and a date in a non-ambiguous format, i.e. October 9, 2017 or 2017-10-09;
- b) A table of contents;
- c) An executive summary;



- d) An introduction;
- e) A methodology section explaining the methods and tools used, such as weightings, comparative analysis;
- f) A conclusion or synopsis; and
- g) Appendices containing supporting material referenced in the report, supplementary and supporting information.

#### **8.4.3 Report Content**

The Consultant is required to:

- a) Ensure that the executive summary is an accurate and complete summary of the report following an identical structure, including only key points, results and recommendations;
- b) Use an organizing system, such as MS Word Document Map, for ease of reference and cross-referencing;
- c) Use correct grammar including complete sentences to avoid ambiguity and facilitate translation when required. The use of technical terms, industry jargon and cryptic phrasing must be avoided;
- d) Be efficiently written with only essential information included in the body of the report and supporting information in an appendix, if required; and
- e) Analyze and ensure all relevant correspondence against accepted goals, objectives and the requirements identified in this Project Brief.



## **9 PRE-DESIGN SERVICES**

### **9.1 Exploratory Work and Investigations**

A detailed exploratory work and investigation is required to collect information required to advance the design of the Project. The purpose is to confirm, analyze, test and determine various conditions either known or unknown. The findings will serve to further define the detailed investigation program and ultimately the activities of the SD. The Consultant must undertake a systematic site verification of the site, bridge installations, and associated infrastructure.

With ongoing consultation with the CM, the Consultant must prepare and prioritize a detailed exploratory work and investigation program to capture as-found conditions of the bridge elements. The as-found information must be integrated with existing survey information to ensure accuracy. The detailed exploratory work and investigations program must include the following disciplines:

- a) Geotechnical;
- b) Environmental;
- c) Civil/Municipal;
- d) Legal & topographical Surveys; and
- e) Structural.

#### **9.1.1 General Activities**

The Consultant must work closely with the CM and NCCR to:

- a) Identify additional exploratory and investigation necessary in order to refine the design assumptions and the design itself:
  - i. Conduct additional exploratory work and investigations; and
  - ii. Coordinate laboratory, in-situ testing and Monitoring;
- b) Conduct additional exploratory work and investigations as required;
- c) Finalize its exploratory work and investigations to advance the SD;
- d) Update site survey data; and
- e) Compile, analyze and submit results of each investigation into a comprehensive summary pre-design report.

#### **9.1.2 Geotechnical**

The Consultant must carry out geotechnical investigations to supplement existing information and inform the structural and geotechnical analysis. The Consultant must:

- a) Prepare geotechnical exploratory work and investigations program that:
  - i. Identifies the methods to obtain the information required to meet identified design requirements and temporary assemblies;



- ii. Includes detailed geotechnical investigations, and / or special studies required to supplement the existing information;
  - iii. Includes all items required to meet the requirements in the geotechnical design memorandum (GDM); and
  - iv. Responds to specific technical requirements identified by other disciplines and coordinate with other disciplines that require geotechnical input (e.g.: determine causes of technical problems, structural integrity of foundation members, retaining structures, underground structures, provide all required seismic parameters for the seismic design compliance, etc.);
- b) Conduct whole site characterization of the Ramp E area and general characterization of the CPR overhead bridge area;
- c) Conduct with the support of the CM, the following geotechnical site investigations field work:
  - i. Borehole drilling and sampling;
  - ii. Excavating test pits and sampling;
  - iii. Confirmation of the existing foundation geometry and bearing depth and conditions;
  - iv. In-situ field testing; and
  - v. Geophysical testing;
- d) Conduct geotechnical laboratory work to establish:
  - i. Soil and rock index properties;
  - ii. Strength and deformation characteristics; and
  - iii. Hydraulic conductivity;
- e) Conduct the following geotechnical special studies:
  - i. Special dynamic analysis beyond that required by codes such as ground/foundation response;
  - ii. Numerical analysis of stresses and deformations (2-D and 3-D) for foundations;
  - iii. Blasting test;
  - iv. Site selection;
  - v. Slope stability; and
  - vi. Define Monitoring requirements;
- f) Prepare a geotechnical design report (GDR) that describes the approach and results of investigations, studies, inspections, surveys, measurements, evaluations. This includes:
  - i. General:
    - 1. Description of the Project;
    - 2. Summary of the existing conditions and past information; and
    - 3. Description of the approach and results of investigations, studies, inspections, surveys, measurements, evaluations;





ii. Subsurface Description:

1. Provide a summary of the subsurface conditions including fill(s) including fill thickness/overburden thickness/depth to bedrock presented on borehole report logs and plan(s);
2. Provide a description of overburden characteristics for each distinct stratigraphic horizon;
3. Provide the structural geology parameters of the bedrock;
4. Provide recommendations for protection from pyritic shales or other;
5. Provide hydrogeological parameters;
6. Provide all of the subsurface characteristics for use in the design process;
7. Present the results of all data analyses and compliance verifications;
8. Summary of lab tests;
9. Summary of other special testing;
10. Location of known faults in the area; and
11. Other geological conditions that may influence design considerations;

iii. Existing Structures:

1. Assess condition and performance of the foundation members, retaining structures, underground structures, etc., of the asset, as well as their impact on its functionality;
2. Verify compliance with all applicable codes, regulations and standards;
3. Verify compliance with the requirements of local, provincial and national authorities having jurisdiction; and
4. Provide details on the existing foundation system (e.g. dimensions, depth, bearing stratum, serviceability limit state (SLS) and ultimate limit state (ULS) loading, etc.);

iv. Field reports:

1. Borehole reports (present and applicable previous studies); and
2. Test pit reports (present and applicable previous studies);

v. Laboratory Tests:

1. Laboratory results (present and previous studies); and
2. Summaries provided for all data for ease of comprehension;

vi. Include all factual data from previous investigations.

### 9.1.3 Environmental

The Consultant must:

- a) Immediate after Contract award, conduct a bird nesting survey, tree survey, and full ecological characterization of the site;
- b) Identify and, with the CM, delineate flood plain area and potential construction site area;
- c) Carry out building materials, soils and groundwater sampling and testing to validate and update existing NCC environmental information;



- d) Review and implement strategies for further exploratory investigations and the proposed management of designated substances, soil, groundwater movement, and environmental protection;
- e) Provide preliminary analysis, and reporting as well as development and auditing of solid waste and waste water management plans, waste reduction strategies and other strategies to meet sustainable strategies during demolition and construction;
- f) Determine Project-specific permitting requirements, when permits must be in place, and who is responsible to apply for and obtain said permits; and
- g) Incorporate existing and new information into the pre-design report.

#### **9.1.4 Civil/Municipal**

The Consultant must:

- a) Verify with the City of Ottawa existing condition and operation of the watermain (WAT19186 – 1676 mm diameter steel pipe concrete lined, dated 2006) and sanitary sewer (STM37719-20 1800 mm diameter concrete reinforced pipe, dated 1962);
- b) Field verify watermain and sewer invert and size to the extent required to permit a professional assessment of the impact of the Project mandate on the municipal infrastructure; and
- c) Determine the degree of onsite testing, if any. Follow the technical requirements of City of Ottawa Special Provisions Section F-4090 – Cleaning and Televising Sewers; and
- d) Incorporate existing and new information into the pre-design report.

#### **9.1.5 Legal and Topographic Survey**

The Consultant must carry out an audit of current NCC survey data and perform additional surveys as required. The Consultant must validate and update the current survey information.

#### **9.1.6 Structural**

The Consultant must carry out structural investigations and condition assessments to supplement existing information and inform the structural analysis. The Consultant must:

- a) Advise the NCCR and CM immediately of any critical structural deficiencies related to the safety and serviceability of the structures that require immediate remedial measures
- b) Consider information previously gathered by the Consultant on approaches used for modelling and analyzing bridge structures constructed in a similar manner;
- c) Prepare structural exploratory work and investigations program that assesses:
  - i. All structural systems;
  - ii. Structural system assemblies, components and materials;
  - iii. Load paths;
  - iv. Evidence of structural damage or distress;



- v. Unique structural features and/ or discontinuities;
  - vi. Gaps in knowledge or understanding of the construction of the structural systems;
  - vii. Configuration of other SJAM parkway bridge and pathway structures; and
  - viii. Requirements for the detailed assessment of the structural systems; and
- d) Use the following prioritized techniques in an iterative and cumulative fashion:
- i. Destructive investigative techniques;
  - ii. Visual observations and simple tools (tactile);
  - iii. Ground penetrating radar, sonic, ultrasonic;
  - iv. In-situ load testing, flat jack, in-place shear test, forced vibration tests;
  - v. Exploratory openings, core drilling; and
  - vi. Destructive openings and sample removal for laboratory testing of physical properties.

## 9.2 Pre-Design Deliverables

The Consultant must:

- a) Provide an exploratory work and investigation plan within four weeks of Contract award;
- b) Update the exploratory work and investigations program quarterly, or more frequently if warranted; and
- c) Provide a pre-design report which consolidates completed exploratory work and investigations reports, progress of on-going exploratory work and investigations and discipline specific deliverables gathered from the activities identified above. The pre-design report must illustrate an analysis of the Project requirements and also serve as a benchmark Project control document to monitor progress of the Project. The body of the pre-design report is to include, as a minimum, the following sections:
  - i) Executive summary;
  - ii) Glossary of terms;
  - iii) Summary of reviewed documentation;
  - iv) Exploratory work and investigations;
  - v) Regulatory Requirements;
  - vi) Geotechnical;
  - vii) Environmental;
  - viii) Civil/municipal;
  - ix) Landscape; and
  - x) Structural;



Include as a minimum:

- a) Comment on the CM's updated Class "D" estimate;
- b) Identify opportunities to accelerate Project delivery;
- c) Identify potential conflicts with the implementation of phased DPs; and
- d) Analyze risk implications and preliminary mitigations strategies for managing risk during the subsequent required Services phases of the Project.

### **9.3 Response to Pre-Design Report**

The Consultant must:

- a) Review and analyse all the comments provided by the Project Team;
- b) Prepare and submit a written response within 20 Working Days to all the submission comments; and
- c) Integrate comments into the subsequent submissions as directed by the NCCR.



## 10 SCHEMATIC DESIGN SERVICES

### 10.1 Intent

It is expected that the SD will overlap with the Services occurring during Pre-Design and potentially DP production.

The objective of the SD stage is to develop three bridge demolition / replacement scenarios and analyze design options with particular attention to the structural design, weighing them against the Project scope, time, and cost constraints, the on-going public use of the SJAM parkway and nearby pedestrian and cycling pathways operations, etc., to confirm the scope and direction of design and to provide sufficiently developed design to permit the preparation of tender-ready DPs.

SD options must consider the latest highway bridge design codes and standards, Ontario Provincial Standards (OPS), geometric design standards for Canadian roads, and the latest statement for clear bridge span from the department of Fisheries and Oceans Canada. SD options will be reviewed and commented on by the NCC at 50%, 90% and 100%

The SD stage will be a continuous process feeding the DP stage as the Project evolves. To respond to the aggressive schedule, it is important to prioritize elements of the Project and review those elements advanced during Pre-Design. It is essential to continue consultation with the CM and NCCR to prioritize those elements and to update the DP requirements to develop cost estimates and schedules.

The Consultant must develop and present distinct and viable options until 50% SD, including for the Ramp E bridge the possibility of an arched structure similar to the CPR and Parkdale bridges or the New Orchard, Lanark and Carleton Avenue one-span pedestrian underpasses, including assessment of reinstating the road and pathway under the bridge deck. The options must be integrated solutions, which incorporate the future planning requirements and the approaches for Ramp E bridge replace and CPR bridge rehabilitation. Options must be complete with sufficient detail to allow comparison, analysis against Project requirements, and provide an analysis of the impact on the public.

Rendered Model and fly-through presentations are required for each SD submission accompanied by narrative formats such as reports, drawings as well as PowerPoint presentations to support the ACPDR submission and approval process. The Consultant must indicate a preferred option and sub-option and indicate the advantages and disadvantages of each option. Between 50% and 100% SD the Consultant must further define the preferred option to advance the design.

The Consultant must revise and optimize the individual work flow of each Design Team member to meet schedule requirements and shorten durations.

The CM will participate in the design process, provide constructability reviews and design assist services if and when requested by the NCCR and provide cost and schedule analysis and support decision making. Following the 50% VE and other workshops, a preferred bridge replacement and rehabilitation option will be identified by the NCCR for further development by the Consultant. A combination options may be identified as the preferred option, in which case the Consultant will be responsible for revising the SD accordingly.



At 90% the SD must be very well advanced. The Consultant must lead subject matter workshops to refine and coordinate the design.

At 100% SD the program must be sufficiently developed and presented for approval, along with the preferred design option.

The CM will define the Consultant’s DP framework (the format and number of packages) and the prioritization of when the DPs are required. The prioritization of the DPs will ensure the optimal sequence of construction in order to achieve the shortest overall construction period and maximum cost control.

Based on the prioritized construction planning and scheduling by the CM, the Consultant must proceed with some DPs before acceptance of the 100% SD submission, as directed by the NCCR.

## **10.2 Design Services**

### **10.2.1 Regulatory**

The Consultant must prepare the following:

- a) Detailed code analysis and requirements;
- b) Universal accessibility site analysis;
- c) Preliminary standards analysis; and
- d) Regulatory analysis and reporting within the Schematic Design deliverables section 10.4.

### **10.2.2 Geotechnical**

The Consultant must develop recommendations that align with the structural and seismic analysis of the design options required at 50% SD, and with further development of the preferred design option.

The Consultant must review all documentation provided by the NCCR and gathered to date from the exploratory work and investigations program and identify any missing geotechnical information required to evaluate the design options and carry out additional studies as required.

The Consultant must incorporate and provide documentation and specifications for:

- a) Excavation methods and supports, including design details such as rock anchor spacing, etc.;
- b) Existing infrastructure that may interfere with proposed works;
- c) Mitigation measures required to deal with special issues;
- d) Excavation support including proposed alternatives;
- e) Subsurface conditions;
- f) Underpinning and support including detailed design information;
- g) Protection of nearby structures including design details;
- h) Dewatering concepts or mitigation;
- i) Foundation system concepts and design;



- j) Geotechnical instrumentation Monitoring;
- k) Backfill requirements; and
- l) Waterproofing design;

The Consultant must also complete the following:

- m) Vibration management plan including, if required, blast and vibration criteria, Monitoring, control, reporting, incident/exceedance management and defining roles and responsibilities;
- n) Construction Monitoring plan that is coordinated with structural Monitoring;
- o) Pre-construction survey; and
- p) Geotechnical analysis and options reporting within the Schematic Design deliverables section 10.4.

### 10.2.3 Environmental

The Consultant must:

- a) Identify overall and specific environmental assessment issues as part of the management of designated substances and solid and liquid waste for the Project;
- b) Identify, analyse and report for each SD option presented, the scope and risks associated with hazardous materials and water movement, waste and water management, and environmental protection and permitting requirements;
- c) Develop a preliminary demolition, soil, groundwater and methane management plan for hazardous and non-hazardous materials;
- d) Develop mitigation measures for environmental protection and follow-up on/finalize environmental permitting requirements/applications;
- e) Define landscape capping processes and requirements;
- f) Prepare a Project-specific Mitigation Measures Form (MMF); and
- g) Report within the schematic design report deliverables section 10.4.

### 10.2.4 Landscape

The Consultant must prepare viable and distinct SD options in coordination with Design Team, stakeholders and authorities having jurisdiction, and is to include:

- a) Landscape architectural vision;
- b) Complete graphic and narrative description including but not limited to:
  - i) All works proposed and identify new interventions;
  - ii) Colour-coded landscape architectural plans indicating the requirements of the program and proposed materials. Provide a narrative that indicates the degree of compliance with the Linear Park master plan;
  - iii) Grading Drawings, sections and elevations and explanatory sketches;
  - iv) Planting Drawings and listings;





- v) Integration of all landscape features and vegetation, grading, soil and soil structure condition, drainage, and storm water management. Include requirements for capping of contaminated soil, not creating preferential pathways for the migration of contaminated groundwater, etc);
  - vi) Description of construction methodologies and mitigation measures;
  - vii) Identification of conflicts and discrepancies;
  - viii) Detailed renderings;
  - ix) Material samples; and
  - x) Key factors that drive Project cost, schedule, and risk;
- c) Signage Drawing indicating way finding strategy including regulatory, directional, information signs;
  - d) Circulation and universal accessibility Drawing detailing strategies and exceptions;
  - e) Visual impact analysis, including views within the Project boundaries, to and from the Ottawa River and from key vantage points for each option;
  - f) Sustainability design strategies;
  - g) Comparative analysis of options;
  - h) Identification of a preferred option that best integrates all other disciplines and best balances future planning with Project scope, time and cost constraints; and
  - i) Landscape options analysis within the schematic design report deliverables section 0.

#### 10.2.5 Civil/Municipal

The Consultant must:

- a) Verify and confirm City of Ottawa watermain and sanitary sewer information and/or previous assumptions;
- b) Verify the design impacts of other projects on municipal infrastructure. Review scope and sequencing with the NCCR and CM;
- c) Obtain the approval of the City of Ottawa for proposed protection or reconfiguration of infrastructure;
- d) In full coordination with the Design Team, propose design options for all below and above grade infrastructure, including sizing, materials and capacities;
- e) Provide Drawings and sections complete with backup data to support requirements; and
- f) Report on the above within the schematic design deliverables section 10.4.

#### 10.2.6 Structural Assessment

The Consultant must perform a detailed assessment, which must include as a minimum, the following information:

- a) Description of the Ramp E and CRP overhead bridge structural systems, their construction, components and materials;
- b) Description of the condition of the structural systems, including deterioration locations and types, and a discussion of their causes and impact on the long-term health of the structural system;





- c) Description of the past performance of the structural systems, including identifying associated damage, and a discussion of the impact on the long-term health of the structural systems;
- d) Description of the framework developed for structure modelling and analysis;
- e) Description of the analytical model including:
  - i) Method of calibration and comparison with actual behavior and other models;
  - ii) Limitations of model; and
  - iii) Confirmation of target reliability level for CSA-S6 seismic compliance and strategies;
- f) Description and discussion of the results of the structural analysis, including:
  - i) Analysis results for gravity, environmental, loading scenarios, including appropriate load combinations; and,
  - ii) Identification of structural deficiencies based on analysis results;
- g) Summary and prioritization of identified structural deficiencies and issues that need to be addressed before and during construction work, including explanations for why these deficiencies and issues must be addressed;
- h) Recording of existing conditions in the model and on Drawings (plans, elevations, sections) showing: areas and quantities of damage/poor performance colour-coded to explanatory text, with photographs;
- i) Appendices with analysis details, computer runs;
- j) Scope of bridge replacement and upgrade options and seismic requirements with technical justification for each, with consideration of rapid replacement scenario;
- k) Report on the structural assessment and analysis at 50%, 75% 90% and 100% SD stages.

### 10.2.7 Bridge Monitoring Program

The Consultant must:

- a) Prepare a two-phase bridge Monitoring plan at 50%, 90% and 100% level of completion. Include activities and processes for:
  - i) Phase 1: Monitoring to inform the Ramp E and CRP overhead bridge condition assessment / evaluation during SD; and
  - ii) Phase 2: Monitoring of the construction implementation;
- b) Identify all Monitoring equipment, techniques, and activities to be implemented by the CM (testing, calibration, installation, verification, operation, maintenance, data acquisition, management and storage) necessary to monitor the safety of systems, assemblies, materials and environment as well as the construction workforce. Take into account the following criteria;
  - i) The least destructive techniques must be used wherever possible;
  - ii) Minimize the adverse impact on the bridge fabric during removal, installation, and alterations;
  - iii) Use a common platform for data acquisition, management and storage;
  - iv) Co-ordinate development of the Monitoring program with the exploratory work and investigation program; and



- v) Demonstrate coordination among the Consultant’s team.
- c) Report on the bridge Monitoring program within the schematic design report deliverables section 0.

### **10.2.8 Commissioning**

The Consultant must:

- a) Summarize performance verification requirements and processes to be employed in the Contract implementation; and
- b) Summarize requirements (outline scope and frequency) for future maintenance in accordance with code, regulatory requirements.

### **10.3 Approvals**

The Consultant must:

- a) Submit a Mitigation Measures Form (MMF) to the NCCR and provide relevant information for the NCC to finalize its Environmental Assessment;
- b) Prepare, submit for internal review and approval and deliver presentations to authorities having jurisdiction and NCC APCDR i to obtain approvals throughout the schematic design phase of the Project; and
- c) Integrate recommendations and feedback to obtain their support and endorsement.

### **10.4 Schematic Design Deliverables**

At a minimum, the Consultant must:

- a) Coordinate all Services of the Design Team and with the CM;
- b) Develop all design and implementation options, sub-options, analysis and recommendations;
- c) Integrate all ongoing pre-design information submitted before the completion of each SD sub-phase;
- d) Submit presentation material associated with the approval processes;
- e) Prepare draft and final reports with integrated and viable SD options that:
  - i) Include Drawings that illustrate the functional relationships of the Project and its scale and character and include scope narratives, with consideration of impacts to construction planning and scheduling, construction cost, and design and construction risk;
  - ii) Present graphic and narrative options to resolve conflicts, anomalies and other issues and present the advantages and disadvantages of each option; and
  - iii) Consolidate the SD proposals, findings, analysis and recommendations.
- f) Recommend an option that best balances the requirements of the Project with viability, schedule, and cost parameters;
- g) Present the advantages and disadvantages of each option based on:



- i) Construction schedule and implementation plan;
- ii) Construction cost;
- iii) Impact on the public;
- iv) Impact on future LeBreton Flats development and the Linear Park master plan;;
- v) Impact on municipal infrastructure;
- vi) Impact and benefits on the environment and overall sustainability objectives of the Project;  
and
- h) Submit reports for each discipline that consolidate all the information gathered to illustrate an integrated analysis of the design options. They must be concise, coordinated and must integrate and consolidate information from the Design Team, with detailed information attached in appendices. Include as a minimum:
  - i) Executive summary with précis of the report and outlining all recommendations;
  - ii) Glossary of Terms;
  - iii) Summary of information gathered and documentation reviewed, with an annotated bibliography;
  - iv) Exploratory work and investigations;
  - v) Regulatory;
  - vi) Geotechnical;
  - vii) Environmental;
  - viii) Civil/municipal;
  - ix) Landscape;
  - x) Structural;
  - xi) Commissioning; and
  - xii) Time, cost and risk analysis that considers the input of the CM.

### **10.5 Response to Schematic Design Report**

The Consultant must:

- a) Review and analyse all the comments provided by the Project Team;
- b) Prepare and submit a written response within 20 Working Days to all the submission comments; and
- c) Integrate comments into the subsequent submissions as directed by the NCCR.



## **11 DESIGN PACKAGE SERVICES**

### **11.1 Intent**

The Services required of the Consultant in this section apply to each DP. All deliverables are to be reviewed and approved by the DR at a minimum of 50%, 90% and 100% unless otherwise indicated.

The CM will take the lead role to define the scope and sequencing of each DP to optimize the schedule, in consultation with the Consultant and NCCR.

The DPs are to include comprehensive, coherent, and fully coordinated sets of Drawings and Specifications (tender documents) compliant with Project requirements in sufficient detail to allow competitive tendering by the CM and guide and direct the sub-contractors to successfully implement each phase and sub-phase of the Project. The DPs as modified following tenders will be issued as Construction Documents.

The CM may take the DPs and split them into tender packages to secure the sub-contractors necessary to undertake each phase and sub-phase of the Project. The CM will review the tender packages submitted by the Design Team to ensure completeness and provide comments and suggestions for revisions.

The Consultant must revise and optimize the individual work flow of each Design Team member to meet schedule requirements and shorten durations.

DPs must be prepared in accordance with Project Brief Appendix A – Guide to Preparation of Construction Documents. The DPs must describe the products, materials, standards, equipment, construction systems, methods and processes and level of workmanship required. Specifications must describe the physical and environmental conditions to be created and maintained in work areas, on-site, in adjacent work areas or off-site. Specifications must indicate the procedures for contract administration to control and Monitor the quality of the work, performance verification requirements, and the reporting of work progress.

Translation of Design Packages is dependent on the language of the CM's prequalified subcontractors. If required, translation Services will be treated as a disbursement to the Consultant's Contract.

### **11.2 Design Services**

The Consultant must ensure congruency between all DPs and:

- a) Confirm the content and timing of each DP with the Project Team;
- b) Coordinate with the CM on the scope and content of each DP submission;
- c) Coordinate with the DR and the CM's conservators to prepare and finalize performance specifications per conservation discipline that includes the complete conservation scope;
- d) Coordinate and integrate all the submissions of the Design Team;
- e) Define testing requirements, construction Monitoring requirements, performance expectations, post-construction Monitoring, and record Drawings and Specifications;



- f) Submit DPs, conduct design constructability workshops and respond to DP comments in accordance with 15 Working Days;
- g) Coordinate and integrate all DP submission review comments;
- h) Confirm the format of the Drawings and specifications and comply with the stipulated requirements for the Project;
- i) Confirm Drawing and specification format requirements with CM for paperless site-wide distribution and use by sub-trades and the Project Team;
- j) Update the Design Team's design production schedule and ensure coordination with the CM's construction schedule; and
- k) Provide all technical support required for the CM when the CM splits the DPs into the tender packages such as content, cost estimates, unit prices, etc.

### **11.3 Design Package Content**

The Consultant must, for each DP, use graphical information to generate from the Model discipline specific Drawings complete with elevations, sections, details and schedules. The Consultant must create Project-specific Specifications for each DP.

#### **11.3.1 Exploratory Work, Investigations and Temporary Work**

The Consultant must prepare complete DP Drawings and specifications for:

- a) All exploratory work and investigations; and
- b) All temporary work, temporary protection, and temporary systems, including alterations and maintenance requirements, as applicable.

#### **11.3.1 Regulatory**

The Consultant must complete the DP Drawings and specifications to include:

- a) Final code data summary for NBC, OBC, CSA, OPS, environmental and other applicable codes, standards and regulations, including table of equivalents when conflicting requirements exist; and
- b) Authorities having jurisdiction review reports, recommendations and approvals.

#### **11.3.2 Geotechnical**

The Consultant must complete the DP Drawings and specifications to include:

- a) Excavation method and support;
- b) Underpinning and support including detailed design;
- c) Protection of existing structures;
- d) Dewatering requirements;
- e) Foundation system requirements;
- f) Existing infrastructure that may interfere with proposed works;



- g) Mitigation measures required to deal with all technical issues; and
- h) Subsurface conditions.

#### **11.3.4 Environmental**

The Consultant must complete the DP Drawings and specifications to include:

- a) Hazardous soils and non-hazardous materials and groundwater management and/or removal Specifications that reflect the legislative and NCC requirements as well as sustainable development objectives;
- b) Environmental protection Specifications to ensure, among other items, that nesting birds, trees and the Ottawa River flood plain remain protected at all times;
- c) Define Project-specific environmental protection, testing and/or Monitoring requirements, on-site water treatment, and follow-up on/obtain environmental permits; and
- d) Provide ongoing auditing and reporting of designated and non-designated substances;

#### **11.3.5 Site**

The Consultant must complete the DP Drawings and Specifications to include:

- a) Site Drawings including property line with dimensions, benchmarks, existing structures, new structures, site improvements, fencing, roads, streets, drainage, rights of way;
- b) Municipal infrastructure, subsurface and above grade components or systems. Describe capacities and limitations. Include flow-through systems;
- c) Underground utilities relocation;
- d) Historical site features;
- e) Environmental features including sustainable design strategies;
- f) Existing conditions site Drawings;
- g) Removals Drawings;
- h) Landscaping Drawings;
- i) Layout Drawings;
- j) Grading and drainage Drawings;
- k) Signage Drawings, include those required for temporary works;
- l) Planting Drawings;
- m) Cross sections, elevations, sections, schedules, details of critical areas for all of the above Drawings, fully dimensioned; and
- n) Details to show type of material, size, layout pattern (if applicable), railings, tactile markers for accessibility, and other related elements on the site.



### **11.3.6 Structural**

The Consultant must complete the DP drawings and Specifications including:

- a) Substructure and superstructure Drawings, rebar layout, framing Drawings, structural sections, details, seismic reinforcing schedules and connection details, all temporary structural bracing/shoring requirements complete with timing and sequencing of bracing/shoring and all loads;
- b) Component/assembly repair or replacement Drawings, schedules and connection details, all temporary structural bracing/shoring requirements complete with timing and sequencing of bracing/shoring associated;
- c) Special construction and demolition details including structures, hazardous materials abatement;
- d) Updated bridge load calculations and include all calculations for structural with the 90% submission. Index and provide calculations in a format suitable to the NCCR, provide in .pdf format; and
- e) The bridge Monitoring plan DPs to clearly define the scope of work, details, and information to complete the installation, operation and maintenance of Monitoring systems.

## **11.4 Design Package Submission Requirements**

### **11.4.1 50% Complete Design Package Documentation**

The Consultant must provide the following for each DP:

- a) An updated design coordinated and clash detection identified and resolved;
- b) Drawings: view plans, elevation plans, perspectives, cross-sections with coordinated details, etc. and Specifications included with preliminary performance requirements per specification subsection;
- c) Preliminary schedules and material requirements;
- d) Preliminary unit rate tables for materials;
- e) Draft Division 01 specifications;
- f) Preliminary independent testing and verification requirements;
- g) Preliminary Drawings and specifications for all demolition, temporary protection, bracing, supports, etc., including installation sequencing; and
- h) Updated Critical Path and milestone schedules for design activities.

### **11.4.2 90% Complete Design Package Documentation**

The Consultant must prepare each 90% complete DP that will be fully coordinated and integrated and include specifications. This includes:

- a) An updated design coordinated and clash detection identified and resolved;
- b) Extensively detailed Drawings (view plans, elevation plans, perspectives, detailed cross-sections,





etc.) and Specifications with the majority of dimensioning incorporated and with detailed performance requirements per specification sub-section;

- c) Extensively detailed schedules material requirements;
- d) Extensively detailed unit rate tables for materials;
- e) Extensively completed Division 01 specifications;
- f) Extensively detailed independent testing and verification requirements;
- g) Code analysis including an equivalent matrix for each applicable code. Where codes differ, prepare a comparison table to highlight the differences;
- h) Finalize all code exemptions, including rationale, approval body, approved decisions;
- i) Extensively detailed Drawings for all demolition, temporary protection, bracing, supports, etc., Monitoring, including installation sequencing;
- j) Updated Critical Path and milestone schedules for design activities;

#### **11.4.3 100% Complete Design Package Documentation**

The Consultant must prepare each 95% DP that is fully coordinated and integrated and includes:

- a) An updated design coordinated and clash detection identified and resolved;
- b) Final signed and sealed original bilingual Drawings (view plans, elevation plans, perspectives, detailed cross-sections, etc.) and English and French National Master Specifications (NMS) that are fully dimensioned and with final performance requirements per specification sub-section;
- c) Final schedules and material requirements;
- d) Final unit rate tables for materials;
- e) Final Division 01 specifications;
- f) Final independent testing and verification requirements;
- g) Final Drawings and specifications for all demolition, temporary protection, bracing, supports, etc., Monitoring, including installation sequencing and performance requirements;
- h) Data, studies, detailed calculations, etc. that are fully indexed for final review and records for all disciplines; and
- i) Updated Critical Path and milestone schedules for design activities.





## 12 TENDERING SERVICES

For all DPs the Consultant must:

- a) Review and suggest modifications to subcontractor pre-qualification criteria established by the CM.;
- b) Attend the bidders briefing meetings;
- c) Analyze and respond to questions from municipal officials during the pre-qualification of suppliers, DPs or tender package tendering. The Consultant must provide the DR and CM with responses within two Working Days of question, or as agreed by the NCCR;
- d) Update the drawings and Specifications based on bidders' questions. Provide the NCCR and CM with addenda inclusive of all information required by bidders to fully interpret the tender documents. CM will issue all addenda to all bidders;
- e) Analyze bidders' requests for alternative materials or construction methods and determine if said alternatives are acceptable. Advise the NCCR and CM accordingly;
- f) Maintain a record of all inquiries directed to the Consultant during the bidding period and submit the record to the NCCR and CM at the close of bidding for audit's records;
- g) Assist in the evaluation of tenders by providing advice on the following:
  - i) The completeness of the tender response in all respects;
  - ii) The technical design; and
  - iii) The effect and suitability of alternatives and qualifications that may have been included in the tender; and
- h) Update the drawings and Specifications to reflect any impact of accepted alternates or qualifications.
- i) Based on the updated drawings, prepared, sign, and seal "Issued for Construction" Drawings and Specifications which incorporate all addenda, within 5 Working Days of issuances of the last addendum.



### **13 SITE SERVICES**

#### **13.1 Intent**

Site Services are an essential aspect of the Consultant’s mandate. These Services are the primary focal point for the Consultant’s production input to and in support of construction operations. The congoing flow of accurate and coordinated information to and from the construction site will ensure a very high level of design and construction sequencing and productivity.

The Consultant’s site Services team must have the authority, ability and capacity to immediately respond to evolving situations on all parts of the site, coordinating site information with ongoing design production, and providing immediate access to design direction to the CM for all site matters of construction and temporary protection, shoring, etc.

Site Services will be required and requested by the PM and NCCR on an as-required-basis.

The Consultant must provide highly experienced, multi-disciplinary team of licensed and non-licensed professionals well-orchestrated and coordinated to respond in real time. Lead by a highly experienced and licensed engineer, the Consultant’s site Services team must adapt in composition as the overall Project advances and include administration support.

#### **13.2 General Services**

The Consultant must, in full coordination with all relevant members of the Design Team, CM and NCCR:

- a) Coordinate and manage all Consultant’s Services, activities and communication at the site;
- b) Lead the design and instruct the CM in all investigation activities by planning, coordinating and scoping investigation DPs, reflecting the prioritized information requirements of the Design Team and CM in order to meet schedule milestones. Services include:
  - i) Coordinating all Design Team information and efforts;
  - ii) Preparing and issuing CM DPs;
  - iii) Managing, administering, accurately compiling data, for each investigation element;
  - iv) Coordinating and validating all site investigation findings to ensure accuracy and completeness of information, relaying the findings to the Design Team, the CM, and the NCCR within 36 hours of each investigation;
  - v) Survey as-found conditions for each bridge assembly and site element affected by investigations, demolition, reconstruction, temporary roads and paths, and other construction activities, linking the as-found conditions to the existing survey network to create a comprehensive and coordinated information base; and
  - vi) Incorporate investigation information into the drawings
- c) Address the NCCR’s technical and the CM’s constructability review comments for suitability to ensure appropriate design production integration. Services include:



- i) Understanding the design intent, design direction, scope mandate, design assumptions, and design limitations;
- ii) Assessing, discussing and reporting of construction sequencing options, risk assessments, material substitutions, and life-cycle considerations for materials, components and systems; and
- iii) Providing formal written response to the CM and the NCCR for all constructability comments;
- d) Participate in formal design and construction meetings and technical meeting and workshops as per section 8.1.6;
- e) Provide ongoing Services, with monthly summaries, to include:
  - i) Managing, coordinating and controlling all design production documentation to and from the site for accuracy and completeness on an ongoing basis;
  - ii) Coordinating with the CM and Design Team, providing supplemental information required by the City of Ottawa or other authorities having jurisdiction to resolve design issues related to any permit;
  - iii) Responding to Requests for Information (RFI) and submittals from the CM, suppliers and subcontractors, or the NCCR with accurate, coordinated and complete information. Submittals include shop Drawings, samples, mock-ups, test reports, and demonstrations for all submittals requiring the Consultant's review and approval. Manage requests by:
    - (1) Establishing an RFI and a submittal review, approval and response framework based on RFI or Submittal importance, to the acceptance of the CM and NCCR. Include a mechanism to reclassify importance when required;
    - (2) Confirming the degree of importance of each RFI or submittal on receipt;
    - (3) Prioritizing responses so that schedule critical responses are provided by the critical date established by the CM; and
    - (4) Responding to all other RFIs or submittals generally within 5 Working Days, but never longer than 15 Working Days; and
    - (5) Incorporating approved submittal information into the drawings as they are approved;
  - iv) Reviewing the construction routinely, daily if and when required, interpreting design information and ensuring construction as per the design intent.
  - v) Providing the CM with direction and rejecting work that does not conform to DP or approved performance requirements, notify the NCCR immediately;
- f) Provide field clarifications within 2 Working Days of issue identification, or when required by the CM;
- g) Prepare and issue in a timely manner to the CM accurate and coordinated DPs, supplementary instructions, notices, contemplated change notices, Change Orders. The Consultant must ensure that:
  - i) Detailed quotations with price support that reflect all aspects of the proposed work and, if not, return the quotation to the CM, indicating which elements of the quotation are problematic;
  - ii) Alternative solutions proposed are thoroughly assessed for compatibility and viability;



- iii) Quotations, alternative design solutions, Contemplated Change Notices, and Change Orders are reviewed by all relevant Consultant disciplines within 5 Working Days or less, or with the approval of the NCCR within an agreed timeframe;
- iv) Quotations only include rates for personnel and percentage mark-ups provided for in the CM's contract; and
- v) After comprehensive review and verification, recommend to the NCCR if the quotation is complete, fair, and reasonable;
- h) Update the drawings and reissue the Issued for Construction DPs every 3 months or more frequently if requested by the NCCR to incorporate all supplementary and site instructions and Change Orders;
- i) Analyze and report monthly on all activities of the construction and construction schedule for viability, including the status of all design activities relative to the construction schedule. Ensure ongoing design production is fully coordinated with tendering schedules. Report potential design production gaps and mitigation measures to the CM and the NCCR within 5 Working Days of the end of each month;
- j) Analyze and report on the CM's proposed sub-contractor productivity measurement methodology before tender. Make suggestions to the CM and NCCR for productivity measurement improvements. Confirm productivity measurement methodology is included within each sub-contractor tender before tender. Advise the Consultant and NCCR of each sub-trade productivity measurement methodology;
- k) Report monthly or more frequently if warranted on any proposed blasting procedures. Inform the CM and the NCCR in writing immediately of any conditions that require immediate remedial measures;
- l) Review and confirm the completeness of the CM's estimate for each Site Instruction that attracts cost, Contemplated Change Notice, and Change Order;
- m) Validate, from the Consultant's perspective, potential impact to the Project scope, time, cost, and risk related to the Site Instruction, Contemplated Change Notice, and Change Order;
- n) Validate, from the Consultant's perspective, potential CM or subcontractor claims;
- o) Validate material types and quantities related to unit price work;
- p) Validate the CM's work and services completed monthly;
- q) Review and recommend to the NCCR for payment the CM's Progress Payments for accuracy and completeness. Advise within 2 Working Days of receipt. Establish an acceptable process with the CM and to the satisfaction of the NCCR for the measurement and validation of materials, equipment and labour in advance of each progress payment. Assess equipment and material types and quantities against approval submittals. Certify the degree of completion of all aspects of the construction. Confirm to the NCCR that requests for progress billing are complete and only reflect the work that has progressed to the date of the billing; and
- r) Provide input to the CM's lessons learned related to the construction.



### 13.3 Environmental Monitoring Services

Environmental Monitoring Services are an integral aspect of the Consultant's site Services and, as such, must be fully coordinated and integrated with the Services outlined in section 0 and **Error! Reference source not found.** The Consultant must:

- a) Visit the site to confirm, with the NCCR and CM, details of:
  - i) Construction site and Ottawa River flood plain delineation;
  - ii) All environmental protection measures include specific tree or nesting bird protective measures or construction start-stop periods;
  - iii) All hazardous materials and water related work;
- b) Participate in environmental protection kick-off meetings with the CM to communicate intent and scope of environmental protection, contaminated soil, groundwater and methane removal and/or handling requirements, as well as requirements for non-hazardous materials;
- c) Define and update as required Design Team and the CM's construction worker protection requirements, protocols and procedures for investigations, geotechnical and hazardous materials and water handling, treatment, and removal work;
- d) Provide, as appropriate, real-time Monitoring and assessment Services during the investigations and the handling and removal of contaminated soil, groundwater and methane, ensuring compliance defined protocols and processes and with environmental protection and permitting requirements;
- e) Report Monitoring results within 24-hours of sample collection, with results posted on site in accordance with prescribed regulations. Advise the DR and CM in writing immediately of any conditions where the Monitoring indicates a health risk to the public or construction personnel;
- f) Provide daily site visit reports for all site visits. Reports must include detailed Project information, work-site observations, assessment of compliance with regulations and recommended procedures for working in hazardous substances work areas, and all contract information necessary for document tracking;
- g) Inform the CM and the NCCR in writing immediately of any conditions that require immediate remedial measures;
- h) Provide hazardous material bulk sampling and analyses for materials discovered during the implementation of hazardous materials work; and
- i) Attend design and construction meetings as per section 8.1.6 to discuss sampling or Monitoring issues as required until all hazardous materials are removed.

#### 13.3.1 Testing and Sampling

The Consultant must:

- a) Consult with the DR and CM to determine a protocol for sampling and testing;
- b) Prepare and implement a work plan for testing methodology and frequency to the approval of the NCCR; and



- c) Revise and resubmit to the NCCR and CM when required.

### 13.4 Deliverables

The Consultant must:

- a) Provide monthly reporting of all Consultant activities, as separate sections, noting:
  - i) Progress and productivity of the design production and the construction;
  - ii) Quality of the construction work;
  - iii) Monitoring, inspection, and if required blasting, procedures and reports;
  - iv) Information gaps, including when these must be resolved and who is to take the required action/decision; and
  - v) Potential opportunities and risks, including criticality and timing for resolution;
- b) Issue and maintain orderly and updated files at the site for the use of the NCCR, including:
  - i) DPs;
  - ii) Issued for Construction Documents;
  - iii) Approved submittals;
  - iv) Supplementary and site instructions;
  - v) Field clarifications;
  - vi) Contemplated Change Notices;
  - vii) Change Orders;
  - viii) Certification for progress payments;
  - ix) Memoranda;
  - x) Inspection, testing and deficiency reports;
  - xi) Correspondence and minutes of meetings; and
  - xii) Names, addresses, telephone numbers of the NCCR, sub-consultants, CM key personnel and key sub-trade personnel, including home telephone numbers in case of emergencies;
- c) Provide environmental Monitoring work plans for testing methodology, including:
  - i) Emergency response protocol for Project stakeholders;
  - ii) Equipment calibration and maintenance reports;
  - iii) Daily site visit reports; and
  - iv) Sampling, testing, and Monitoring results report;
- d) Provide written comments for all CM constructability feedback;
- e) Provide an as-built Drawing and as-built Specifications of the built work prior to use; and
- f) Provide signed documentation for Substantial Performance and Completion.



## **14 POST-CONSTRUCTION SERVICES**

The Consultant must:

- a) Finalize any outstanding design discipline updates to the drawings and as-built Specifications;
- b) Perform a detailed warranty inspection of the work 10 months and 22 months after Substantial Performance with the CM and NCCR;
- c) Assess and confirm contaminated soil and groundwater containment is functioning as intended. Perform specific on-site testing as appropriate;
- d) Instruct CM to correct any deficiency, perform materials sampling, etc., agreeing on appropriate schedule for correction or follow up re-inspection with the CM and NCCR;
- e) Witness testing, analyze materials sampling results, and advise NCCR and CM in writing if said testing/sampling results;
- f) Incorporate any changes in the drawings; and
- g) Participate in lessons learned workshops at substantial performance.

### **14.1 Post Construction Deliverables**

The Consultant must:

- a) Submit reports to the CM and NCCR and within 5 Working Days of each warranty related activity;
- b) Submit the updated, as-built drawings and as-built Specifications to the NCCR with 4 weeks of Substantial Performance and again before Completion should drawing changes occur during the 24-month warranty period;
- c) Submit a lessons-learned report to the DR two weeks after the lessons learned workshop including:
  - i) What components or systems, if any, were not verified and why;
  - ii) What could have been done better;
  - iii) A remedial work plan outlining prudent follow-up actions or projects the NCC should undertake, including references to scope, estimated costs and duration for each follow-up item; and
  - iv) Other related information.





## Terminology

The following terms are used in this Project Brief and supplement defined terminology indicated in GC1, “Interpretation”, of the General Conditions, Appendix A of the Contract.

Baseline	The original approved plan, estimate and/or schedule, plus or minus approved scope changes.
Canada’s Capital Region	A designated geographical area in the provinces of Quebec and Ontario surrounding and including the cities of Gatineau, Quebec and Ottawa, Ontario. It is also referred to as the National Capital Region.
Consultant	The entity identified as the Contractor or Prime Consultant in the Contract, who is represented by the person designated by the Prime Consultant to lead and coordinate the collective Services of the Design Team.
Construction Documents	Includes Project-specific specifications and Drawings and includes Models or Model Elements.
Construction Manager	The construction management firm engaged by the NCC to provide construction related advice during the planning, design and Design Package documentation phases and to provide construction management services during the tendering, award and execution of multiple sub-contracts for construction work.
Clients/Users	Canadians at large and Government of Canada officers and officials.
Critical Path	A series of activities that determines the longest duration of a Project.
Critical Path Method	A network analysis technique used to predict Project duration by analyzing which sequence of activities (which path) has least amount of scheduling flexibility (least amount of float).
Day or day	Means a calendar day unless Working Day is specified
Design Package	The part of the overall work for the Project that is specific to a limited number of trades or even one trade and is prepared by the Design Team to acquire or construct one or more Project element.
Design Team	The combined forces of the Consultant and all subconsultants.
Drawings	Means the graphic and pictorial portions of the Construction Documents showing the design, location, and dimensions of the work, generally including plans, elevations, sections, details, and diagrams generated from Autocad.
Float	The amount of time that an activity may be delayed from its early start without delaying the Project finish date. Float is a mathematical calculation and can change as a Project progresses and changes are made to the Project plan. Float is available to both the NCC and the Consultant.
Model	A digital representation of the physical and functional configuration,





	characteristics or attributes of the Project or a portion of the Project.
Model Element	Means a part of the Model representing a portion of the Project or a system or assembly within the Project or the Project site as well as data sets.
Monitoring	The capture, analysis, and reporting of Project performance, usually as compared to plan.
National Capital Region	The designated geographical area in the provinces of Quebec and Ontario, as defined in the National Capital Act, surrounding, and including the cities of Gatineau, Quebec and Ottawa, Ontario, which may also be referred to as Canada’s Capital Region.
Project	All Services and work required to fulfill the Services described in the Contract.
National Master Specification (NMS)	<p>The National Master Specification (NMS) is the most comprehensive master specification in Canada serving as an easy-to-use framework for writing construction project specifications. The NMS is a reference document containing approximately 784 master specifications in both English and French. Each section is designed to be edited from the original master to produce a project-specific document. It is intended for use by the federal government, other public organizations and the private sector in the preparation of construction and renovation contract documents. The content reflects the expertise of many of Canada's foremost authorities on specifications, contract documents, and construction technology. A complete set of specifications in both official languages can be purchased in print or electronic format from one of our publishers. Individual specialty packages are also available for specifications related to: Architecture, Air Transportation, Building Services, Electrical, Heavy Civil Engineering, Interior Design, Landscape Architecture, Mechanical, Restoration-Conservation, and Structural Engineering.</p> <p><a href="https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/nms_index.html">https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/nms_index.html</a></p> <p>NMS table of contents <a href="https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/nms_toc.html">https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/nms_toc.html</a></p> <p>NMS updates <a href="https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/nms_updates.html">https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/nms_updates.html</a></p> <p>NMS user’s guide <a href="https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/users_guide.html">https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/users_guide.html</a></p> <p>NMS development guide <a href="https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/development_guide.html">https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/development_guide.html</a></p> <p>NMS publishers <a href="https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/publishers.html">https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/publishers.html</a></p>



	Frequently asked questions <a href="https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/questions.html">https://www.nrc-cnrc.gc.ca/eng/publications/nrc_pubs/nms/questions.html</a>
Project Brief	The document forming part of the Contract providing the statement of work the Contractor must perform. The Services described therein is all-inclusive in that it comprises all the Services needed to complete the Services of the Contract, except as provided for in other Contract documents.
Project Team	The combined private sector and government sector teams responsible for delivering the Project including the Design Team, the Construction Manager, the NCCR, and Clients/User representatives.
Services	Means, subject only to any express stipulation in the Contract to the contrary, everything that is necessary to be done, furnished or delivered by the Consultant to perform the Contract in accordance with the Contract documents including the project management of the Design Team.
Working Day	Means a day other than a Saturday, Sunday, or a statutory holiday that is observed by the construction industry in the area of the place of the work identified in the Contract documents or by the NCC Representative.



#### **OTHER PROJECT BRIEF ANNEXES**

1. Appendix G SJAMP CPR Overhead Bridge as built dwgs.
2. Appendix H SJAMP Transitway Exit Ramp E Bridge as built dwgs
3. Appendix I SJAMP Bridges 2005 Rehab Drawings.
4. Appendix J Survey Drawings RampE\_photo.
5. Appendix K SJAM OLRT Transit Detour – Temporary shoring.
6. Appendix L City of Ottawa storm\_ water pipes.
7. Appendix M NCC\_CADD\_Standard



NATIONAL CAPITAL COMMISSION  
COMMISSION DE LA CAPITALE NATIONALE

# **Appendix F**

## **Terms of Payment and Insurance Requirements**

### **ENGINEERING SERVICES**

for bridges on the  
Sir John A. Macdonald Parkway

**SOLICITATION NUMBER: AL1760**



**Terms of Payment and Insurance Requirements**

Solicitation Number: AL1760

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**TERMS OF PAYMENT (TP)**

**TP 5.1 Fees**

1. Subject to the terms and conditions of the Agreement, and in consideration for the performance of the Services, the NCC shall pay to the Consultant a sum of money calculated in accordance with the provisions herein and the Agreement Particulars.
2. The Consultant's fees are only payable when the Consultant has performed the Services as determined by the NCC Representative. Payment in respect of a Service, or part of a Service, is not to be deemed a waiver of the NCC's rights of set off at law or under the Agreement for costs or expenses arising from default or negligence of the Consultant.
3. The maximum amount payable under the Agreement, including fees and disbursements, shall not exceed the sum specified in the Agreement Particulars, without the prior written authorization of the NCC Representative in accordance with the terms of the Agreement.

**TP 5.2 Fee Arrangement(s) for Services**

The fee to be paid to the Consultant for the Services described herein, shall be determined by one or more of the following arrangements as specified in the Agreement Particulars:

- a. **Percentage Fee**  
The calculation of the total fee recognizes the variability of the Construction Cost Estimate as the Project develops. The fee for the various Services of the Project development shall be calculated on the basis of the following formula:

An amount equal to  $F \times A$

Where F = the percentage specified in the Agreement Particulars, and A = as follows:

- i. **At Analysis of Project Requirements and Design Concept:**  
A = the Construction Cost Estimate at the time of signing the Agreement.
- ii. **At Design Development:**  
A = the accepted preliminary Construction Cost Estimate prepared on completion of the design concept documents.
- iii. **At Construction Documents:**  
A = the accepted updated Construction Cost Estimate prepared on completion of the design development documents.
- iv. **At Tender Call and Tender Evaluation:**  
A = the accepted final Construction Cost Estimate prepared on completion of the construction documents.
- v. **At Construction and Contract Administration and Post Construction Warranty Review:**  
A = the Construction Contract Award Price.



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The total fee is adjusted in accordance with the terms of any authorization pursuant to TP 5.8.

b. Fixed Fee

The fixed fee may be in the form of a fixed lump sum or an amount made up of fixed unit prices multiplied by a number of units of deliverables in the amount(s) specified in the Agreement Particulars.

c. Time Based Fee

i. Principals and executives, and other personnel approved in that capacity by the NCC Representative shall be paid at the hourly rate specified in the Agreement Particulars.

ii. Staff approved by the NCC Representative shall be paid at the Hourly Rate specified in the Agreement Particulars.

iii. Normal Working Hours

The normal working hours per day for principals, executives and Consultant's employees, shall be deemed to be seven and a half (7.5) hours of any day during which they are actually engaged in the performance of the Services.

iv. Travel Time

Travel time during normal working hours, that is related to the Project and authorized by the NCC Representative, shall be chargeable as time worked.

Travel time outside normal working hours, that is related to the Project and authorized by the NCC Representative, shall be chargeable up to a maximum of three (3) hours per day, unless otherwise authorized.

v. Maximum Amount(s) Payable

The maximum amount(s) that applies (apply) to the Services to be carried out at time rates shall be as specified in the Agreement Particulars, which amount(s) shall not be exceeded without the prior authorization of the NCC Representative, with the approval of the NCC Contracting Authority.

**TP 5.3 Payments to the Consultant**

1. The Consultant shall be entitled to receive progress payments at monthly or other agreed intervals, subject to the limitations of the Terms of Payment, if applicable. Such payments shall be made prior to or on the due date. The due date shall be the 30th day following receipt of an acceptable invoice.

2. An acceptable invoice shall be an invoice delivered to the NCC Representative in the agreed format with sufficient detail and information to permit verification. The invoice shall also identify, as separate items:

a. the amount of the progress payment being claimed for Services satisfactorily performed,

b. the amount for any tax calculated in accordance with the applicable federal legislation, and



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- c. the total amount which shall be the sum of the amounts referred to in (a) and (b) above.
3. The amount of the tax shown on the invoice shall be paid by the NCC to the Consultant in addition to the amount of the progress payment for Services satisfactorily performed.
4. The NCC Representative shall notify the Consultant within fifteen (15) days after the receipt of an invoice of any error or missing information therein. Payment shall be made prior to or on the thirtieth (30) day after acceptance of the corrected invoice or the required information.
5. Upon completion of each Service as described elsewhere in the Agreement, provided at least one progress payment has been made, the Consultant shall provide a Statutory Declaration evidencing that all the Consultant's financial obligations for Services rendered to the Consultant or on the Consultant's account, in connection with the Agreement, have been satisfied, before any further payment is made.
6. Upon written notice by a Sub-Consultant, with whom the Consultant has a direct contract, of an alleged non-payment to the Sub-Consultant, the NCC Representative may provide the Sub-Consultant with a copy of the latest approved progress payment made to the Consultant for the Services.
7. Upon the satisfactory completion of all Services, the amount due, less any payments already made, shall be paid to the Consultant not later than thirty (30) days after receipt of an acceptable invoice, together with the Final Statutory Declaration in accordance with subsection 5 above.

**TP 5.4 Payments for Services**

1. Payments in respect of the percentage fee arrangement shall be made during the performance of the Services, on the basis of the fee calculations as described in TP 5.2(a), for each of the Services equal to the amounts specified below:
  - a. Payment for Analysis of Project Requirements and Design Concept:  
Upon acceptance of the design concept documents, an amount equal to 10 percent of the fee;
  - b. Payment for Design Development:  
Upon acceptance of the design development documents, an amount equal to 15 percent of the fee;
  - c. Payment for Construction Documents:  
Upon acceptance of the construction documents, an amount equal to 45 percent of the fee;
  - d. Payment for Tender Call, Tender Evaluation and Contract Award:  
Upon award of the Construction Contract, or upon completion of tender evaluation(s) in such cases where Canada does not award a Construction Contract for reasons other than those specified in subsection 6 below, an amount equal to 5 percent of the fee;





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- e. Payment for Construction and Contract Administration:  
Upon interim completion of the Construction Contract, an amount equal to 22 percent of the fee;
  - f. Payment for Final Completion and Post Construction Warranty Review:  
Upon reporting to the NCC Representative on the status of the defects at the end of the warranty period(s) an amount equal to 3 percent of the fee.
2. Payments in respect of the fixed fee arrangement shall be made upon satisfactory performance of the Services but such payments shall not exceed the amount(s) as specified in the Agreement Particulars, for each Service.
  4. Progress payments, in respect of all fee arrangements, shall be made in accordance with TP 5.3 of the Agreement, but such payments shall not exceed the value of the fee indicated for each Service under consideration.
  5. Progress payments in respect of construction and contract administration for percentage fee or fixed fee arrangements may be made in proportion to the percentage of the construction work completed and approved for payment under the Construction Contract.
  6. If, for reasons attributable to the Consultant, a price cannot be obtained by a tender or negotiation within the Construction Cost Limit, or acceptable to the NCC Representative for the award of the Construction Contract, the Consultant shall be entitled to receive payment for the tender call, bid evaluation and construction contract award Services, only when the Services have been rendered.

**TP 5.5 Delayed Payment**

1. If the NCC delays in making a payment that is due in accordance with TP 5.3, the Consultant will be entitled to receive interest on the amount that is overdue for the period of time as defined in subsection 2 below including the day previous to the date of payment. Such date of payment shall be deemed to be the date on the cheque given for payment of the overdue amount. An amount is overdue when it is unpaid on the first day following the due date described in TP 5.3.1.
2. Interest shall be paid automatically on all amounts that are not paid by the due date or fifteen (15) days after the Consultant has delivered a Statutory Declaration in accordance with TP 5.3.5 or TP 5.3.7 whichever is the later.
3. The rate of interest shall be the Average Bank Rate plus 3 percent per year on any amount which is overdue pursuant to subsection 1 above.



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**TP 5.6 Claims Against, and Obligations of, the Consultant**

1. The NCC may, in order to discharge lawful obligations of and satisfy lawful claims against the Consultant by a Sub-Consultant, with whom the Consultant has a direct contract, for Services rendered to, or on behalf of, the Consultant, pay an amount from money that is due and payable to the Consultant directly to the claimant Sub-Consultant.
2. For the purposes of subsection 1 a claim shall be considered lawful when it is so determined
  - a. by a court of legal jurisdiction, or
  - b. by an arbitrator duly appointed to arbitrate the said claim, or
  - c. by a written notice delivered to the NCC Representative and signed by the Consultant authorizing payment of the said claim or claims.
3. A payment made pursuant to subsection 1 is, to the extent of the payment, a discharge of the NCC's liability to the Consultant under the Agreement and will be deducted from any amount payable to the Consultant under the Agreement.
4. Subsection 1 shall only apply to claims and obligations
  - a. the notification of which has set forth the amount claimed to be owing and a full description of the Services or a part of the Services for which the claimant has not been paid. The notification must be received by the NCC Representative in writing before the final payment is made to the Consultant and within one hundred twenty (120) days of the date on which the claimant
    - i. should have been paid in full under the claimant's Agreement with the Consultant where the claim is for an amount that was lawfully required to be held back from the claimant; or
    - ii. performed the last of the Services pursuant to the claimant's Agreement with the Consultant where the claim is not for an amount referred to in subparagraph 4.(a)(i), and
  - b. the proceedings to determine the right to payment of which shall have commenced within one year from the date that the notification referred to in paragraph 4.(a) was received by the NCC Representative.
5. The NCC may, upon receipt of a notification of claim referred to in paragraph 4.(a), withhold from any amount that is due and payable to the Consultant pursuant to the Agreement the full amount of the claim or any portion thereof.
6. The NCC Representative shall notify the Consultant in writing of receipt of any notification of claim and of the intention of the NCC to withhold funds pursuant to subsection 5. The Consultant may, at any time thereafter and until payment is made to the claimant, post with the NCC, security in a form acceptable to the in an amount equal to the value of the said claim. Upon receipt of such security the NCC shall release to the Consultant any funds which would be



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otherwise payable to the Consultant, that were withheld pursuant to the provision of subsection 5.

7. The Consultant shall discharge all lawful obligations and shall satisfy all lawful claims against the Consultant for Services rendered to, or on behalf of, the Consultant in respect of the Agreement at least as often as the Agreement requires the NCC to discharge its obligations to the Consultant.

**TP 5.7 No Payment for Errors and Omissions**

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

**TP 5.8 Payment for Changes and Revisions**

1. Payment for any additional or reduced Services authorized by the NCC Representative prior to their performance, and for which a basis of payment has not been established at the time of execution of the Agreement, shall be in an amount or amounts to be determined by the NCC Representative, acting reasonably, subject to these Terms of Payment.
2. Where it is not possible, or not appropriate, to determine a fixed price fee or percentage fee prior to the performance of the additional or reduced Services, payment shall be made on the basis of a time based fee in accordance with TP 5.2.1.(c). Disbursements shall be paid in accordance with TP 5.12.
3. Prior to the performance of additional or reduced Services on the basis of a time-based fee, the Consultant shall comply with any request made by the NCC Representative regarding persons to be employed by the Consultant or the Consultant's subconsultants to provide the additional or reduced Services. In addition, the NCC Representative shall determine, based on industry practice and input from the Consultant, hourly rates for any of those persons for whom the relevant information does not appear in the Agreement Particulars.
4. Payment for additional Services not identified at the time of execution of the Agreement shall be made only to the extent that
  - a. the additional Services are Services that are not included in stated Services in the Agreement,
  - b. the additional Services are required for reasons beyond the control of the Consultant, and
  - c. any fee adjustment for Services resulting from an adjustment in the Construction Cost Estimate arising from the additional Services is not commensurate with the additional Services performed.



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**TP 5.9 Extension of Time**

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

**TP 5.10 Suspension Costs**

1. In the event of a suspension of any Services pursuant to GC7.2, the NCC shall pay:
  - a. for clarity, an amount based on these Terms of Payment, for Services satisfactorily performed before the date of suspension; and
  - b. those out-of-pocket costs and expenses that, in the opinion of the NCC, are substantiated as having been reasonably incurred during the suspension period, as more particularly provided for in TP 5.10.2, 5.10.3, and 5.10.4.
2. The Consultant shall minimize all TP 5.10.1(b) out-of-pocket costs and expenses.
3. Within fourteen (14) days of notice of such suspension, the Consultant shall submit to the NCC Representative a schedule of all out-of-pocket costs and expenses, if any, that the Consultant expects to incur during the period of suspension, and for which the Consultant will request reimbursement, failing which, the Consultant shall, for all purposes, be deemed to have no such costs and expenses.
4. Save and except for the specified payment provided for TP 5.10.1(b), if any, the Consultant shall not be paid and has no claim for damages, compensation, loss of profit, loss of opportunity, allowance or otherwise by reason of, or directly or indirectly arising out of, the suspension of Services pursuant to GC 8.

**TP 5.11 Termination Costs**

1. In the event of termination of the Agreement pursuant to GC 8, the NCC shall pay, and the Consultant shall accept in full settlement:
  - a. an amount based on these Terms of Payment, for Services satisfactorily performed before the date of termination; and
  - b. those out-of-pocket costs and expenses that, in the opinion of the NCC, are substantiated as having been reasonably incurred to terminate the Agreement, as more particularly provided for in TP 5.11.2, 5.11.3, 5.11.4 and 5.11.5.
2. The Consultant shall minimize all TP 5.11.1(b) out-of-pocket costs and expenses.
3. Within fourteen (14) days of notice of such termination, the Consultant shall submit to the Departmental Representative a schedule of all out-of-pocket costs and expenses, if any,



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reasonably incurred after the date of termination, failing which, the Consultant shall, for all purposes, be deemed to have no such costs and expenses.

4. Payment shall be made to the Consultant only for those out-of-pocket costs and expenses that in the opinion of the NCC are substantiated as having been reasonably incurred after the date of termination of the Agreement.
5. Save and except for the specified payment provided for in TP 5.11.1, if any, the Consultant shall not be paid any amount and has no claim for damages, compensation, loss of profit, loss of opportunity, allowance or otherwise by reason of, or directly or indirectly arising out of, the termination of the Agreement pursuant to GC 8 Termination or Suspension.

**TP 5.12 Disbursements**

1. Subject to any provisions specifically to the contrary in the General Conditions or Supplementary Conditions, the following costs shall be included in the lump sum rates and hourly rates/fees required to deliver the consultant services and shall not be reimbursed separately;
  - a. The base rate of pay, wages or salaries;
  - b. Vacation pay;
  - c. Benefits which includes:
    - i. welfare and/or social assistance contributions;
    - ii. pension contributions;
    - iii. union dues;
    - iv. training and industry funds contributions; and
    - v. other applicable benefits and costs, if any, that can be substantiated by the Contractor;
  - d. Statutory and legislated requirements, assessed and payable under statutory authority, which includes:
    - i. Employment Insurance contributions;
    - ii. Canada Pension Plan or Quebec Pension Plan contributions;
    - iii. Workplace Safety and Insurance Board, Worker's Compensation
    - iv. Board or Commission de la santé et de la sécurité du travail premium;
    - v. Public Liability and Property Damage insurance premiums; and
    - vi. Health tax or insurance premiums;
  - e. Incentive remuneration/Profit sharing;
  - f. Sick pay;
  - g. Computers and standard computer software (as well as peripheral devices but excluding printing devices);
  - h. Cellular telephones, monthly charges, long distance charges, data charges, cases and protective carriers, chargers;
  - i. Stationery/miscellaneous offices supplies;
  - j. E-mail addresses/servers;



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- k. Short-term disability / parental or maternity leave;
  - l. Training costs;
  - m. Professional associations;
  - n. Travel/lodging; Travel and travel related expenses to and from and within the National Capital Region (e.g. Gatineau, Ottawa and surrounding areas), including:
    - i. travel time
    - ii. travel fare
    - iii. mileage
    - iv. parking fees
    - v. lodging
    - vi. meals
    - vii. taxi charges
  - o. Local and head office overheads;
  - p. Reproduction and delivery costs of drawings, CADD files, specifications and other technical documentation specified in the Statement of Work;
  - q. Standard office expenses such as any photocopying, computer costs, internet, cellular phone costs, long distance telephone and fax costs, including that between the Consultant's main office and branch offices and between the Consultant's offices and other team members' offices;
  - r. Courier and delivery charges for deliverables specified in the Statement of Work;
  - s. In-house computer work station;
  - t. Plotting charges;
  - u. Presentation materials;
  - v. Rental of office space.
  - w. Translation of all tender documents; and
  - x. Profit
2. Disbursements not included in Lump Sum Rates:

The following disbursements are not to be included in the Lump Sum Rates. When pre-approved by the NCC PM they will be reimbursed to the consultant at actual cost or as described below:

- a. Extraordinary reproduction and delivery costs of drawings, documents, presentation material, CADD files, specifications and other Technical Documentation, to comply with NCC requests;
- b. Extraordinary transportation costs for material samples and models additional to that specified in the Statement of Work;
- c. Fees for approvals and permits to conduct field investigations and material testing;
- d. Extraordinary travel and accommodation requirements requested by the NCC shall be reimbursed in accordance with the current Treasury Board Travel Policy;
- e. Other extraordinary disbursements provided they are:
  - i. reasonably incurred by the Consultant
  - ii. related to the services required

In all such cases, extraordinary requirements should be described and estimated, if their need is



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only identified, formalized and approved in writing in advance by the NCC PM.

3. Disbursements shall be Project related and shall not include expenses that are related to the normal operation of the Consultant's business. The amounts payable, shall not exceed the amount entered in the Agreement Particulars, without the prior authorization of the NCC Representative.

**TP 5.13 Key Individuals**

1. The NCC identified in the RFP solicitation Key Individuals. In return, the Consultant's RFP Proposal identified the Key Individuals with specific experience and certifications. The Consultant's Key Individuals for the duration of the Contract are:
  - a. Senior Structural Engineer – bridge design;
  - b. Intermediate Structural Engineer – bridge design;
  - c. Senior Geotechnical Engineer;
  - d. Intermediate Geotechnical Engineer;
  - e. Senior Environmental Engineer;
  - f. Intermediate Environmental Engineer; and
  - g. Senior Landscape Architect
2. Through its duly completed Proposal in the RFP solicitation for this Contract the Consultant declares and certifies every Key Individual identified in its RFP Proposal is available to perform the services as required by the NCC at the time and place of the work specified in the Contract documents.
3. If for reasons beyond its control, any of the Consultant's Key Individuals are unable to provide the services identified in the Appendix E- Project Brief, the Consultant shall notify the NCC immediately of the unavailability and then propose to the NCC within 14 days of the notification a substitute with at least the same level of qualifications and experience, subject to the acceptance of the NCC at its sole discretion. If the NCC does not agree that the proposed substitute has similar capacity and qualification to the original Key Individual, then the Consultant shall propose another substitute within the next 14 days of the NCC's rejection of the previously proposed substitute.
4. The Consultant shall advise the NCC Contracting Authority of the reason for the substitution and provide the name, qualifications, and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Consultant, and must be documented: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause, termination of an agreement for default or by mutual-agreement between the NCC and the Consultant.
5. In the first twelve (12) months of the Contract, any substitution of a Key Individual for reasons other than death, certified sickness, maternity, dismissal for cause or mutual consent between the NCC and the Consultant, will be subject to a financial adjustment. The all-inclusive-hour-rate of pay identified in the Consultant's Price Proposal for the services provided by the Key





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Individual will be reduced by 50% for the first six months of services provided by the substitute. The financial adjustment shall be applied to any and all subsequent substitutions of Key Individuals.





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**INSURANCE REQUIREMENTS**

**1 General**

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

**2 Commercial General Liability**

- a. The insurance coverage provided shall not be less than that provided by IBC Form 2100, as amended from time to time, and shall have: a limit of liability of not less than \$5,000,000 per occurrence; an aggregate limit of not less than \$5,000,000 within any policy year.
- b. The policy shall insure the Consultant and shall include the National Capital Commission, represented by the Minister of Heritage as an Additional Insured, with respect to liability arising out of the performance of the Services.

**3 Professional Liability**

- a. The Professional Liability insurance coverage shall be in an amount usual for the nature and scope of the Services but, shall have a limit of liability of not less than \$10,000,000 per claim, and be continually maintained from the commencement of performance of the Services until five (5) years after their completion.
- b. Notice of Cancellation of Insurance Coverage: The Consultant shall immediately advise the Contracting Authority in writing upon being informed or in receipt of any notification of a pending cancellation of its professional Liability insurance or of any reduction to the claim limits it maintains.