

<p>NCC Tender File #</p>	<p>AL1438</p>
<p>Project Description</p>	<p>Gatineau Park - Rehabilitation of the Lac Philippe Covered Bridge</p>
<p>Site Visit</p>	<p>A NON MANDATORY site visit will be held on Friday, June 28, 2013 at 10am Ottawa time. The exact meeting place is the main Gatineau Park entrance to Lac Philippe off of hwy 366, Gatineau Park, Chelsea, Qc. All costs incurred by the Bidder to attend the site visit will be at their expense. The NCC will not reimburse any Bidder for expenses related to the site visit. Please contact Tony Fares at 613-239-5678 ext. 5573 to confirm your attendance at this NON MANDATORY site visit and to gain access to the grounds</p>
<p>Closing date and time</p>	<p>Thursday, July 11, 2013 at 3pm Ottawa time</p>

RETURN TENDERS TO: National Capital Commission 40 Elgin Street, 3rd Floor, Service Centre Ottawa, ON K1P 1C7 TENDER CLOSING DATE Thursday, July 11, 2013 AND TIME: at 3pm Ottawa time	NCC Tender File # AL1438
	NCC Contract Number

DESCRIPTION OF WORK: Gatineau Park - Rehabilitation of the Lac Philippe Covered Bridge

1. BUSINESS NAME AND ADDRESS OF BIDDER

Name: _____

Address: _____

Telephone number: _____ **Fax number:** _____

2. THE OFFER

The Bidder offers to the National Capital Commission (NCC) to perform and complete the work for the above mentioned project in accordance with the tender documents for the total tender amount (to be expressed in numbers only) of:

Sub Total \$ _____

GST/QST – _____

14,975% \$ _____

TOTAL \$ _____

3. TENDER VALIDITY PERIOD

The tender shall not be withdrawn for a period of 60 days following the date and time of tender closing.

4. CONTRACT DOCUMENTS

1. The following are the contract documents:
 - (a) Invitation to Tender & Acceptance Form when signed by the NCC;
 - (b) Duly completed Invitation to Tender & Acceptance Form and any Appendices attached thereto;
 - (c) Drawings and Specifications;
 - (d) General Conditions (GC1 to GC10);
 - (e) Supplementary Conditions, if any;
 - (f) Insurance Terms;
 - (g) Fair Wages and Hours of Labour – Labour Conditions;
 - (h) Occupational Health and Safety Requirements;
 - (i) Addenda
 - (j) Schedules of Wage Rates for Federal Construction Contracts;
 - (k) Any amendments issued or any allowable tender revision received before the date and time set for tender closing;
 - (l) Any amendment incorporated by mutual agreement between the NCC and the Contractor before acceptance of the tender; and
 - (m) Any amendment or variation of the contract documents that is made in accordance with the General Conditions;
 - (n) Security Requirements.
2. Schedules of Wage Rates for Federal Construction contracts are included by reference and may be accessed from the Website: <http://www.hrsdc.gc.ca/asp/gateway.asp?hr=en/lp/lo/lswf/fw/schedule.shtml&hs=cgp>.
3. The language of the contract documents shall be the language of the Invitation to Tender & Acceptance Form submitted.

NCC Tender File # AL1438

NCC Contract Number

5. APPENDICES

The tender includes Appendix(ces) Nos 1 and 11 to the Invitation to Tender & Acceptance Form.

6. ACCEPTANCE AND CONTRACT

Upon acceptance of the Contractor's offer by the NCC, a binding Contract shall be formed between the NCC and the Contractor. The documents forming the Contract shall be the contract documents referred to in 4 – CONTRACT DOCUMENTS.

7. CONSTRUCTION TIME

The Contractor shall perform and complete the Work beginning from end of August 2013 and ending no later than end of December 2013.

8. UNIT PRICE TABLE

The Bidder agrees that

- (a) the Unit Price Table designates that part of the Work to which a Unit Price Arrangement applies.
- (b) the Price per Unit and the Estimated Total Price must be entered for each item listed;
- (c) the Price per Unit as tender governs in calculating the Total Estimated Amount, and any errors in the extension of the Price per Unit and in the addition of the Estimated Total Prices shall be corrected by the NCC in order to obtain the Total Estimated Amount; and
- (d) the following table is the Unit Price Table for the purposes of the tender and the Contract:

UNIT PRICE TABLE

Note: Transmit the estimated total of the unit price table, under item 2, The Offer of this Invitation to Tender & Acceptance Form.

ITEM#	DESCRIPTION	UOM	QTY	UNIT PRICE	LS price or total for item
1	Sitework	lump sum	-		
2	Traffic control	lump sum	-		
3	Protection of utilities	lump sum	-		
4	Environmental protection	lump sum	-		
5	Dewatering	lump sum	-		
6	Site office for contract administrator	lump sum	-		
7	Access to work area, work platforms and scaffolding	lump sum	-		
8	Removal of asphalt pavement and waterproofing	m2	163		
9	Temporary support timber structure	lump sum	-		
10	Eath excavation for structure	m ³	25		
11	Scarify concrete deck	m2	127		
12	Partial depth concrete removals, deck	m2	50		
13	Full depth concrete removals, deck	m2	50		
14	Partial depth concrete removals, bearing seats	m2	2		
15	Partial depth concrete removals, abutment faces	m2	5		
16	Full depth concrete removals, ballast walls	lump sum	-		
17	Remove deck drains	each	6		
18	Remove damaged timber members	lump sum	-		
19	Jack and temporarily support bridge	lump sum	-		
20	Remove bearings	each	6		
21	Structural Steel Repairs	lump sum	-		
22	Abrasive blast clean and coat structural steel at ends of bridge ends of girders	lump sum	-		
23	New deck drains	each	6		
24	Place in concrete in deck, partial depth	m2	50		

25	Place in concrete in deck, full depth	m2	50		
26	Place concrete overlay	m2	127		
27	Place concrete partial depth, bearing seats	m2	2		
28	Place concrete partial depth, abutment faces	m2	5		
29	Place concrete in ballast walls	lump sum	-		
30	New bearings	each	6		
31	Reinforcing steel	tonne	1		
32	Granular backfill to structure (MG-20)	tonne	60		
33	Waterproofing	m2	163		
34	New timber traffic rail	lump sum	-		
35	Repair damaged members on timber structure	lump sum	-		
36	Timber structure modifications	lump sum	-		
37	Removal of asphalt pavement, full and partial depth	m2	97		
38	Earth excavation for retaining walls	m ³	100		
39	Remove timber retaining walls	lump sum	-		
40	New gabion retaining walls	m ³	60		
41	Granular backfill for retaining walls (MG-20)	tonne	250		
42	New steel beam guiderail	m	116		
43	New steel beam guiderail end treatments	each	4		
44	Asphalt pavement (bridge and approaches)	tonne	40		
45	Pavement markings	lump sum	-		
46	Top soil and seed	m2	200		
47	Rip Rap	m2	15		
				SUB-TOTAL EXCL TAXES	

9. The basis of award is low total cost to the Commission including all taxes.
10. 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, if any).

11. TENDER SECURITY

1. The Bidders shall enclose tender security with its tender in accordance with GI08 TENDER SECURITY REQUIREMENTS.
2. If the security furnished does not comply fully with the requirements referred to in paragraph 1) herein, the tender shall be disqualified.
3. If a security deposit is furnished as tender security, it shall be forfeited in the event that the tender is accepted by the NCC and the Contractor fails to provide Contract Security in accordance with GC9 CONTRACT SECURITY, provided that the NCC may, if it is in the public interest, waive the forfeiture of the security deposit.

12. REVISIONS

Item 1c) of GC10.3.2.1 (refer under GC10 Insurance, section 10.3.2 Commercial General Liability, sub-section 10.3.2.1 Scope of Policy) is deleted.

13. INVOICING

Send the original invoice and 1 copy to:

Accounts Payable
 National Capital Commission
 202-40 Elgin Street
 Ottawa, ON K1P 1C7

Or by email at the following address: payables@ncc-ccn.ca

To ensure prompt payment, please prepare your invoice in accordance with the prices quoted. Errors in invoicing can cause delay of payment. Submit your invoice to the address shown above and clearly indicate the Contract number.

We hereby offer to supply to the NCC in accordance with the terms and conditions set out herein, the construction work listed above and on any attached sheets at the submitted price(s).

 Name and title of person authorized to sign on behalf of Bidder
 (please print or type)

 Signature

 Date

Your tender is accepted to supply to the NCC, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the construction services listed herein and on any attached sheets at the price(s) set out therefore.

 Name and title of the person authorized to sign on behalf of the NCC
 (please print or type)

 Signature

 Date

INVITATION TO TENDER & ACCEPTANCE FORM	APPENDIX 1
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- 1) The Bidder will subcontract the parts of the work listed below to the subcontractor named for each part. The Bidder agrees not to make changes in the list of subcontractors without the written consent of the NCC Representative. The Bidder understands that for each part of the work identified as Mandatory, if more than one subcontractor is named or no subcontractor is named, or, the Bidder fails to state that the work will be done by its own forces where applicable, the tender will be disqualified.
- 2) The Bidder certifies that tenders for the part(s) of the Work listed below were received from the following subcontractors:

NON-MANDATORY REQUIREMENT:

- (a) Any other work not listed below

Type of Work: _____	Sub-contractor: _____
Type of Work: _____	Sub-contractor: _____
Type of Work: _____	Sub-contractor: _____
Type of Work: _____	Sub-contractor: _____
Type of Work: _____	Sub-contractor: _____
Type of Work: _____	Sub-contractor: _____

~~**MANDATORY REQUIREMENT:** The subcontractors performing the work listed below must be identified. Failure to disclose the name of the sub-contractor for any work identified will result in the disqualification of your tender.~~

- ~~(a) **n/a**~~

~~Sub contractor: _____~~

~~Address: _____~~

- ~~(b) **n/a**~~

~~Sub contractor: _____~~

~~Address: _____~~

- ~~(c) **n/a**~~

~~Sub contractor: _____~~

~~Address: _____~~

- ~~(d) **n/a**~~

~~Sub contractor: _____~~

~~Address: _____~~

SUPPLIER – DIRECT PAYMENT AND TAX INFORMATION FORM
FOURNISSEUR – FORMULAIRE DE PAIEMENT DIRECT ET RENSEIGNEMENTS POUR FINS D'IMPÔT

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)		
Former Public Servant in receipt of a PSSA Pension / Ancien fonctionnaire qui reçoit une pension en vertu de la LPFP			
			<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 LPFP, ou un partenariat formé d'anciens fonctionnaires touchant une pension en vertu de la LPFP, ou 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. / No. de ☐elephone :	Fax no. / No. De télécopieur :	
Postal code / Code postal	()	()	

PART 'B' – STATUS OF SUPPLIER / PARTIE 'B' – STATUT DU FOURNISSEUR

(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"/>	SIN – mandatory for (1) & (2) / NAS – obligatoire pour (1) & (2)	Corporation / Société <input type="checkbox"/>	Business No. (BN) / No de l'entreprise (NE)	
GST/HST / TPS et de TVH		QST / TVQ (Québec)		
Number / Numéro : _____		Number / Numéro : _____		
Not registered / non inscrit <input type="checkbox"/>		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 / No de la succursale	Institution no. / No de l'institution :	Account no. / No de compte :
Institution name / Nom de l'institution :	Address / Adresse :	
Postal Code / Code postal :		

PART 'D' – PAYMENT NOTIFICATION / PARTIE 'D' – AVIS DE PAIEMENT

E-mail address / Adresse courriel :

PART 'E' – CERTIFICATION / PARTIE 'E' – 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).	Veillez 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 Assistant, Procurement Services National Capital Commission 202-40 Elgin Street Ottawa, ON K1P 1C7 Fax : (613) 239-5007	Poster ou télécopier à : Assistant à l'approvisionnement Services de l'approvisionnement Commission de la capitale nationale 40, rue Elgin, pièce 202 Ottawa (Ontario) K1P 1C7 Télécopieur : (613) 239-5007

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

**FOURNISSEUR – FORMULAIRE DE PAIEMENT DIRECT
ET RENSEIGNEMENTS AUX FINS D'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 : Marcel Sanscartier, Manager, Accounts Payable and Receivable – (613) 239-5241.

Direct 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.

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 payment

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

There is less risk of direct payment being lost, stolen, or damaged as may happen with cheques.

Funds made by direct 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 d'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 : Marcel Sanscartier, Gestionnaire, comptes fournisseurs et comptes clients – (613) 239-5241.

Renseignements sur le paiement 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 vous sera envoyé par courriel.

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 direct

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

Avec les paiements 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 direct sont versés dans votre compte le jour même où nous aurions posté votre chèque.

- SI01 Tender Documents
- SI02 Enquiries during the Solicitation Period
- SI03 [\[Non Mandatory\] Site Visit](#)
- SI04 Revision of Tender
- SI05 Tender Results
- SI06 Negotiations
- SI07 Tender Validity Period
- SI08 Construction Documents
- SI09 Public Tender Opening

SI01 TENDER DOCUMENTS

- 1) The following are the tender documents:
 - (a) Invitation to Tender & Acceptance Form and any Appendices attached thereto;
 - (b) Special Instructions to Bidders; and
 - (c) General Instructions to Bidders.

Submission of a tender constitutes acknowledgement that the Bidder has read and agrees to be bound by these documents.

SI02 ENQUIRIES DURING THE SOLICITATION PERIOD

- 1) Enquiries regarding this tender must be submitted in writing to the following: Sr. Contract Officer, Allan Lapensée, telephone number - 613-239-5678 ext. 5051, facsimile number - 613-239-5007 or e-mail address - allan.lapensee@ncc-ccn.ca as early as possible within the solicitation period. Except for the approval of alternative materials as described in GI15 of the General Instructions to Bidders, enquiries should be received no later than five (5) calendar days prior to the date set for solicitation closing to allow sufficient time to provide a response. Enquiries received after that time may result in an answer not being provided.
- 2) To ensure consistency and quality of the information provided to Bidders, the Sr. Contract Officer shall examine the content of the enquiry and shall decide whether or not to issue an amendment.
- 3) All enquiries and other communications related to this tender sent throughout the solicitation period are to be directed ONLY to the Sr. Contract Officer named above. Non-compliance with this requirement during the solicitation period can, for that reason alone, result in disqualification of a tender.

SI03 [\[NON MANDATORY\] SITE VISIT](#)

- 1) A NON MANDATORY site visit will be held on Friday, June 28, 2013 at 10am Ottawa time. The exact meeting place is the main Gatineau Park entrance to Lac Philippe off of hwy 366, Gatineau Park, Chelsea, Qc. All costs incurred by the Bidder to attend the site visit will be at their expense. The NCC will not reimburse any Bidder for expenses related to the site visit. Please contact Tony Fares at 613-239-5678 ext. 5573 to confirm your attendance at this NON MANDATORY site visit and to gain access to the grounds.

SI04 REVISION OF TENDER

- 1) A tender may be revised by letter or facsimile in accordance with GI10 of the General Instructions to Bidders. The facsimile number for receipt of revisions is 613-239-5012.

SI05 TENDER RESULTS

- 1) Following solicitation closing, tender results may be obtained by calling the Sr. Contract Officer, Allan Lapensée, telephone number 613-239-5678 ext. 5051, facsimile number 613-239-5007 or e-mail address allan.lapensee@ncc-ccn.ca.

SI06 NEGOTIATIONS

- 1) In the event that the lowest compliant tender exceeds the amount of funding the NCC has allocated for the construction phase of the work:
 - (a) by 15% or less, the NCC, at its sole discretion, shall either:
 - (i) cancel the invitation to tender; or
 - (ii) obtain additional funding and, subject to the provisions of GI11 and GI09 of the General Instructions to Bidders, award the Contract to the Bidder submitting the lowest compliant tender; or
 - (iii) revise the scope of the work accordingly and negotiate, with the Bidder submitting the lowest compliant tender, a corresponding reduction in its tender price.
 - (b) by more than 15%, the NCC, at its sole discretion, shall either:
 - (i) cancel the invitation to tender; or
 - (ii) obtain additional funding and, subject to the provisions of GI11 and GI09 of the General Instructions to Bidders, award the Contract to the Bidder submitting the lowest compliant tender; or
 - (iii) revise the scope of the work accordingly and invite those who submitted compliant tenders at the original invitation to tender to re-tender the work.
- 2) If negotiations or a re-tender are undertaken as is contemplated in subparagraphs 1)(a)(iii) or 1)(b)(iii) above, Bidders shall retain the same subcontractors and suppliers as they carried in their original tenders.
- 3) If the NCC elects to negotiate a reduction in the tender price as is contemplated in subparagraph 1)(a)(iii) herein and the negotiations fail to reach an agreement, the NCC shall then exercise either of the options referred to subparagraphs 1)(a)(i) or 1)(a)(ii).

SI07 TENDER VALIDITY PERIOD

- 1) The NCC reserves the right to seek an extension to the tender validity period prescribed in 3 of the Invitation to Tender & Acceptance Form. Upon notification in writing from the NCC, Bidders shall have the option to either accept or reject the proposed extension.

**SPECIAL INSTRUCTIONS TO
BIDDERS**

- 2) If the extension referred to in paragraph 1) of SI07 is accepted, in writing, by all those who submitted tenders, then the NCC shall continue immediately with the evaluation of the tenders and its approvals processes.
- 3) If the extension referred to in paragraph 1) of SI07 is not accepted in writing by all those who submitted tenders then the NCC shall, at its sole discretion, either:
 - (a) continue to evaluate the tenders of those who have accepted the proposed extension and seek the necessary approvals; or
 - (b) cancel the invitation to tender.
- 4) The provisions expressed herein do not in any manner limit the NCC's rights in law or under GI11 of the General Instructions to Bidders.

SI08 CONSTRUCTION DOCUMENTS

- 1) The successful contractor will be provided with one paper copy of the sealed and signed plans, the specifications and the amendments upon acceptance of the offer. Additional copies, may be available free of charge upon request by the contractor. If not, obtaining more copies shall be the responsibility of the contractor including costs.

SI09 PUBLIC TENDER OPENING

- 1) **A public tender opening will be held on July 11, 2013 shortly after 3pm Ottawa time at 40 Elgin Street, Ottawa, Ontario in room 306.**

- GI01 Completion of Tender
- GI02 Identity or Legal Capacity of the Bidder
- GI03 Goods and Services Tax / Harmonized Sales Tax
- GI04 Québec Sales Tax
- GI05 Capital Development and Redevelopment Charges
- GI06 Registry and Pre-qualification of Floating Plant
- GI07 Listing of Subcontractors and Suppliers
- GI08 Tender Security Requirements
- GI09 Submission of Tender
- GI10 Revision of Tender
- GI11 Acceptance of Tender
- GI12 Procurement Business Number
- GI13 Bid Depository
- GI14 Compliance with Applicable Laws
- GI15 Approval of Alternative Materials
- GI16 Performance Evaluation

GI01 Completion of Tender

- 1) The tender shall be:
 - (a) submitted on the Invitation to Tender and Acceptance Form provided through the Government Electronic Tendering Service (GETS) or on a clear and legible reproduced copy of such Invitation to Tender and Acceptance Form that must be identical in content and format to the Invitation to Tender and Acceptance Form provided through GETS;
 - (b) based on the Tender Documents listed in the Special Instructions to Bidders;
 - (c) correctly completed in all respects;
 - (d) signed by a duly authorized representative of the Bidder; and
 - (e) accompanied by
 - (i) tender security as specified in GI08; and
 - (ii) any other document or documents specified elsewhere in the solicitation where it is stipulated that said documents are to accompany the tender.
- 2) Subject to paragraph 6) of GI11, any alteration to the pre-printed or pre-typed sections of the Invitation to Tender and Acceptance Form, or any condition or qualification placed upon the tender shall be cause for disqualification. Alterations, corrections, changes or erasures made to statements or figures entered on the Invitation to Tender and Acceptance Form by the Bidder shall be initialled by the person or persons signing the tender. Initials shall be original(s). Alterations, corrections, changes or erasures that are not initialled shall be deemed void and without effect.
- 3) Unless otherwise noted elsewhere in the Tender Documents, facsimile copies of tenders are not acceptable.

GI02 Identity or Legal Capacity of the Bidder

- 1) In order to confirm the authority of the person or persons signing the tender or to establish the legal capacity under which the Bidder proposes to enter into Contract, any Bidder who carries on business in other than its own personal name shall, if requested by the NCC prior to award of contract, provide satisfactory proof of:

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

Proof of signing authority may be in the form of a certified copy of a resolution naming the signatory(ies) that is (are) authorized to sign this tender on behalf of the corporation or partnership. Proof of legal capacity may be in the form of a copy of the articles of incorporation or the registration of the business name of a sole proprietor or partnership.

GI03 Goods and Services Tax / Harmonized Sales Tax

- 1) The National Capital Commission (NCC) is a Crown Corporation subject to the Goods and Services Tax (GST), the Ontario Provincial Sales Tax (OST) and the Quebec Sales Tax (QST). The rates quoted are exclusive of the GST and the OST/QST. The successful firm will be required to indicate separately, on all invoices or requests for payments, the amount of Goods and Services Sales Tax (GST), the amount of Ontario Sales Tax (OST) and the amount of Quebec Sales Tax (QST), to the extent applicable, that the Commission must pay. These amounts will be paid to the successful Bidder who is required to make the appropriate remittances to Revenue Canada and the respective provincial governments.

Pursuant to paragraph 221 (1)(d) of the Income Tax Act, payments made by Crown Corporations under applicable service contracts (including contracts involving a mix of goods and services) must be reported on a "T1204" slip. To comply with this requirement, the Bidder is required to provide the following information on the "Supplier – Direct Payment and Tax Information Form" (see Appendix 11).

By signing this form, the Bidder/Proponent certifies that he/she has examined the information provided on the form and that it is correct, complete, and fully discloses the identification of the Contractor.

This "Supplier – Direct Payment and Tax Information Form" must be completed and returned to the Commission prior to any contract being awarded to your firm (see Appendix 11).

GI04 Quebec Sales Tax

- 1) See GI03.

GI05 Capital Development and Redevelopment Charges

- 1) For the purposes of GC1.8 LAWS, PERMITS AND TAXES in the General Conditions of the Contract, only fees or charges directly related to the processing and issuing of building permits shall be included. The Bidder shall not include any monies in the tender amount for special municipal development, redevelopment or other fees or charges which a municipal authority may seek as a prerequisite to the issuance of building permits.

GI06 Registry and Pre-qualification of Floating Plant

- 1) Dredges or other floating plant to be used in the performance of the Work must be on Canadian registry. For dredges or other floating plant that are not of Canadian make or manufacture, the Bidder must obtain a certificate of qualification from Industry Canada, if applicable, and this certificate must accompany the tender. Plant so qualified by Industry Canada may be accepted on this project.

GI07 Listing of Subcontractors and Suppliers

- 1) Notwithstanding any list of Subcontractors that the Bidder shall be required to submit as part of the tender, the Bidder submitting the lowest acceptable tender shall, within 24 hours of receipt of a notice to do so, submit all information requested in the said notice including the names of Subcontractors and Suppliers for the part or parts of the Work listed. Failure to do so may result in the disqualification of its tender.

GI08 Tender Security Requirements

- 1) The Bidder shall submit tender security with the tender in the form of a bid bond or a security deposit in an amount that is equal to not less than 10% of the tender amount including all applicable taxes.

The maximum amount of tender security required with any tender is \$2,000,000.00.

- 2) A bid bond shall be in an approved form, properly completed, with original signature(s) and issued by an approved company whose bonds are acceptable to the NCC either at the time of solicitation closing or as identified on the list displayed at the following Website:

<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12027>

The approved form for the bid bond is enclosed at the end of this section.

- 3) A security deposit shall be an original, properly completed, signed where required and be either:
 - (a) a bill of exchange, bank draft or money order payable to the NCC;
 - (b) bonds of, or unconditionally guaranteed as to principal and interest by, the Government of Canada; or
- 4) A bill of exchange, bank draft or money order referred to in subparagraph 3)(a) of GI08 shall be certified by or drawn on:
 - (a) a corporation or institution that is a member of the Canadian Payments Association;
 - (b) a corporation that accepts public deposits and repayment of the deposits is unconditionally guaranteed by Her Majesty in right of a province;
 - (c) a corporation that accepts deposits that are insured by the Canada Deposit Insurance Corporation or the "Régie de l'assurance-dépôts du Québec" to the maximum permitted by law;
 - (d) a corporation, association or federation incorporated or organized as a credit union or cooperative credit society that conforms to the requirements of a credit union which are more particularly described in paragraph 137 (6)(b) of the *Income Tax Act*; or
 - (e) Canada Post Corporation.
- 5) If a bill of exchange, bank draft or money order is drawn on an institution or corporation other than a chartered bank, it must be accompanied by proof that the said institution or corporation meets at least one of the criteria described in paragraph 4) of GI08, either by letter or by a stamped certification on the bill of exchange, bank draft, or money order.
- 6) For the purposes of this section, a bill of exchange is an unconditional order in writing signed by the Bidder and addressed to an approved financial institution, requiring the said institution to pay, on demand, at a fixed or determinable time, a certain sum of money to, or to the order of, the NCC.

- 7) Bonds referred to in subparagraph 3)(b) of GI08 shall be provided on the basis of their market value current at the date of solicitation closing, and shall be:
 - (a) payable to bearer;
 - (b) accompanied by a duly executed instrument of transfer of the bonds to the NCC in the form prescribed by the Domestic Bonds of Canada Regulations; or
 - (c) registered as to principal or as to principal and interest in the name of the NCC pursuant to the Domestic Bonds of Canada Regulations.
- 8) As an alternative to a security deposit an irrevocable standby letter of credit is acceptable to the NCC and the amount shall be determined in the same manner as a security deposit referred to above.
- 9) An irrevocable standby letter of credit referred to in paragraph 8) of GI08 shall:
 - (a) be an arrangement, however named or described, whereby a financial institution (the “Issuer”) acting at the request and on the instructions of a customer (the “Applicant) or on its own behalf:
 - (i) is to make a payment to, or to the order of, the NCC as the beneficiary;
 - (ii) is to accept and pay bills of exchange drawn by the NCC;
 - (iii) authorizes another financial institution to effect such payment or accept and pay such bills of exchange; or
 - (iv) authorizes another financial institution to negotiate against written demand(s) for payment provided that the terms and conditions of the letter of credit are complied with.
 - (b) state the face amount which may be drawn against it;
 - (c) state its expiry date;
 - (d) provide for sight payment to the NCC by way of the financial institution’s draft against presentation of a written demand for payment signed by the NCC Contract Administrator identified in the letter of credit by his/her office;
 - (e) provide that more than one written demand for payment may be presented subject to the sum of those demands not exceeding the face value of the letter of credit;
 - (f) provide that it is subject to the International Chamber of Commerce (ICC) Uniform Customs and Practice for Documentary Credits, 2007 Revision, ICC Publication No. 600;
 - (g) clearly specify that it is irrevocable or deemed to be irrevocable pursuant to article 6 c) of the International Chamber of Commerce (ICC) Uniform Customs and Practice for Documentary Credits, 2007 Revision, ICC Publication No. 600; and
 - (h) be issued or confirmed, in either official language, by a financial institution which is a member of the Canadian Payments Association and is on the letterhead of the Issuer or Confirmer. The format is left to the discretion of the Issuer or Confirmer.
- 10) Tender security shall lapse or be returned as soon as practical following:
 - (a) the solicitation closing date, for those Bidders submitting non-compliant tenders; and

- (b) the administrative tender review, for those Bidders submitting compliant tenders ranked fourth to last on the schedule of tenders; and
 - (c) the award of contract, for those Bidders submitting the second and third ranked tenders; and
 - (d) the receipt of contract security for the successful Bidder; or
 - (e) the cancellation of the solicitation, for all Bidders.
- 11) Notwithstanding the provisions of paragraph 10) of GI08 and provided more than three (3) compliant tenders have been received, if one or more of the tenders ranked third to first is withdrawn or rejected for whatever reason, then the NCC reserves the right to hold the security of the next highest ranked compliant tender in order to retain the tender security of at least three (3) valid and compliant tenders.

GI09 Submission of Tender

- 1) The Invitation to Tender and Acceptance Form, duly completed with the bid security, shall be enclosed and sealed in an envelope provided by the Bidder, and shall be addressed and submitted to the office designated on the front page of the Invitation to Tender and Acceptance Form for the receipt of tenders.
- 2) Unless otherwise specified in the Special Instructions to Bidders:
 - (a) the tender shall be in Canadian currency;
 - (b) exchange rate fluctuation protection is not offered; and
 - (c) any request for exchange rate fluctuation protection shall not be considered.
- 3) Prior to submitting the tender, the Bidder shall ensure that the following information is clearly printed or typed on the face of the tender envelope:
 - (a) Solicitation Number;
 - (b) Name of Bidder.
- 5) Timely and correct delivery of the tender is the sole responsibility of the Bidder. The tender must be received on or before the date and time set for solicitation closing. Late tenders shall be disqualified.

GI10 Revision of Tender

- 1) A tender submitted in accordance with these instructions may be revised by letter or facsimile (fax number only 613-239-5012 provided the revision is received at the office designated for the receipt of tenders, on or before the date and time set for the closing of the solicitation. The letter or facsimile shall:
 - (a) be on the Bidder's letterhead or bear a signature that identifies the Bidder;
 - (b) for the Total Bid Amount, clearly identify the amount of the current revision. The total aggregate sum of all revisions submitted, including the current revision, shall be shown separately; and
 - (c) for the Price per unit portion of a tender, clearly identify the current revision(s) to the Price(s) per unit and the specific item(s) to which each revision applies. If a revision is to be applied to a specific Item that was previously amended then, in addition to the amount of the current

revision, the total aggregate sum of all revisions submitted, including the current revision, for that Item shall be shown separately.

- 2) A letter or facsimile submitted to confirm an earlier revision shall be clearly identified as "CONFIRMATION ONLY", for each contemplated change.
- 3) Failure to comply with any of the above provisions shall result in the rejection of the non-compliant revision(s) only. The tender shall be evaluated based on the original tender submitted and all other compliant revision(s).

GI11 Acceptance of Tender

- 1) The NCC may accept any tender, whether it is the lowest or not, or may reject any or all tenders.
- 2) Without limiting the generality of paragraph 1) of GI11, the NCC may reject a tender if any of the following circumstances are present:
 - (a) the Bidder, or any employee or subcontractor included as part of the tender, have been convicted under section 121 ("Frauds on the government" & "Contractor subscribing to election fund"), 124 ("Selling or purchasing office"), 380 (Fraud committed against Her Majesty) or 418 ("Selling defective stores to Her Majesty") of the Criminal Code of Canada, or under paragraph 80(1)(d) (False entry, certificate or return), subsection 80(2) (Fraud against her Majesty) or Section 154.01 (Fraud against her Majesty) of the Financial Administration Act;
 - (b) the Bidder's bidding privileges are suspended or are in the process of being suspended;
 - (c) the bidding privileges of any employee or subcontractor included as part of the tender are suspended or are in the process of being suspended, which suspension or pending suspension would render that employee or subcontractor ineligible to tender on the Work, or the portion of the Work the employee or subcontractor is to perform;
 - (d) with respect to current or prior transactions with the NCC
 - (i) the Bidder is bankrupt or if, for whatever reason, its activities are rendered inoperable for an extended period;
 - (ii) evidence, satisfactory to the NCC, of fraud, bribery, fraudulent misrepresentation or failure to comply with any law protecting individuals against any manner of discrimination, has been received with respect to the Bidder, any of its employees or any subcontractor included as part of its tender;
 - (iii) the NCC has exercised, or intends to exercise, the contractual remedy of taking the work out of the contractor's hands with respect to a contract with the Bidder, any of its employees or any subcontractor included as part of its tender; or
 - (iv) the NCC determines that the Bidder's performance on other contracts is sufficiently poor to jeopardize the successful completion of the requirement being tendered on.
- 3). In assessing the Bidder's performance on other contracts pursuant to subparagraph 2)(d)(iv) of GI11, the NCC may consider, but not be limited to, such matters as:
 - (a) the quality of workmanship in performing the Work;
 - (b) the timeliness of completion of the Work;

- (c) the overall management of the Work and its effect on the level of effort demanded of the NCC and its representative; and
 - (d) the completeness and effectiveness of the Contractor's safety program during the performance of the Work.
- 4) Without limiting the generality of paragraphs 1), 2) and 3) of GI11, the NCC may reject any based on an unfavourable assessment of the:
- (a) adequacy of the tender price to permit the work to be carried out and, in the case of a tender providing prices per unit, whether each such price reasonably reflects the cost of performing the part of the work to which that price applies;
 - (b) Bidder's ability to provide the necessary management structure, skilled personnel, experience and equipment to perform competently the work under the Contract; and
 - (c) Bidder's performance on other contracts.
- 5) If the NCC intends to reject a tender pursuant to a provision of paragraphs 1), 2), 3) or 4) of GI11, other than subparagraph 2)(b) of GI11, the NCC shall so inform the Bidder and provide the Bidder ten (10) days within which to make representation, prior to making a final decision on the tender rejection.
- 6) The NCC may waive informalities and minor irregularities in tenders received, if the NCC determines that the variation of the tender from the exact requirements set out in the Tender Documents can be corrected or waived without being prejudicial to other Bidders.

GI12 Procurement Business Number

- 1) Not applicable.

GI13 Bid Depository

- 1) If the solicitation advertisement states that a Bid Depository shall be used, the Bidder shall obtain bids in accordance with local Bid Depository rules and procedures.

GI14 Compliance with Applicable Laws

- 1) By submission of a tender, the Bidder certifies that the Bidder has the legal capacity to enter into a contract and is in possession of all valid licences, permits, registrations, certificates, declarations, filings, or other authorizations necessary to comply with all federal, provincial and municipal laws and regulations applicable to the submission of the tender and entry into any ensuing contract for the performance of the work.
- 2) For the purpose of validating the certification in paragraph 1) of GI14, a Bidder shall, if requested, provide a copy of every valid licence, permit, registration, certificate, declaration, filing or other authorization listed in the request, and shall provide such documentation within the time limit(s) set out in the said request.
- 3) Failure to comply with the requirements of paragraph 2) of GI14 shall result in the disqualification of the tender.

GI15 Approval of Alternative Materials

- 1) When materials are specified by trade names or trademarks, or by manufacturers' or suppliers' names, the tender shall be based on use of the named materials. During the solicitation period,

alternative materials may be considered provided full technical data is received in writing by the Contracting Officer at least seven (7) calendar days, unless otherwise noted in the Tender documents, prior to the solicitation closing date. If the alternative materials are approved for the purposes of the tender, an addendum to the tender documents shall be issued.

GI16 Performance Evaluation

- 1) Bidders shall take note that the performance of the Contractor during and upon completion of the work shall be evaluated by the NCC. The evaluation shall be based on the quality of workmanship, timeliness of completion of the work, project management, contract management and management of health and safety. Should the Contractor's performance be considered unsatisfactory, the Contractor's bidding privileges on future work may be suspended indefinitely. Contractor Evaluation Report Form is enclosed at the end of this section.

BID BOND

Bond Number _____

Amount \$ _____

KNOW ALL MEN BY THESE PRESENTS, that _____ as Principal, hereinafter called the Principal, and _____ as Surety, hereinafter called the Surety, are, subject to the conditions hereinafter contained, held and firmly bound unto the National Capital Commission as Obligee, hereinafter called the NCC, In the amount of _____ dollars (\$ _____), lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

SIGNED AND SEALED this _____ day of _____, _____. WHEREAS, the Principal has submitted a written tender to the NCC, dated the _____ day of _____, _____, for: _____.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION are such that if:

- (a) The Principal, should his tender be accepted within the period be specified by the NCC, or, if no period be specified, within sixty (60) days after closing date of the tender:
 - 1. does execute within a period specified by the NCC, or, if no period be specified therein, within fourteen (14) days after the prescribed forms are presented to him for signature, execute such further contractual documents, if any, as may be required by the terms of the tender as accepted; and does
 - 2. furnish a Performance Bond and a Labour and Material Payment Bond, each in the amount of 50% of the Contract price and satisfactory to the NCC, or other security acceptable to the NCC; or
- (b) the Principal does pay to the NCC the difference between the amount of the Principal's tender and the amount of the Contract entered into by the NCC for the work, supplies and services which were specified in the said tender, if the latter amount be in excess of the former,

then, this obligation shall be void; otherwise it shall remain in full force and effect.

PROVIDED, HOWEVER, that the Surety and the Principal shall not be liable to the NCC for an amount greater than the amount specified in the bond.

PROVIDED FURTHER that the Surety shall not be subject to any suit or action unless such suit or action is instituted and process therefore served upon the Surety at its Head Office in Canada, within twelve (12) months from the date of this bond.

IN TESTIMONY WHEREOF, the Principal has hereto set its hand and affixed its seal, and the Surety has caused these presents to be sealed with its corporate seal duly attested by the signature of its authorized signing authority, the day and first above written.

SIGNED, SEALED AND DELIVERED in the presence of:

Principal _____

Witness _____

Surety _____

Note: Affix Corporate seal if applicable.

Date	Contract no. / No du contrat		
Description of work / Description des travaux			
Contractor's business name / Nom de l'entreprise de l'entrepreneur		Contractor's site superintendent / Contremaître de l'entrepreneur	
Contractor's business address / Adresse de l'entreprise de l'entrepreneur			
NCC representative / Représentant de la CCN			
Name / Nom	Telephone no. / N°. de téléphone	E-mail address / Adresse électronique	
Contract information / Information sur le contrat			
Contract award amount / Montant du marché adjugé		Contract award date / Date de l'adjudication du marché	
Final amount / Montant final		Actual contract completion date / Date réelle d'achèvement du contrat	
Number of change orders / Nombre d'ordres de changement		Final certificate date / Date du certificat final	
Quality of workmanship / Qualité des travaux exécutés			
<p>This is the rating of the quality of the workmanship. At final completion the quality of the materials and equipment incorporated in the work must meet the requirements set out in the plans and specifications.</p> <p>Il s'agit de l'évaluation de la qualité des travaux exécutés. À l'achèvement des travaux, la qualité des matériaux et de l'équipement doit satisfaire les exigences établies dans les plans et devis.</p>	Unacceptable / Inacceptable	0 – 5	<div style="border: 1px solid black; width: 80px; height: 80px; margin: auto;"></div>
	Not satisfactory / Non-satisfaisant	6 – 10	
	Satisfactory / Satisfaisant	11 – 16	
	Superior / Supérieur	17 – 20	
Time / Délai d'exécution			
<p>This is the rating of the timeliness of completion considering the actual completion date compared with the original (or amended) contract completion date and allowing for conditions beyond the control of the contractor.</p> <p>Il s'agit de l'évaluation du délai d'exécution des travaux en prenant en considération la date actuelle d'achèvement des travaux par rapport à la date originale (ou modifiée) et en tenant compte des conditions indépendantes de la volonté de l'entrepreneur.</p>	Unacceptable / Inacceptable	0 – 5	<div style="border: 1px solid black; width: 80px; height: 80px; margin: auto;"></div>
	Late / En retard	6 – 10	
	On time / À temps	11 – 16	
	Ahead of schedule / En avance sur le calendrier	17 – 20	
Project management / Gestion de projet			
<p>This is the rating of how the project, as described in the drawings and specifications, was managed including co-ordination, quality control, effective schedule development and implementation.</p> <p>Voici l'évaluation de la façon dont le projet décrit dans les documents contractuels a été géré, y compris la coordination, le contrôle de la qualité, l'élaboration d'un calendrier efficace et la mise en œuvre.</p>	Unacceptable / Inacceptable	0 – 5	<div style="border: 1px solid black; width: 80px; height: 80px; margin: auto;"></div>
	Not satisfactory / Non-satisfaisant	6 – 10	
	Satisfactory / Satisfaisant	11 – 16	
	Superior / Supérieur	17 – 20	
	Criteria not applicable / Critère non-applicable		
Contract management / Gestion de contrat			
<p>This is the rating of how the contract was administered in accordance with the provisions expressed in the "front end" portion of the documents.</p> <p>Voici l'évaluation de la façon dont le contrat a été administré conformément aux dispositions comprises dans la partie « prioritaire » des documents.</p>	Unacceptable / Inacceptable	0 – 5	<div style="border: 1px solid black; width: 80px; height: 80px; margin: auto;"></div>
	Not satisfactory / Non-satisfaisant	6 – 10	
	Satisfactory / Satisfaisant	11 – 16	
	Superior / Satisfaisant	17 – 20	
	Criteria not applicable / Critère non-applicable		
Health and safety / Santé et sécurité			
<p>This is the rating of the effectiveness of how the occupational health and safety provisions (whether identified in the contract or those of provincial legislation or those otherwise applicable) were managed and administered.</p> <p>Voici l'évaluation de l'efficacité avec laquelle les dispositions relatives à la santé et à la sécurité au travail (dans le contrat, dans les règlements provinciaux ou dans tout autre document) ont été gérées et administrées.</p>	Unacceptable / Inacceptable	0 – 5	<div style="border: 1px solid black; width: 80px; height: 80px; margin: auto;"></div>
	Not satisfactory / Non-satisfaisant	6 – 10	
	Satisfactory / Satisfaisant	11 – 16	
	Superior / Satisfaisant	17 – 20	
Total points / Pointage total			/100
Comments / Commentaires			
Name / Nom	Title / Titre	Signature	Date

INSTRUCTIONS AND ADDITIONAL INFORMATION (Contractor Performance Evaluation Report)
INSTRUCTIONS ET RENSEIGNEMENTS SUPPLÉMENTAIRES (Rapport d'évaluation du rendement de l'entrepreneur)

QUALITY OF WORKMANSHIP – QUALITÉ DES TRAVAUX EXÉCUTÉS

The NCC representative is to consider how the workmanship compares with:

- the norms in the area in which the work was carried out
- the contractor's compliance with any quality provisions outlined in the drawings and specification
- the quality of workmanship provided by other contractors on similar projects in the same facility/facilities

Le représentant de la CCN doit évaluer la qualité de l'exécution en fonction de ce qui suit :

- le respect des normes s'appliquant aux travaux réalisés
- la conformité de l'entrepreneur aux exigences de qualité comprises dans les dessins et dans les devis
- la qualité de l'exécution des travaux accomplis par d'autres entrepreneurs dans le cadre de projets similaires réalisés dans la même installation ou dans des installations semblables.

TIME / DÉLAIS D'EXÉCUTION

For the purpose of evaluation the contractor's time performance, consideration must be given to conditions beyond the contractor's control including NCC / Consultant / Client performance.

Afin d'évaluer le rendement de l'entrepreneur en matière de délai d'exécution, on doit prendre en considération les conditions indépendantes de la volonté de l'entrepreneur, y compris le rendement de la CCN, de l'expert-conseil et du client.

Consider conditions beyond the contractor's control, e.g.,

Prendre en considération les conditions indépendantes de la volonté de l'entrepreneur, par exemple :

- availability of, and access to the site
- changes in soil or site conditions
- weather extremes
- strikes
- material / equipment supply problems originating from manufacturers/suppliers
- quality of plans and specifications
- major change(s) in scope
- cumulative effect of changes
- was the NCC able to meet its obligations?
- timely decisions, clarifications, approvals, payments in due time
- delays caused by other contractors in the same facility

- disponibilité du chantier et accès au chantier
- modifications des conditions du sol ou du chantier
- température
- grèves
- problèmes d'approvisionnement en matériel et en équipement provenant des manufacturiers/fournisseurs
- qualité des plan et devis
- modifications importantes à l'étendue des travaux
- effets cumulatifs des modifications
- la CCN a-t-elle été capable de remplir ses obligations?
- décisions, clarifications, approbations, paiements en temps opportun
- les retards occasionnés par d'autres entrepreneurs travaillant dans la même installation.

The NCC representative's estimate of a reasonable maximum time allowance resulting from conditions beyond the contractor's control is
 L'estimation, par le représentant de la CCN, du temps maximum alloué pour les conditions indépendantes de la volonté de l'entrepreneur est



The period of delay attributable to the contractor is
 La période de retard attribuable à l'entrepreneur est



Did the contractor make an effective effort / Est-ce que l'entrepreneur s'est efforcé :

- to meet the schedule / de respecter l'échéancier des travaux
- to clean up deficiencies in a reasonable time / de corriger les vices dans un délai raisonnable

▶	<input type="checkbox"/>	Yes Oui	<input type="checkbox"/>	No Non
▶	<input type="checkbox"/>	Yes Oui	<input type="checkbox"/>	No Non

Have you recommended assessments and damages for late completion under the contract?
 Avez-vous recommandé des dédommagements pour retard d'exécution aux termes du marché?

▶	<input type="checkbox"/>	Yes Oui	<input type="checkbox"/>	No Non
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PROJECT MANAGEMENT / GESTION DU PROJET

The extent to which the contractor takes charge of and effectively manages the work has a direct effect on the inputs required of the NCC.

La mesure dans laquelle l'entrepreneur assume efficacement la gestion des travaux a une incidence directe sur les services qu'on attend de la CCN.

Consideration should be given to: Did the contractor

Il faut examiner si l'entrepreneur a :

- employ a knowledgeable site superintendent
- required additional input from the NCC staff above that which is normal for a project of similar size and nature
- promptly commence the work
- provide realistic schedules and updates in accordance with the terms of the contract
- provide a comprehensive work plan and adhere to its milestones
- order material promptly and in such a way as to expedite the progress of the work
- provide shop drawings promptly and were they of sufficient detail

- fait appel aux services d'un surintendant de chantier expérimenté
- demandé au personnel de la CCN une plus grande contribution que ce qui est normal pour un projet de cette importance et de cette nature
- commencé les travaux dans les plus brefs délais
- fourni un calendrier réaliste et des mises à jour conformément aux modalités du contrat
- présenté un plan de travail complet et a respecté les échéances
- commandé le matériel rapidement et de façon à accélérer l'avancement des travaux.
- fourni rapidement des dessins d'atelier comprenant suffisamment de détails

PROJECT MANAGEMENT (cont'd) / GESTION DU PROJET (suite)

- effectively manage and complete all Division 1 work site activities
 - promptly provide reasonable quotations for changes to the original scope of work
 - cooperate when issued directions by the NCC representative
 - interpret the contract documents accurately
 - establish effective quality control procedures
 - effectively coordinate and manage the work of its subcontractors
 - promptly correct defective work as the project progressed
 - promptly clean-up all deficiencies and incomplete work after issuance of the Interim Certificate of Completion
 - satisfactorily clean the work site periodically and at the completion of the project
- g r  et achev  efficacement toutes les activit s sur le chantier de la Division 1
 - propos  rapidement des prix raisonnables pour les modifications   l' nonc  des travaux initial
 - accept  les directives du repr sentant de la CCN
 - interpr t  les documents contractuels avec exactitude
 - mis en place des proc dures de contr le de la qualit  efficaces
 - coordonn  et g r  efficacement les travaux confi s   des sous-traitants
 - corrig  promptement le travail d fectueux en cours de projet
 - corrig  rapidement les travaux non acceptables et termin  les travaux incomplets apr s r ception du certificat provisoire d'ach vement
 - nettoy  de fa on satisfaisante le chantier p riodiquement ainsi qu'  la fin du projet.

CONTRACT MANAGEMENT / GESTION DU CONTRAT

The effectiveness of the contractor to administer the contract in accordance with the provisions expressed in the "front end" portion of the contract documents.

Consideration should be given to: Did the contractor

- in the time frame specified, provide its contract security, Insurance Certificate fully executed and WSIB form where applicable
- submit progress claims in the correct format, accurately representing the work successfully completed and material delivered to the site but not yet installed for each payment period
- submit a Statutory Declaration correctly completed with each progress claim
- submit an updated Schedule if so specified
- pay subcontractors and suppliers in a timely fashion in accordance with the terms and conditions of its subcontracts
- promptly appoint a competent site superintendent
- notify the NCC representative of all its subcontracting activities
- apply for, obtain and pay for all necessary permits, licenses and certificates
- cooperate with other contractors sent onto the site of the work
- remove a superintendent or unsuitable worker when requested by the NCC representative to do so
- effectively protect the work and the contract documents provided by the NCC
- comply with all warranty provisions up to the date of the Contractor Performance Evaluation Report Form (CPERF)
- effectively manage the site during a suspension or termination of the work to mitigate any additional costs to the NCC
- deal promptly with any claims from creditors
- maintain complete records of the project
- provide information promptly when requested to do so
- expedite and co-operate in the settlement of all disputes

Efficacit  avec laquelle l'entrepreneur a administr  le contrat conform ment aux dispositions continues dans la partie « prioritaire » des documents contractuels.

Il faut examiner si l'entrepreneur a :

- fourni, dans le d lai prescrit, une garantie contractuelle, un certificat d'assurance d ment sign s et le formulaire de la CSST, le cas  ch ant
- pr sent  des r clamations p riodiques dans le bon format, en d crivant avec pr cision les travaux ex cut s et le mat riel livr  sur le chantier mais non encore install , pour chaque p riode de paiement
- pr sent  une d claration solennelle correctement remplie avec chaque r clamation p riodique
- fourni un calendrier   jour, sur demande
- pay  rapidement les sous-traitants et les fournisseurs conform ment aux conditions des contrats de sous-traitance
- d sign  dans les plus brefs d lais un surintendant de chantier qualifi 
- tenu au courant le repr sentant de la CCN de toutes les activit s de sous-traitance
- demand , obtenu et pay  tous les permis, licences et certificats n cessaires
- collabor  avec les autres entrepreneurs envoy s sur le lieu des travaux
- remplac  un surintendant ou un travailleur inapte   la demande du repr sentant de la CCN
- prot g  efficacement les travaux et les documents relativement aux travaux et au contrat fournis par la CCN
- respect  toutes les dispositions de garantie jusqu'  la date du Formulaire Rapport d' valuation du rendement de l'entrepreneur (FRERE)
- g r  efficacement le chantier pendant une suspension des travaux ou lors de leur ach vement, afin de limiter tout c t  suppl mentaire pour la CCN
- trait  dans les plus brefs d lais les demandes de paiement des cr anciers
- tenu des dossiers complets sur le projet
- fourni promptement les renseignements demand s
- acc l re et coop re dans le r glement des diff rends

HEALTH AND SAFETY / SANTÉ ET SÉCURITÉ

The effectiveness to which the contractor managed and administered the occupational health and safety provisions as stipulated in the contract documents and those required by provincial legislation or those that would otherwise be applicable to the site of the work.

Consideration should be given to: Did the contractor

- provide the NCC with a copy of its health and safety program prior to award of contract
- provide the NCC with a copy of its site specific hazardous assessment prior to award of contract
- apply for and obtain the provincial Notice of Project prior to commencement of the work
- apply for and obtain the Building Permit prior to commencement of the work
- provide a competent superintendent who
 - is qualified in health and safety matters because of her/his knowledge, training and experience
 - is familiar with the OH&S Act and its Regulations that apply to the site of the work
 - remedies any potential or actual danger of health and safety to those employed at the work site
- respond in a timely manner to any non-compliance safety issues noted by the NCC or a representative of the authority having jurisdiction
- implement its safety program in a proactive manner

Efficacité avec laquelle l'entrepreneur a géré et administré les dispositions relatives à la santé et à la sécurité au travail telles que stipulées dans les documents contractuels et dans les règlements provinciaux ou ceux s'appliquant normalement au lieu des travaux.

Il faut examiner si l'entrepreneur a :

- fourni à la CCN une copie de son programme en matière de santé et de sécurité avant l'octroi du contrat
- fourni à la CCN une copie de son évaluation des dangers pouvant survenir sur les lieux avant l'octroi du contrat
- demandé et obtenu l'avis de projet provincial avant le début des travaux
- demandé et obtenu le permis de construction avant le début des travaux
- engagé un surintendant qui :
 - est qualifié en matière de santé et de sécurité de par ses connaissances, sa formation et son expérience
 - connaît bien les dispositions de la Loi sur la santé et la sécurité au travail et de son règlement qui s'applique sur le lieu des travaux
 - remédie à tout danger possible ou réel en matière de santé et de sécurité pouvant toucher toutes les personnes travaillant sur le lieu des travaux
- traité rapidement tous les problèmes de non-conformité à la sécurité relevés par la CCN ou par un représentant de l'autorité qui a juridiction
- mis en œuvre son programme de sécurité de façon proactive

- GC1.1 INTERPRETATION
 - GC1.1.1 Headings and References
 - GC1.1.2 Terminology
 - GC1.1.3 Application of Certain Provisions
 - GC1.1.4 Substantial Performance
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 - GC1.2.1 General
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- GC1.13 CONFLICT OF INTEREST
- GC1.14 AGREEMENTS AND AMENDMENTS
- GC1.15 SUCCESSION
- GC1.16 ASSIGNMENT
- GC1.17 NO BRIBE
- GC1.18 CERTIFICATION - CONTINGENCY FEES
- GC1.19 INTERNATIONAL SANCTIONS

GC1.1 INTERPRETATION

GC1.1.1 Headings and References

- 1) The headings in the contract documents, other than those in the drawings and specifications, form no part of the Contract but are inserted for convenience of reference only.
- 2) A reference made to a part of the Contract by means of numbers preceded by letters is a reference to the particular part of the Contract that is identified by that combination of letters and numbers and to any other part of the Contract referred to therein.
- 3) A reference to a paragraph or subparagraph followed by an identifying number, letter or combination thereof is, unless specifically stated otherwise, a reference to the paragraph or subparagraph that forms part of the clause within which the reference is made.

GC1.1.2 Terminology

- 1) In the Contract

"Contract" means the contract documents referred to as such therein 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;

"Contract Amount" means the amount set out in the Contract to be payable to the Contractor for the Work, subject to the terms and conditions of the Contract;

"Contract Security" means any security given by the Contractor to the NCC in accordance with the Contract;

"Contractor" means the person contracting with the NCC to provide or furnish all labour, Material and Plant for the execution of the Work under the Contract, and includes the Contractor's superintendent as designated in writing to the NCC;

"Certificate of Completion" means a certificate issued by the NCC when the Work reaches Completion;

"Certificate of Measurement" means a certificate issued by the NCC certifying the correctness of the final quantities, prices per unit and values of labour, Plant and Material performed, used and supplied by the Contractor for the construction of the part of the Work to which a Unit Price Arrangement applies;

"Certificate of Substantial Performance" means a certificate issued by the NCC when the Work reaches Substantial Performance;

"NCC Representative" means the person designated in the Contract, or by written notice to the Contractor, to act as the NCC Representative for the purposes of the Contract, and includes a person, designated and authorized in writing by the NCC Representative to the Contractor;

"herein", "hereby", "hereof", "hereunder" and similar expressions refer to the Contract as a whole and not to any particular section or part thereof;

"Lump Sum Arrangement" means that part of the Contract that prescribes a lump sum as payment for performance of the Work to which it relates;

"Material" includes all commodities, articles, machinery, equipment, fixtures and things required to be furnished in accordance with the Contract for incorporation into the Work;

"NCC" means the National Capital Commission;

"Person" also includes, unless there is an express stipulation in the Contract to the contrary, any partnership, proprietorship, firm, joint venture, consortium or corporation;

"Plant" includes all tools, implements, machinery, vehicles, structures, equipment, articles and things that are necessary for the performance of the Contract, other than Material and those tools customarily provided by a tradesperson in practicing a trade;

"Security screening" is a generic term that applies to all types and levels of personnel security screening including Reliability Status, Site Access, and CONFIDENTIAL, SECRET and TOP SECRET security clearances conducted by the NCC;

"Sensitive Information and Assets" means information or assets that have been identified by the NCC as TOP SECRET, SECRET, CONFIDENTIAL or protected;

"Subcontractor" means a person having a direct contract with the Contractor, subject to GC3.6 SUBCONTRACTING, to perform a part or parts of the Work, or to supply Material customized for the Work;

"Superintendent" means the employee or representative of the Contractor designated by the Contractor to act pursuant to GC2.6 SUPERINTENDENT;

"Supplementary Conditions" means the part of the Contract that amends or supplements the General Conditions;

"Supplier" means a person having a direct contract with the Contractor to supply Plant or Material not customized for the Work;

"Unit Price Arrangement" means that part of the Contract that prescribes the product of a price per unit of measurement multiplied by a number of units of measurement for performance of the Work to which it relates;

"Unit Price Table" means the table of prices per unit set out in the Contract;

"Work" 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 Contractor to perform the Contract in accordance with the contract documents; and

"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.

GC1.1.3 Application of Certain Provisions

- 1) Any provisions of the Contract that are expressly stipulated to be applicable only to a Unit Price Arrangement are not applicable to any part of the Work to which a Lump Sum Arrangement applies.
- 2) Any provisions of the Contract that are expressly stipulated to be applicable only to a Lump Sum Arrangement are not applicable to any part of the Work to which a Unit Price Arrangement applies.

GC1.1.4 Substantial Performance

- 1) The Work shall be considered to have reached Substantial Performance when:
 - (a) the Work or a substantial part thereof has passed inspection and testing and is, in the opinion of the NCC, ready for use by the NCC or is being used for the intended purposes; and
 - (b) the Work is, in the opinion of the NCC, capable of completion or correction at a cost of not more than
 - (i) 3% of the first \$500,000;
 - (ii) 2% of the next \$500,000; and
 - (iii) 1% of the balanceof the Contract Amount at the time this cost is calculated.
- 2) Where the Work or a substantial part thereof is ready for use or is being used for the purposes intended and:
 - (a) the remainder of the Work or a part thereof cannot be completed by the time specified in the Contract, or as amended in accordance with GC6.5 DELAYS AND EXTENSION OF TIME, for reasons beyond the control of the Contractor; or
 - (b) the NCC and the Contractor agree not to complete a part of the Work within the specified time;

the cost of that part of the Work that was either beyond the control of the Contractor to complete or the NCC and the Contractor have agreed not to complete by the time specified, shall be deducted from the value of the Contract referred to in subparagraph 1)(b) of GC1.1.4, and the said cost shall not form part of the cost of the Work remaining to be done in determining Substantial Performance.

GC1.1.5 Completion

- 1) The Work shall be deemed to have reached Completion when all labour, Plant and Material required have been performed, used or supplied, and the Contractor has complied with the Contract and all orders and directions made pursuant thereto, all to the satisfaction of the NCC.

GC1.2 CONTRACT DOCUMENTS**GC1.2.1 General**

- 1) The contract documents are complementary, and what is required by any one shall be as binding as if required by all.
- 2) References in the contract documents to the singular shall be considered to include the plural as the context requires.
- 3) Nothing contained in the contract documents shall create a contractual relationship between the NCC and any Subcontractor or Supplier, their subcontractors or suppliers, or their agents or employees.

GC1.2.2 Order of Precedence

- 1) 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;
 - (b) any amendment issued prior to tender closing;
 - (c) Supplementary Conditions;
 - (d) General Conditions;
 - (e) the duly completed Invitation to Tender and Acceptance Form when accepted;
 - (f) drawings and specifications.

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

- 2) In the event of any discrepancy or conflict in the information contained in the drawings and specifications, the following rules shall apply:
 - (a) specifications shall govern over drawings;
 - (b) dimensions shown in figures on a drawings shall govern where they differ from dimensions scaled from the same drawing; and
 - (c) drawings of larger scale govern over those of smaller scale.

GC1.2.3 Security and Protection of Documents and Work

- 1) The Contractor shall guard and protect all sensitive contract information (TOP SECRET, SECRET, CONFIDENTIAL and PROTECTED) including printed and digital documents, drawings, information, models, copies thereof and processing systems, whether supplied by the NCC or the Contractor, against loss or compromise and damage from any cause.
- 2) The Contractor shall limit access to sensitive NCC information only to those with a “need-to-know” and who have been successfully security screened to at least the level of sensitivity of the information.
- 3) The Contractor shall ensure all contract information indicated in paragraph 1) is guarded and protected by any subcontractors, agents or suppliers and access limited only to those with a “need-to-know” and who have been successfully security screened to at least the level of sensitivity of the information.
- 4) The Contractor shall keep confidential all information provided to the Contractor by or on behalf of the NCC in connection with the Work, and all information developed by the Contractor as part of the Work, and shall not disclose any such information to any person without the written permission of the NCC, except that the Contractor may disclose to a subcontractor, authorized in accordance with the Contract, information necessary to the performance of a subcontract. This section does not apply to any information that:
 - (a) is publicly available from a source other than the Contractor; or
 - (b) is or becomes known to the Contractor from a source other than the NCC, except any source that is known to the Contractor to be under an obligation to the NCC not to disclose the information.
- 5) When the Contract, the Work, or any information referred to in paragraph 4) is identified as TOP SECRET, SECRET, CONFIDENTIAL or PROTECTED by the NCC, the Contractor shall, at all times, take all measures reasonably necessary for the safeguarding of the material so identified, including such measures as may be further specified elsewhere in the Contract or provided, in writing, from time to time by the NCC.
- 6) Without limiting the generality of paragraphs 4) and 5) of GC1.2.3, when the Contract, the Work, or any information referred to in paragraph 4) is identified as TOP SECRET, SECRET, CONFIDENTIAL or PROTECTED by the NCC, the NCC shall be entitled to inspect the Contractor's premises and the premises of its subcontractors or suppliers and any other person at any tier, for security purposes at any time during the term of the Contract, and the Contractor shall comply with, and ensure that any such subcontractors or suppliers comply with all written instructions issued by the NCC dealing with the material so identified, including any requirement that employees of the Contractor and its subcontractors and suppliers and any other person at any tier execute and deliver declarations relating to reliability status, site access security clearances and other procedures.
- 7) The Contractor shall report any suspected or actual security incidents immediately to the NCC involving loss, compromise or damage of NCC information or assets.
- 8) The Contractor shall safeguard the Work and the Contract, the specifications, drawings and any other information provided by the NCC to the Contractor, and shall be liable to the NCC for any loss or damage from any causes.

GC1.3 STATUS OF THE CONTRACTOR

- 1) The Contractor is engaged under the Contract as an independent contractor.
- 2) The Contractor, its subcontractors and suppliers and any other person at any tier and their employees are not engaged by the Contract as employees, servants or agents of the NCC.
- 3) For the purposes of the contract the Contractor shall be solely responsible for any and all payments and deductions required to be made by law including those required for Canada or Quebec Pension Plans, Employment Insurance, Worker's Compensation, provincial health or insurance plans, and Income Tax.

GC1.4 RIGHTS AND REMEDIES

- 1) Except as expressly provided in the Contract, the duties and obligations imposed by the Contract and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law.

GC1.5 TIME OF THE ESSENCE

- 1) Time is of the essence of the Contract.

GC1.6 INDEMNIFICATION BY CONTRACTOR

- 1) The Contractor shall pay all royalties and patent fees required for the performance of the Contract and, at the Contractor's expense, shall defend all claims, actions or proceedings against the NCC charging or claiming that the Work or any part thereof provided or furnished by the Contractor to the NCC infringes any patent, industrial design, copyright trademark, trade secret or other proprietary right enforceable in Canada.
- 2) The Contractor shall indemnify and save the NCC harmless from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings by any third party, brought or prosecuted and in any manner based upon, arising out of, related to, occasioned by, or attributable to the activities of the Contractor, its subcontractors and suppliers and any other person at any tier, in performing the Work.
- 3) For the purposes of paragraph 2) of GC1.6, "activities" means any act improperly carried out, any omission to carry out an act and any delay in carrying out an act.

GC1.7 INDEMNIFICATION BY THE NCC

- 1) Subject to the Crown Liability and Proceedings Act, the Patent Act, and any other law that affects the NCC's rights, powers, privileges or obligations, the NCC shall indemnify and save the Contractor harmless from and against all claims, demands, losses, costs, damage, actions, suits or proceedings arising out of the Contractor's activities under the Contract that are directly attributable to:
 - (a) a lack of or a defect in the NCC's title to the Work site if owned by the NCC, whether real or alleged; or
 - (b) an infringement or an alleged infringement by the Contractor of any patent of invention or any other kind of intellectual property occurring while the Contractor was performing any act for the purposes of the Contract employing a model, plan or design or any other thing related to the Work that was supplied by the NCC to the Contractor.

GC1.8 LAWS, PERMITS AND TAXES

- 1) The Contractor shall comply with all federal, provincial and municipal laws and regulations applicable to the performance of the Work or any part thereof including, without limitation, all laws concerning health and labour conditions and the protection of the environment, and shall require compliance therewith by all of its subcontractors and suppliers at any tier as if the Work were being performed for an owner other than the NCC. The Contractor shall furnish evidence of compliance with such laws and regulations to the NCC at such times as the NCC may reasonably request.
- 2) Unless stipulated otherwise in the Contract, the Contractor shall obtain and maintain all permits, certificates, licences, registrations and authorizations required for the lawful performance of the Work.
- 3) Prior to the commencement of the Work at the site, the Contractor shall tender to a municipal authority an amount equal to all fees and charges that would be lawfully payable to that municipal authority in respect of building permits as if the Work were being performed for an owner other than the NCC.
- 4) Within 10 days of making a tender pursuant to paragraph 3) of GC1.8, the Contractor shall notify the NCC of the amount properly tendered and whether or not the municipal authority has accepted that amount.
- 5) If the municipal authority has not accepted the amount tendered, the Contractor shall pay that amount to the NCC within 6 days after the time stipulated in paragraph 4) of GC1.8.
- 6) For the purposes of this clause, "municipal authority" means any authority that would have jurisdiction respecting permission to perform the Work if the owner were not the NCC.
- 7) Notwithstanding the residency of the Contractor, the Contractor shall pay any applicable tax arising from or related to the performance of the Work under the Contract.
- 8) In accordance with the Statutory Declaration referred to in paragraph 4) of GC5.5 SUBSTANTIAL PERFORMANCE OF THE WORK, a Contractor who has neither residence nor place of business in the province or territory in which work under the Contract is being performed shall provide the NCC with proof of registration with the provincial sales tax authorities in the said province.
- 9) For the purpose of the payment of any applicable tax or the furnishing of security for the payment of any applicable tax arising from or related to the performance of the Work, and notwithstanding the provision that all Material, Plant and interest of the Contractor in all real property, licences, powers and privileges, become the property of the NCC after the time of purchase in accordance with GC3.10 MATERIAL PLANT AND REAL PROPERTY BECOME PROPERTY OF THE NCC, the Contractor shall be liable, as a user or consumer, for the payment or for the furnishing of security for the payment of any applicable tax payable, at the time of the use or consumption of that Material, Plant or interest of the Contractor in accordance with the relevant legislation.

GC1.9 WORKERS' COMPENSATION

- 1) Prior to award of contract, at the time of submitting its first progress claim, at the time of Substantial Performance of the Work, and prior to issuance of the Certificate of Completion, the Contractor shall provide evidence of compliance with workers' compensation legislation applicable to the place of the Work, including payments due thereunder.

- 2) At any time during the term of the Contract, when requested by the NCC, the Contractor shall provide such evidence of compliance by the Contractor, its subcontractors and any other person at any tier and any other person performing part of the Work who is required to comply with such legislation.

GC1.10 NATIONAL SECURITY

- 1) If the NCC determines that the Work is of a class or kind that involves national security, the NCC may order the Contractor to:
 - (a) provide the NCC with any information concerning persons employed or to be employed by the Contractor for purposes of the Contract; and
 - (b) remove any person from the site of the Work if, in the opinion of the NCC, that person may be a risk to the national security;and the Contractor shall comply with the order.
- 2) In all contracts with persons who are to be employed in the performance of the Contract, the Contractor shall make provision for the performance of any obligation that may be imposed upon the Contractor under paragraph 1) of GC1.10.

GC1.11 UNSUITABLE WORKERS

- 1) The NCC shall instruct the Contractor to remove from the site of the Work any person employed by the Contractor for purposes of the Contract who, in the opinion of the NCC, is incompetent or is guilty of improper conduct, and the Contractor shall not permit a person who has been removed to return to the site of the Work.

GC1.12 PUBLIC CEREMONIES AND SIGNS

- 1) The Contractor shall not permit any public ceremony in connection with the Work without the prior consent of the NCC.
- 2) The Contractor shall not erect nor permit the erection of any sign or advertising on the Work or its site without the prior consent of the NCC.

GC1.13 CONFLICT OF INTEREST

- 1) It is a term of the Contract that no individual, for whom the post-employment provisions of the Conflict of Interest and Post-Employment Code for Public Office Holders or the Values and Ethics Code for the Public Service apply, shall derive a direct benefit from the Contract unless that individual is in compliance with the applicable post-employment provisions.

GC1.14 AGREEMENTS AND AMENDMENTS

- 1) The Contract constitutes the entire and sole agreement between the parties with respect to the subject matter of the Contract and supersedes all previous negotiations, communications and other agreements, whether written or oral, relating to it, unless they are incorporated by reference in the Contract. There are no terms, covenants, representations, statements or conditions binding on the parties other than those contained in the Contract.
- 2) The failure of either party at any time to require performance by the other party of any provision hereof shall not affect the right thereafter to enforce such provision. Nor shall the waiver by either

party of any breach of any covenant, term or condition hereof be taken to be held to be a waiver of any further breach of the same covenant, term or condition.

- 3) The Contract may be amended only as provided for in the Contract.

GC1.15 SUCCESSION

- 1) The Contract shall inure to the benefit of and be binding upon the parties hereto and their lawful heirs, executors, administrators, successors and, subject to GC1.16 ASSIGNMENT, permitted assigns.

GC1.16 ASSIGNMENT

- 1) The Contractor shall not make any assignment of the Contract, either in whole or in part, without the written consent of the NCC.

GC1.17 NO BRIBE

- 1) The Contractor represents and covenants that no bribe, gift, benefit, nor other inducement has been nor shall be paid, given, promised or offered directly or indirectly to any official or employee of the NCC or to a member of the family of such a person, with a view to influencing the entry into the Contract or the administration of the Contract.

GC1.18 CERTIFICATION - CONTINGENCY FEES

- 1) In this clause:
 - (a) "contingency fee" means any payment or other compensation that is contingent upon or is calculated upon the basis of a degree of success in soliciting or obtaining a Government contract or negotiating the whole or any part of its terms;
 - (b) "employee" means a person with whom the Contractor has an employer/employee relationship; and
 - (c) "person" includes an individual or a group of individuals, a corporation, a partnership, an organization and an association and, without restricting the generality of the foregoing, includes any individual who is required to file a return with the registrar pursuant to section 5 of the Lobbyists Registration Act R.S.C. 1985 c.44 (4th Supplement) as the same may be amended from time to time.
- 2) The Contractor certifies that it has not directly or indirectly paid nor agreed to pay and covenants that it shall not directly or indirectly pay nor agree to pay a contingency fee for the solicitation, negotiation or obtaining of the Contract to any person other than an employee acting in the normal course of the employee's duties.
- 3) All accounts and records pertaining to payments of fees or other compensation for the solicitation, obtaining or negotiation of the Contract shall be subject to the accounts and audit provisions of the Contract.
- 4) If the Contractor certifies falsely under this section or is in default of the obligations contained therein, the NCC may either take the Work out of the Contractor's hands in accordance with the provisions of the Contract or recover from the Contractor by way of reduction to the Contract Amount or otherwise, the full amount of the contingency fee.

GC1.19 INTERNATIONAL SANCTIONS

- 1) Persons and companies in Canada, and Canadians outside of Canada are bound by economic sanctions imposed by the Government of Canada. As a result, the the NCC cannot accept delivery of goods or services that originate, either directly or indirectly, from the countries or persons subject to economic sanctions.
Details on existing sanctions can be found at:
<http://www.dfait-maeci.gc.ca/trade/sanctions-en.asp>.
- 2) It is a condition of the Contract that the Contractor not supply to the NCC any goods or services which are subject to economic sanctions.
- 3) By law, the Contractor must comply with changes to the regulations imposed during the life of the Contract. During the performance of the Contract should the imposition of sanctions against a country or person or the addition of a good or service to the list of sanctioned goods or services cause an impossibility of performance for the Contractor, the Contractor may request that the Contract be terminated in accordance with GC7.3 TERMINATION OF CONTRACT.

- GC2.1 NCC REPRESENTATIVE'S AUTHORITY
- GC2.2 INTERPRETATION OF CONTRACT
- GC2.3 NOTICES
- GC2.4 SITE MEETINGS
- GC2.5 REVIEW AND INSPECTION OF WORK
- GC2.6 SUPERINTENDENT
- GC2.7 NON-DISCRIMINATION IN HIRING AND EMPLOYMENT OF LABOUR
- GC2.8 ACCOUNTS AND AUDITS

GC2.1 NCC REPRESENTATIVE'S AUTHORITY

- 1) The NCC shall designate an NCC Representative and shall notify the Contractor of the name, address and telephone number of the NCC Representative.
- 2) The NCC Representative shall perform the NCC's duties and functions under the contract.
- 3) The NCC Representative shall be authorized to issue notices, instructions and directions to the Contractor and to accept on behalf of the NCC any notice, order or other communication from the contractor relating to the Work.
- 4) The NCC Representative shall, within a reasonable time, review and respond to submissions made by the Contractor in accordance with the requirements of the Contract.

GC2.2 INTERPRETATION OF CONTRACT

- 1) If, at any time before the NCC has issued a Certificate of Completion, any question arises between the parties about whether anything has been done as required by the Contract or about what the Contractor is required by the Contract to do, and in particular but without limiting the generality of the foregoing, about:
 - (a) the meaning of anything in the drawings and specifications;
 - (b) the meaning to be given to the drawings and specifications in case of any error therein, omission therefrom, or obscurity or discrepancy in their wording or intention;
 - (c) whether or not the quality or quantity of any Material or workmanship supplied or proposed to be supplied by the Contractor meets the requirements of the Contract;
 - (d) whether or not the labour, Plant or Material performed, used and supplied by the Contractor for performing the Work and carrying out the Contract are adequate to ensure that the Work shall be performed in accordance with the Contract and that the Contract shall be carried out in accordance with its terms;
 - (e) what quantity of any of the Work has been completed by the Contractor; or
 - (f) the timing and scheduling of the various phases of the performance of the Work as specified in the Contract;

the question shall be decided, subject to the provisions of GC8 DISPUTE RESOLUTION, by the NCC.

- 2) The Contractor shall perform the Work in accordance with any decisions of the NCC that are made under paragraph 1) of GC2.2 and in accordance with any consequential directions given by the NCC.

- 3) If the Contractor fails to comply with any instruction or direction issued by the NCC pursuant to the Contract, the NCC may employ such methods as the NCC deems advisable to do what the Contractor failed to do, and the Contractor shall, on demand, pay the NCC an amount that is equal to the aggregate of all costs, expenses and damages incurred or sustained by the NCC by reason of the Contractor's failure to comply with such instruction or direction, including the cost of any methods employed by the NCC in doing what the Contractor failed to do.

GC2.3 NOTICES

- 1) Subject to paragraph 3) of GC2.3, any notice, order or other communication may be given in any manner, and if required to be in writing, shall be addressed to the party to whom it is intended at the address in the Contract or at the last address of which the sender has received written notice in accordance with this section.
- 2) Any notice, order or other communication given in writing in accordance with paragraph 1) of GC2.3 shall be deemed to have been received by either party:
 - (a) if delivered personally, on the day that it was delivered;
 - (b) if forwarded by mail, on the earlier of the day it was received or the sixth day after it was mailed; and
 - (c) if forwarded by facsimile or electronic mail, 24 hours after it was transmitted.
- 3) A notice given under GC7.1 TAKING THE WORK OUT OF THE CONTRACTOR'S HANDS, GC7.2 SUSPENSION OF WORK, and GC7.3 TERMINATION OF CONTRACT shall be given in writing and, if delivered personally, shall be delivered, if the Contractor is a sole proprietor, to the Contractor or, if the Contractor is a partnership or corporation, to an officer thereof.

GC2.4 SITE MEETINGS

- 1) In consultation with the NCC, the Contractor shall arrange site meetings at regular intervals, with all involved parties who are to attend, in order to ensure, among other things, the proper co-ordination of the Work.

GC2.5 REVIEW AND INSPECTION OF WORK

- 1) The NCC shall review the Work to determine if it is proceeding in conformity with the Contract and to record the necessary data to make an assessment of the value of Work completed. The NCC shall measure and record the quantities of labour, Plant and Material performed, used or supplied by the Contractor in performing the Work or any part thereof that is subject to a Unit Price Arrangement and, on request, shall inform the Contractor of those measurements, and permit the Contractor to inspect any records pertaining thereto.
- 2) The NCC shall reject Work or Material which in the NCC's opinion does not conform to the requirements of the Contract, and shall require inspection or testing of Work, whether or not such Work is fabricated, installed, or completed. If such Work is not in accordance with the requirements of the Contract, the Contractor shall correct the Work and shall pay the NCC, on demand, all reasonable costs and expenses that were incurred by the NCC in having the examination performed.
- 3) The Contractor shall provide the NCC with access to the Work and its site at all times, and at all times shall provide sufficient, safe, and proper facilities for the review and inspection of the Work by persons authorized by the NCC and any representatives of those authorities having jurisdiction. If parts of the Work are in preparation at locations other than the site of the Work, the NCC shall be given access to such Work whenever it is in progress.

- 4) The Contractor shall furnish the NCC with such information respecting the performance of the Contract as the NCC may require, and render every possible assistance to enable the NCC to verify that the Work is performed in accordance with the Contract, carry out any other duties and exercise any powers in accordance with the Contract.
- 5) If Work is designated for tests, inspections, or approvals in the Contract or by the NCC's instructions, or by laws or ordinances of the place of the Work, the Contractor shall give the NCC reasonable notice of when such Work shall be ready for review and inspection. The Contractor shall arrange for and shall give the NCC reasonable notice of the date and time of inspections, tests or approvals.
- 6) If the Contractor covers, or permits to be covered, Work that has been designated for tests, inspections or approvals before such tests, inspections or approvals are made, completed or given, the Contractor shall, if so directed by the NCC, uncover such Work, have the inspections, tests or approvals satisfactorily made, completed or given and make good the covering of the Work at the Contractor's expense.

GC2.6 SUPERINTENDENT

- 1) Prior to commencing the Work, the Contractor shall designate a Superintendent and shall notify the NCC of the name, address and telephone number of the Superintendent. The Contractor shall keep the Superintendent at the Work site during working hours until the Work has reached completion.
- 2) The Superintendent shall be in full charge of the operations of the Contractor during the performance of the Work and shall be authorized to accept on behalf of the Contractor any notice, order or other communication given to the Superintendent or the Contractor relating to the Work.
- 3) Upon request of the NCC, the Contractor shall remove any Superintendent who, in the opinion of the NCC, is incompetent or has been guilty of improper conduct, and shall forthwith designate another Superintendent who is acceptable to the NCC.
- 4) The Contractor shall not substitute a Superintendent without the written consent of the NCC. If a Superintendent is substituted without such consent, the NCC shall be entitled to refuse to issue any documentation or certification relating to progress payments, Substantial Performance or Completion of the Work until the Superintendent has returned to the Work site or another Superintendent who is acceptable to the NCC has been substituted.

GC2.7 NON-DISCRIMINATION IN HIRING AND EMPLOYMENT OF LABOUR

- 1) For the purposes of this clause, "persons" include the Contractor, its subcontractors and suppliers at any tier and their respective employees, agents, licensees or invitees and any other individual involved in the performance of the Work or granted access to the Work site. A "person" includes any partnership, proprietorship, firm, joint venture, consortium and corporation.
- 2) Without restricting the provisions of paragraph 3) of GC2.6, SUPERINTENDENT, the Contractor shall not refuse to employ and shall not discriminate in any manner against any person because:
 - (a) of that person's race, national origin, colour, religion, age, sex or marital status;
 - (b) of the race, national origin, colour, religion, age, sex, or marital status of any person having any relationship or association with that person; or
 - (c) a complaint has been made or information has been given by or in respect of that person relating to an alleged failure by the Contractor to comply with subparagraphs 2)(a) and 2)(b) of GC2.7.

- 3) Within two Working Days immediately following receipt of a written complaint pursuant to paragraph 2) of GC2.7, the Contractor shall:
 - (a) cause to have issued a written direction to the person or persons named by the complainant to cease all actions that form the basis of the complaint;
 - (b) forward a copy of the complaint to the NCC by registered mail or courier service; and
 - (c) when the Labour Conditions are applicable under the circumstances of the complaint, forward a copy of the complaint to HRSDC - Labour to the attention of the appropriate Director as described in the Labour Conditions ("HRSDC - Labour" means the labour component of the federal Department of Human Resources and Skills Development).
- 4) Within twenty four (24) hours immediately following receipt of a direction from the NCC to do so, the Contractor shall cause to have removed from the site of the Work and from the performance of Work under the Contract, any person or persons whom the NCC believes to be in breach of the provisions of paragraph 2) of GC2.7.
- 5) No later than thirty (30) days after receipt of the direction referred to in paragraph 4) of GC2.7, the Contractor shall cause the necessary action to be commenced to remedy the breach described in the direction.
- 6) If a direction is issued pursuant to paragraph 4) of GC2.7, the NCC may withhold from monies that are due and payable to the Contractor or setoff pursuant to GC5.9 RIGHT OF SETOFF, whichever is applicable, an amount representing the sum of the costs and payment referred to in paragraph 8) of GC2.7.
- 7) If the Contractor fails to proceed in accordance with paragraph 5) of GC2.7, the NCC shall take the necessary action to have the breach remedied, and shall determine all supplementary costs incurred by the NCC as a result.
- 8) The NCC may make a payment directly to the complainant from monies that are due and payable to the Contractor upon receipt from the complainant of:
 - (a) a written award issued pursuant to the federal Commercial Arbitration Act, R.S.C. 1985, c. 17 (2nd Supp.);
 - (b) a written award issued pursuant to the Canadian Human Rights Act, R.S.C. 1985, c. H-6;
 - (c) a written award issued pursuant to provincial or territorial human rights legislation; or
 - (d) a judgement issued by a court of competent jurisdiction.
- 9) If the NCC is of the opinion that the Contractor has breached any of the provisions of this clause, the NCC may take the Work out of the Contractor's hands pursuant to GC7.1 TAKING THE WORK OUT OF THE CONTRACTOR'S HANDS.
- 10) Subject to paragraph 7) of GC3.6 SUBCONTRACTING, the Contractor shall ensure that the provisions of this clause are included in all agreements and contracts entered into as a consequence of the Work.

GC2.8 ACCOUNTS AND AUDITS

- 1) The Contractor shall, in addition to the requirements expressed in paragraph 6) of GC3.4 EXECUTION OF THE WORK, maintain full records of the Contractor's estimated and actual cost of the Work together with all tender calls, quotations, contracts, correspondence, invoices, receipts and vouchers relating thereto, and shall make them available on request to audit and inspection by the NCC or by persons designated to act on behalf of the NCC.
- 2) The Contractor shall allow any of the persons referred to in paragraph 1) of GC2.8 to make copies of and take extracts from any of the records and material, and shall furnish such persons or entities with any information those persons or entities may require from time to time in connection with such records and material.
- 3) The Contractor shall maintain and keep the records intact until the expiration of two years after the date that a Certificate of Completion has been issued or until the expiration of such other period of time as the NCC may direct.
- 4) The Contractor shall cause all subcontractors at any tier and all other persons directly or indirectly controlled by or affiliated with the Contractor and all persons directly or indirectly having control of the Contractor to comply with the requirements of this clause as if they were the Contractor.

- GC3.1 PROGRESS SCHEDULE
- GC3.2 ERRORS AND OMISSIONS
- GC3.3 CONSTRUCTION SAFETY
- GC3.4 EXECUTION OF THE WORK
- GC3.5 MATERIAL
- GC3.6 SUBCONTRACTING
- GC3.7 CONSTRUCTION BY OTHER CONTRACTORS OR WORKERS
- GC3.8 LABOUR AND FAIR WAGES
- GC3.9 TRUCK HAULAGE RATES **(CANCELLED)**
- GC3.10 MATERIAL, PLANT AND REAL PROPERTY BECOME PROPERTY OF THE NCC
- GC3.11 DEFECTIVE WORK
- GC3.12 CLEANUP OF SITE
- GC3.13 WARRANTY AND RECTIFICATION OF DEFECTS IN WORK

GC3.1 PROGRESS SCHEDULE

- 1) The Contractor shall:
 - (a) prepare and submit to the NCC, prior to the submission of the Contractor's first progress claim, a progress schedule in accordance with the requirements set out in the Contract;
 - (b) monitor the progress of the Work relative to the schedule and update the schedule as stipulated by the contract documents;
 - (c) advise the NCC of any revisions to the schedule required as the result of any extension of time for completion of the Contract that was approved by the NCC; and
 - (d) prepare and submit to the NCC, at the time of issuance of an Certificate of Substantial Performance, an update of any schedule clearly showing a detailed timetable that is acceptable to the NCC for the completion of any unfinished Work and the correction of all listed defects.

GC3.2 ERRORS AND OMISSIONS

- 1) The Contractor shall report promptly to the NCC any errors, discrepancies, or omissions the Contractor may discover when reviewing the contract documents. In making a review, the Contractor does not assume any responsibility to the NCC for the accuracy of the review. The Contractor shall not be liable for damage or costs resulting from such errors, discrepancies, or omissions in the contract documents prepared by or on behalf of the NCC that the Contractor did not discover.

GC3.3 CONSTRUCTION SAFETY

- 1) Subject to GC3.7 CONSTRUCTION BY OTHER CONTRACTORS OR WORKERS, the Contractor shall be solely responsible for construction safety at the place of the Work and for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Work. In any emergency, the Contractor shall either, stop the Work, make changes or order extra work to ensure the safety of life and the protection of the Work and neighbouring property.
- 2) Prior to commencing the Work, the Contractor shall notify the authorities having jurisdiction for construction safety at the site of the Work with respect to the intended commencement of the Work, and shall provide such authority with whatever additional information may be required by that authority.

GC3.4 EXECUTION OF THE WORK

- 1) The Contractor shall perform, use or supply and pay for, all labour, Plant, Material, tools, construction machinery and equipment, water, heat, light, power, transportation and other facilities and services necessary for the performance of the Work in accordance with the Contract.
- 2) The Contractor shall, at all times, perform the Work in a proper, diligent and expeditious manner as is consistent with construction industry standards and in accordance with the progress schedule prepared pursuant to GC3.1 PROGRESS SCHEDULE and shall provide sufficient personnel to fulfil the Contractor's obligations in accordance with that schedule.
- 3) Subject to paragraph 4) of GC3.4, the Contractor shall have complete care, custody and control of the Work and shall direct and supervise the Work so as to ensure compliance with the Contract. The Contractor shall be responsible for construction means, methods, techniques, sequences and procedures and for co-ordinating the various parts of the Work.
- 4) When requested in writing by the NCC, the Contractor shall make appropriate alterations in the method, Plant or workforce at any time the NCC considers the Contractor's actions to be unsafe or damaging to either the Work, existing facilities, persons at the site of the Work or the environment.
- 5) The Contractor shall have sole responsibility for the design, erection, operation, maintenance and removal of temporary structures and other temporary facilities and for the construction methods used in their erection, operation, maintenance and removal. The Contractor shall engage and pay for registered professional engineering personnel, skilled in the appropriate discipline to perform these functions if required by law or by the Contract, and in all cases when such temporary facilities and their methods of construction are of such a nature that professional engineering skill is required to produce safe and satisfactory results.
- 6) The Contractor shall keep at least one copy of current contract documents, submittals, reports, and records of meetings at the site of the Work, in good order and available to the NCC.
- 7) Except for any part of the Work that is necessarily performed away from or off the site of the Work, the Contractor shall confine Plant, storage of Material, and operations of employees to limits indicated by laws, ordinances, permits or the contract documents.

GC3.5 MATERIAL

- 1) Unless otherwise specified in the Contract, all Material incorporated in the Work shall be new.
- 2) Subject to paragraph 3) of GC3.5, if a specified reused, refurbished, or recycled item of Material is not available, the Contractor shall apply to the NCC to substitute a similar item for the one specified.
- 3) If the NCC agrees that the Contractor's application for substitution of a reused, refurbished or recycled item is warranted, and that the substitute item is of acceptable quality and value to that specified and is suitable for the intended purpose, the NCC may approve the substitution, subject to the following:
 - (a) the request for substitution shall be made in writing to the NCC and shall be substantiated by information in the form of the manufacturer's literature, samples and other data that may be required by the NCC;
 - (b) the Contractor shall make the request for substitution in a manner that shall not negatively affect the progress schedule of the Contract and well in advance of the time the item of Material must be ordered;

- (c) substitution of Material shall be permitted only with the prior written approval of the NCC, and any substituted items that are supplied or installed without such approval shall be removed from the site of the Work at the expense of the Contractor, and specified items installed at no additional cost to the NCC; and
- (d) the Contractor shall be responsible for all additional expenses incurred by the NCC, the Contractor, its subcontractors and suppliers at any tier due to the Contractor's use of the substitute.

GC3.6 SUBCONTRACTING

- 1) Subject to the provisions of this clause, the Contractor may subcontract any part of the Work but not the whole of the Work.
- 2) The Contractor shall notify the NCC in writing of the Contractor's intention to subcontract.
- 3) A notification referred to in paragraph 2) of GC3.6 shall identify the part of the Work and the Subcontractor with whom the Contractor intends to subcontract.
- 4) The NCC may for reasonable cause, object to the intended subcontracting by notifying the Contractor in writing within six (6) days of receipt by the NCC of a notification referred to in paragraph 2) of GC3.6.
- 5) If the NCC objects to a subcontracting, the Contractor shall not enter into the intended subcontract.
- 6) The Contractor shall not change, nor permit to be changed, a Subcontractor engaged by the Contractor, in accordance with this clause, without the written consent of the NCC.
- 7) The Contractor shall ensure that all the terms and conditions of the Contract that are of general application shall be incorporated in every other contract issued as a consequence of the Contract, at whatever tier, except those contracts issued solely to suppliers at any tier for the supply of Plant or Material.
- 8) Neither a subcontracting nor the NCC's consent to a subcontracting shall be construed to relieve the Contractor from any obligation under the Contract or to impose any liability upon the NCC.

GC3.7 CONSTRUCTION BY OTHER CONTRACTORS OR WORKERS

- 1) The NCC reserves the right to send other contractors or workers, with or without Plant and Material, onto the site of the Work.
- 2) When other contractors or workers are sent on to the site of the Work, the NCC shall:
 - (a) enter into separate contracts, to the extent it is possible, with the other contractors under conditions of contract that are compatible with the conditions of the Contract;
 - (b) ensure that the insurance coverage provided by the other contractors is co-ordinated with the insurance coverage of the Contractor as it affects the Work; and
 - (c) take all reasonable precautions to avoid labour disputes or other disputes arising from the work of the other contractors or workers.
- 3) When other contractors or workers are sent on to the site of the Work, the Contractor shall:
 - (a) co-operate with them in the carrying out of their duties and obligations;

- (b) co-ordinate and schedule the Work with the work of the other contractors and workers;
 - (c) participate with other contractors and workers in reviewing their construction schedules when directed to do so;
 - (d) where part of the Work is affected by or depends upon the work of other contractors or workers for its proper execution, promptly report to the NCC in writing and prior to proceeding with that part of the Work, any apparent deficiencies in such work. Failure by the Contractor to so report shall invalidate any claims against the NCC by reason of the deficiencies in the work of other contractors or workers except those deficiencies that are not then reasonably discoverable; and
 - (e) when designated as being responsible for construction safety at the place for work, in accordance with the applicable provincial or territorial laws, carry out its duties in that role and in accordance with those laws.
- 4) If, when entering into the Contract, the Contractor could not have reasonably foreseen nor anticipated the sending of other contractors or workers on to the site of the Work and provided the Contractor:
- (a) incurs extra expense in complying with the requirements of paragraph 3) of GC3.7; and
 - (b) gives the NCC written notice of a claim for that extra expense within thirty (30) days of the date that the other contractors or workers were sent onto the Work or its site,

the NCC shall pay the Contractor the cost of the extra labour, Plant and Material that was necessarily incurred, calculated in accordance with GC6.4 DETERMINATION OF PRICE.

GC3.8 LABOUR AND FAIR WAGES

- 1) The Labour Conditions and the Schedules of Wage Rates form part of these General Conditions.
- 2) To the extent to which they are available, consistent with proper economy and the expeditious carrying out of the Work, the Contractor shall, in the performance of the Work, employ a reasonable number of persons who have been on active service with the Armed Forces of the Canada and have been honourably discharged therefrom.
- 3) The Contractor shall maintain good order and discipline among the Contractor's employees and workers engaged in the Work shall not employ, on the site of the Work, anyone not skilled in the tasks assigned.

GC3.9 TRUCK HAULAGE RATES

CANCELLED

GC3.10 MATERIAL, PLANT AND REAL PROPERTY BECOME PROPERTY OF THE NCC

- 1) Subject to paragraph 9) of GC1.8 LAWS PERMITS AND TAXES, all Material and Plant and the interest of the Contractor in all real property, licences, powers and privileges purchased, used or consumed by the Contractor for the Work shall, immediately after the time of their purchase, use or consumption be the property of the NCC for the purposes of the Work and they shall continue to be the property of the NCC:
 - (a) in the case of Material, until the NCC indicates that the Materials shall not be required for the Work; and

- (b) in the case of Plant, real property, licences, powers and privileges, until the NCC indicates that the interest vested in the NCC therein is no longer required for the purposes of the Work.
- 2) Material or Plant, that is the property of the NCC by virtue of paragraph 1) of GC3.10, shall not be taken away from the site of the Work nor used nor disposed of except for the purposes of the Work without the written consent of the NCC.
- 3) The NCC is not liable for loss of nor damage from any cause to the Material or Plant referred to in paragraph 1) of GC3.10, and the Contractor is liable for such loss or damage notwithstanding that the Material or Plant is the property of the NCC.

GC3.11 DEFECTIVE WORK

- 1) The Contractor shall promptly remove from the site of the Work and replace or re-execute defective Work whether or not the defective Work has been incorporated in the Work and whether or not the defect is the result of poor workmanship, use of defective Material, or damage through carelessness or other act or omission of the Contractor.
- 2) The Contractor, at the Contractor's expense, shall promptly make good other work destroyed or damaged by such removals or replacements.
- 3) If, in the opinion of the NCC, it is not expedient to correct defective Work or Work not performed as provided for in the Contract documents, the NCC may deduct from the amount otherwise due to the Contractor the difference in value between the Work as performed and that called for by the Contract documents.
- 4) The failure of the NCC to reject any defective Work or Material shall not constitute acceptance of the defective Work or Material.

GC3.12 CLEANUP OF SITE

- 1) The Contractor shall maintain the Work and its site in a tidy condition and free from an accumulation of waste material and debris.
- 2) Before the issue of a Certificate of Substantial Performance, the Contractor shall remove waste material and debris, and all Plant and Material not required for the performance of the remaining Work and, unless otherwise stipulated in the Contract Documents, shall cause the Work and its site to be clean and suitable for occupancy by the NCC.
- 3) Before the issue of a Certificate of Completion, the Contractor shall remove all surplus Plant and Materials and any waste products and debris from the site of the Work.
- 4) The Contractor's obligations described in paragraphs 1) to 3) of GC3.12 do not extend to waste products and other debris caused by the NCC's servants, or by other contractors and workers referred to in GC3.7 CONSTRUCTION BY OTHER CONTRACTORS OR WORKERS.

GC3.13 WARRANTY AND RECTIFICATION OF DEFECTS IN WORK

- 1) Without restricting any warranty or guarantee implied or imposed by law or contained in the Contract, the Contractor shall, at the Contractor's expense:
 - (a) rectify and make good any defect or fault that appears in the Work or comes to the attention of the NCC with respect to those parts of the Work accepted in connection with the Certificate of Substantial Performance within 12 months from the date of Substantial Performance; and

- (b) rectify and make good any defect or fault that appears in or comes to the attention of the NCC in connection with those parts of the Work described in the Certificate of Substantial Performance within 12 months from the date of the Certificate of Completion;
 - (c) transfer and assign, to the NCC, any subcontractor, manufacturer or supplier extended warranties or guarantees implied or imposed by law or contained in the Contract covering periods beyond the 12 months stipulated above. Extended warranties or guarantees referred to herein shall not extend the 12-month period whereby the Contractor, except as may be provided elsewhere in the Contract, must rectify and make good any defect or fault that appears in the Work or comes to the attention of the NCC;
 - (d) provide, to the NCC prior to the issuance of the Certificate of Completion, a list of all extended warranties and guarantees referred to in paragraph (c) above.
- 2) The NCC may direct the Contractor to rectify and make good any defect or fault referred to in paragraph 1) of GC3.13 or covered by any other expressed or implied warranty or guarantee and the Contractor shall rectify and make good such defect within the time stipulated in the direction.
 - 3) A direction referred to in paragraph 2) GC3.13 shall be in writing and shall be given to the Contractor in accordance with GC2.3 NOTICES.

- GC4.1 PROTECTION OF WORK AND PROPERTY
- GC4.2 PRECAUTIONS AGAINST DAMAGE, INFRINGEMENT OF RIGHTS, FIRE AND OTHER HAZARDS
- GC4.3 MATERIAL, PLANT AND REAL PROPERTY SUPPLIED BY THE NCC
- GC4.4 CONTAMINATED SITE CONDITIONS

GC4.1 PROTECTION OF WORK AND PROPERTY

- 1) The Contractor shall protect the Work and its site against loss or damage from any cause and shall similarly protect all Material, Plant and real property under the Contractor's care, custody and control whether or not such Material, Plant and real property are supplied by the NCC to the Contractor.
- 2) The Contractor shall provide all facilities necessary for the purpose of maintaining security, and shall assist any person authorized by the NCC to inspect or to take security measures in respect of the Work and its site.
- 3) The NCC may direct the Contractor to do such things and to perform such work as the NCC considers reasonable and necessary to ensure compliance with or to remedy a breach of paragraphs 1) or 2) of GC4.1, and the Contractor, shall comply with such direction.

GC4.2 PRECAUTIONS AGAINST DAMAGE, INFRINGEMENT OF RIGHTS, FIRE AND OTHER HAZARDS

- 1) The Contractor shall do whatever is necessary to ensure that:
 - (a) no person, property, right, easement nor privilege is injured, damaged or infringed upon by reasons of the Contractor's activities in performing the Work;
 - (b) pedestrian and other traffic on any public or private road or waterway is not unduly impeded, interrupted nor endangered by the performance or existence of the Work, Material or Plant;
 - (c) fire hazards in or about the site of the Work are eliminated and any fire is promptly extinguished;
 - (d) the health and safety of all persons employed in the performance of the Work is not endangered by the methods nor means of their performance;
 - (e) adequate medical services are available to all persons employed on the Work or its site at all times during the performance of the Work;
 - (f) adequate sanitation measures are taken in respect of the Work and its site; and
 - (g) all stakes, buoys and marks placed on the Work or its site by the NCC are protected and are not removed, defaced, altered nor destroyed.
- 2) The NCC may direct the Contractor to do such things and to perform such work as the NCC considers reasonable and necessary to ensure compliance with or to remedy a breach of paragraph 1) of GC4.2, and the Contractor shall comply with the direction of the NCC.

GC4.3 MATERIAL, PLANT AND REAL PROPERTY SUPPLIED BY THE NCC

- 1) Subject to paragraph 2) of GC4.3, the Contractor is liable to the NCC for any loss of or damage to Material, Plant or real property that is supplied or placed in the care, custody and control of the Contractor by the NCC for use in connection with the Contract, whether or not that loss or damage is attributable to causes beyond the Contractor's control.

- 2) The Contractor is not liable to the NCC for any loss or damage to Material, Plant or real property referred to in paragraph 1) of GC4.3 if that loss or damage results from and is directly attributable to reasonable wear and tear.
- 3) The Contractor shall not use any Material, Plant or real property supplied by the NCC except for the purpose of performing the Contract.
- 4) When the Contractor fails to make good any loss or damage for which the Contractor is liable under paragraph 1) within a reasonable time, the NCC may cause the loss or damage to be made good at the Contractor's expense, and the Contractor shall thereupon be liable to the NCC for the cost thereof and shall, on demand, pay to the NCC an amount equal to that cost.
- 5) The Contractor shall keep records of all Material, Plant and real property supplied by the NCC as the NCC requires and shall satisfy the NCC, when requested, that such Material, Plant and real property are at the place and in the condition in which they ought to be.

GC4.4 CONTAMINATED SITE CONDITIONS

- 1) For the purposes of GC4.4, a contaminated site condition exists when a solid, liquid, gaseous, thermal or radioactive irritant or contaminant, or other hazardous or toxic substance or material, including moulds and other forms of fungi, is present at the site of the Work to an extent that constitutes a hazard, or potential hazard, to the environment, property, or the health or safety of any person.
- 2) If the Contractor encounters a contaminated site condition of which the Contractor is not aware or about which the Contractor has not been advised, or if the Contractor has reasonable grounds to believe that such a site condition exists at the site of the Work, the Contractor shall:
 - (a) take all reasonable steps, including stopping the Work, to ensure that no person suffers injury, sickness or death, and that neither property nor the environment is injured or destroyed as a result of the contaminated site condition;
 - (b) immediately notify the NCC of the circumstances in writing; and
 - (c) take all reasonable steps to minimize additional costs that may accrue as a result of any work stoppage.
- 3) Upon receipt of a notification from the Contractor, the NCC shall promptly determine whether a contaminated site condition exists, and shall notify the Contractor in writing of any action to be taken, or work to be performed, by the Contractor as a result of the NCC's determination.
- 4) If the Contractor's services are required by the NCC, the Contractor shall follow the direction of the NCC with regard to any excavation, treatment, removal and disposal of any polluting substance or material.
- 5) The NCC, at the NCC's sole discretion, may enlist the services of experts and specialty contractors to assist in determining the existence of, and the extent and treatment of contaminated site conditions, and the Contractor shall allow them access and co-operate with them in the carrying out of their duties and obligations.
- 6) Except as may be otherwise provided for in the Contract, the provisions of GC6.4 DETERMINATION OF PRICE shall apply to any additional work made necessary because of a contaminated site condition.

GC5.1	INTERPRETATION
GC5.2	AMOUNT PAYABLE
GC5.3	INCREASED OR DECREASED COSTS
GC5.4	PROGRESS PAYMENT
GC5.5	SUBSTANTIAL PERFORMANCE OF THE WORK
GC5.6	FINAL COMPLETION
GC5.7	PAYMENT NOT BINDING ON THE NCC
GC5.8	CLAIMS AND OBLIGATIONS
GC5.9	RIGHT OF SETOFF
GC5.10	ASSESSMENTS AND DAMAGES FOR LATE COMPLETION
GC5.11	DELAY IN MAKING PAYMENT
GC5.12	INTEREST ON SETTLED CLAIMS
GC5.13	RETURN OF SECURITY DEPOSIT

GC5.1 INTERPRETATION

In these Terms of Payment

- 1) The "payment period" means a period of 30 consecutive days or such other longer period as may be agreed between the Contractor and the NCC.
- 2) An amount is "due and payable" when it is due and payable by the NCC to the Contractor according to GC5.4 PROGRESS PAYMENT, GC5.5 SUBSTANTIAL PERFORMANCE OF THE WORK or GC5.6 FINAL COMPLETION.
- 3) An amount is overdue when it remains unpaid on the first day following the day upon which it is due and payable.
- 4) The "date of payment" means the date of the negotiable instrument of an amount due and payable by the NCC.
- 5) The "Bank Rate" means the rate of interest established by the Bank of Canada as the minimum rate at which it makes short term advances to members of the Canadian Payments Association.
- 6) The "Average Bank Rate" means the simple arithmetic mean of the Bank Rate in effect at 4:00 p.m. Ottawa Time each day during the calendar month which immediately precedes the calendar month in which payment is made.

GC5.2 AMOUNT PAYABLE

- 1) Subject to any other provisions of the Contract, the NCC shall pay the Contractor, at the times and in the manner hereinafter set out, the amount by which the amounts payable by the NCC to the Contractor in accordance with the Contract exceed the amounts payable by the Contractor to the NCC, and the Contractor shall accept that amount as payment in full satisfaction for everything furnished and done by the Contractor in respect of the Work to which the payment relates.
- 2) When making any payment to the Contractor, the failure of the NCC to deduct an amount payable to the NCC by the Contractor shall not constitute a waiver of the right to do so, or an admission of lack of entitlement to do so in any subsequent payment to the Contractor.
- 3) No payment other than a payment that is expressly stipulated in the Contract, shall be made by the NCC to the Contractor for any extra expense or any loss or damage incurred or sustained by the Contractor.

GC5.3 INCREASED OR DECREASED COSTS

- 1) The Contract Amount shall not be increased nor decreased by reason of any increase or decrease in the cost of the Work that is brought about by an increase or decrease in the cost of labour, Plant, Material or any wage adjustment arising pursuant to the Labour Conditions.
- 2) Notwithstanding paragraph 1) of GC5.3, if any change, including a new imposition or repeal, of any tax, customs or other duty, charge, or any similar imposition that is imposed under sales, customs or excise tax legislation of the Government of Canada or any Provincial or Territorial legislation, affects the cost of the Work to the Contractor, and occurs:
 - (a) after the date of submission by the Contractor of its tender; or
 - (b) after the date of submission of the last revision, if the Contractor's tender was revised,the Contract Amount shall be adjusted in the manner provided in paragraph 3) of GC5.3.
- 3) If a change referred to in paragraph 2) of GC5.3 occurs, the Contract Amount shall be increased or decreased by an amount established by an examination by the NCC of the relevant records of the Contractor referred to in GC2.8 ACCOUNTS AND AUDITS to be the increase or decrease in the cost incurred by the Contractor that is directly attributable to that change.
- 4) For the purpose of paragraph 2) of GC5.3, if a tax is changed after the tender closing, but public notice of the change has been given by the Minister of Finance or the corresponding Provincial or Territorial authority before that closing, the change shall be deemed to have occurred before the solicitation closing.
- 5) Notwithstanding paragraphs 2) to 4) of GC5.3, no adjustment to the Contract Amount in respect of the Work or a part thereof shall be made for a change in any imposition referred to in this section that occurs after the date required by the Contract for completion of the Work or that part of the Work.

GC5.4 PROGRESS PAYMENT

- 1) On the expiration of a payment period, the Contractor shall deliver to the NCC:
 - (a) a written progress claim in a form acceptable to the NCC that fully describes any part of the Work that has been completed, and any Material that was delivered to the Work site but not incorporated into the Work, during that payment period: and
 - (b) a completed and signed statutory declaration containing a declaration that, up to the date of the progress claim, the Contractor has complied with all lawful obligations with respect to the Labour Conditions and that, in respect of the Work, all lawful obligations of the Contractor to its Subcontractors and Suppliers, referred to collectively in the declaration as "subcontractors and suppliers", have been fully discharged.
- 2) Within 10 days of receipt of a progress claim and statutory declaration from the Contractor, the NCC shall inspect, or cause to have inspected, the part of the Work and the Material described in the progress claim, and shall issue a progress report to the Contractor, that indicates the value of the part of the Work and the Material described in the progress claim that, in the opinion of the NCC:
 - (a) is in accordance with the Contract; and
 - (b) was not included in any other progress report relating to the Contract.

- 3) Subject to GC5.2 AMOUNT PAYABLE, and paragraph 5) of GC5.4, the NCC shall pay the Contractor an amount that is equal to:
 - (a) 95% of the value that is indicated in the NCC's progress report if a labour and material payment bond has been furnished by the Contractor; or
 - (b) 90% of the value that is indicated in the NCC's progress report if a labour and material payment bond has not been furnished by the Contractor.
- 4) Subject to GC5.2, "Amount Payable", and paragraph 5) of GC5.4, the NCC shall pay the Contractor an amount that is equal to 90% of the value that is indicated in the NCC's progress report
- 5) In the case of the Contractor's first progress claim, it is a condition precedent to the NCC's obligation under paragraph 3) of GC5.4 that the Contractor has provided all necessary documentation required by the Contract for the first progress claim and has provided evidence of compliance with workers' compensation legislation applicable to the place of the Work in accordance with GC1.9 WORKERS' COMPENSATION.

GC5.5 SUBSTANTIAL PERFORMANCE OF THE WORK

- 1) If, at any time before the issuance of a Certificate of Completion, the NCC determines that the Work has reached Substantial Performance as described in subparagraph 1) (b) of GC1.1.4 SUBSTANTIAL PERFORMANCE, the NCC shall issue a Certificate of Substantial Performance to the Contractor. The Certificate of Substantial Performance shall state or describe:
 - (a) the date of Substantial Performance;
 - (b) the parts of the Work not completed to the satisfaction of the NCC; and
 - (c) all things that must be done by the Contractor before a Certificate of Completion is issued and before the 12-month warranty period referred to in GC3.13 WARRANTY AND RECTIFICATION OF DEFECTS IN WORK commences for the said parts and all the said things.
- 2) The issuance of a Certificate of Substantial Performance does not relieve the Contractor from the Contractor's obligations under GC3.11 DEFECTIVE WORK.
- 3) Subject to GC5.2 AMOUNT PAYABLE and paragraph 4) of GC5.5, the NCC shall pay the Contractor the amount referred to in paragraph 1) of GC5.2 AMOUNT PAYABLE, less the aggregate of:
 - (a) the sum of all payments that were made pursuant to GC5.4 PROGRESS PAYMENT;
 - (b) an amount that is equal to the NCC's estimate of the cost to the NCC of rectifying defects described in the Certificate of Substantial Performance; and
 - (c) an amount that is equal to the NCC's estimate of the cost to the NCC of completing the parts of the Work described in the Certificate of Substantial Performance other than defects listed therein.
- 4) The NCC shall pay the amount referred to in paragraph 3) of GC5.5 not later than:
 - (a) 30 days after the date of issue of a Certificate of Substantial Performance, or
 - (b) 15 days after the Contractor has delivered to the NCC:

- (i) a statutory declaration containing a declaration by the Contractor that up to the date of the Certificate of Substantial Performance, the Contractor has complied with all lawful obligations with respect to the Labour Conditions, discharged all its lawful obligations to its Subcontractors and Suppliers in respect of the work under the Contract, and discharged its lawful obligations referred to in GC1.8 LAWS, PERMITS AND TAXES;
- (ii) evidence of compliance with workers' compensation legislation in accordance with GC1.9 WORKERS' COMPENSATION; and
- (iii) an update of the progress schedule in accordance with the requirements of GC3.1 PROGRESS SCHEDULE;

whichever is later.

GC5.6 FINAL COMPLETION

- 1) When the NCC is of the opinion that the Contractor has complied with the Contract and all orders and directions made pursuant thereto, and that the Work has been completed as described in GC1.1.5 COMPLETION, the NCC shall issue a Certificate of Completion to the Contractor and, if the Work or a portion of the Work is subject to a Unit Price Arrangement, the NCC shall issue a Certificate of Measurement that shall, subject to GC8, be binding upon and conclusive between the NCC and the Contractor as to the quantities referred to therein.
- 2) Subject to GC5.2 AMOUNT PAYABLE and paragraph 3) of GC5.6, the NCC shall pay the Contractor the amount referred to in GC5.2 AMOUNT PAYABLE, less the aggregate of the sum of all payments that were made pursuant to GC5.4 PROGRESS PAYMENT and GC5.5 SUBSTANTIAL PERFORMANCE OF WORK.
- 3) The NCC shall pay the amount referred to in paragraph 2) of GC5.6 not later than:
 - (a) 60 days after the date of issue of a Certificate of Completion; or
 - (b) 15 days after the Contractor has delivered to the NCC:
 - (i) a statutory declaration which contains a declaration by the Contractor that all of the Contractor's lawful obligations and any lawful claims against the Contractor that arose out of the performance of the Contract have been discharged and satisfied; and
 - (ii) evidence of compliance with workers' compensation legislation in accordance with GC1.9 WORKERS' COMPENSATION;

whichever is later.

GC5.7 PAYMENT NOT BINDING ON NCC

- 1) Neither acceptance of a progress claim or progress report, nor any payment made by the NCC under the Contract, nor partial or entire use or occupancy of the Work by the NCC shall constitute an acceptance by the NCC of any portion of the Work or Material that is not in accordance with the requirements of the Contract.

GC5.8 CLAIMS AND OBLIGATIONS

- 1) The Contractor shall discharge all the Contractor's lawful obligations and shall satisfy all lawful claims against the Contractor arising out of the performance of the Work at least as often as the Contract requires the NCC to pay the Contractor.

- 2) Whenever requested to do so by the NCC, the Contractor shall make a statutory declaration declaring to the existence and condition of any obligations and claims against the Contractor arising out of the performance of the Work.
- 3) In order to discharge lawful obligations of and satisfy lawful claims against the Contractor or its Subcontractors arising out of the performance of the Contract, the NCC may pay an amount that is due and payable to the Contractor directly to the claimant. Such payment is, to the extent of the payment, a discharge of the NCC's liability to the Contractor under the Contract and may be deducted from any amount payable to the Contractor under the Contract.
- 4) For the purposes of paragraph 3) of GC5.8, and subject to paragraph 6) of GC5.8, a claim or obligation shall be considered lawful when it is so determined by:
 - (a) a court of legal jurisdiction;
 - (b) an arbitrator duly appointed to arbitrate the claim; or
 - (c) the written consent of the Contractor authorizing payment of the claim or obligation.
- 5) If a claim or obligation would have been subject to the provisions of Provincial or Territorial lien legislation or, in the Province of Quebec, the law relating to legal hypothecs had the Contractor been performing the Work for an entity other than the NCC:
 - (a) such amount as may be paid by the NCC pursuant to paragraphs 3) and 4) of GC5.8 shall not exceed the amount that the Contractor would have been obliged to pay had the provisions of such legislation or law been applicable to the Work;
 - (b) a claimant need not comply with the provisions of such legislation, setting out the steps by way of notice, registration or otherwise as might have been necessary to preserve or perfect any claim for lien or privilege which the claimant might have had; and
 - (c) for the purposes of determining the entitlement of a claimant, the notice required by paragraph 8) of GC5.8 shall be deemed to replace the registration or provision of notice after the performance of work as required by any applicable legislation and no claim shall be deemed to have expired, become void or unenforceable by reason of the claimant not commencing any action within the time prescribed by such legislation.
- 6) The Contractor shall, at the request of any claimant, submit to binding arbitration those questions that need to be answered to establish the entitlement of the claimant to payment. The arbitration shall have as parties to it any Subcontractor or Supplier to whom the claimant supplied Material, performed work or rented equipment should such Subcontractor or Supplier wish to be adjoined, and the NCC shall not be a party to such arbitration. Subject to any agreement between the Contractor and the claimant, the arbitration shall be conducted in accordance with the governing Provincial or Territorial legislation applicable to the site of the Work.
- 7) Paragraph 3) of GC5.8 shall apply only to claims and obligations:
 - (a) the notification of which has set forth the amount claimed to be owing and the person who by contract is primarily liable and has been received by the NCC in writing before final payment is made to the Contractor pursuant to GC5.6 FINAL COMPLETION, and within 120 days of the date on which the claimant:

- (i) should have been paid in full under the claimant's contract with the Contractor, its Subcontractor or Supplier if the claim is for money that was lawfully required to be held back from the claimant; or
 - (ii) performed the last of the services, work or labour, or furnished the last of the Material pursuant to the claimant's contract with the Contractor or its Subcontractor or Supplier where the claim is for money not lawfully required to be held back from the claimant; and
- (b) the proceedings to determine the right to payment of which, pursuant to paragraph 5) of GC5.8, shall have commenced within one year from the date that the notification required by subparagraph 7)(a) of GC5.8 was received by the NCC.
- 8) Upon receipt of a notice of claim, the NCC may withhold, from any amount that is due and payable to the Contractor pursuant to the Contract, the full amount of the claim or any portion thereof.
- 9) The NCC shall notify the Contractor in writing in a timely manner of receipt of any claim and of the intention of the NCC to withhold funds. At any time thereafter and until payment is made to the claimant, the Contractor may be entitled to post, with the NCC, security in a form acceptable to the NCC in an amount equal to the value of the claim, and upon receipt of such security the NCC shall release to the Contractor any funds that would be otherwise payable to the Contractor, that were withheld pursuant to the provisions of this clause in respect of the claim of any claimant for whom the security stands.

GC5.9 RIGHT OF SETOFF

- 1) Without limiting any right of setoff or deduction given or implied by law or elsewhere in the Contract, the NCC may set off any amount payable to the NCC by the Contractor under the Contract, or under any current contract, against any amount payable to the Contractor under the Contract.
- 2) For the purposes of paragraph 1) of GC5.9, "current contract" means a contract between the NCC and the Contractor:
- (a) under which the Contractor has an undischarged obligation to perform or supply work, labour or material; or
 - (b) in respect of which the NCC has, since the date of the Contract, exercised any right to take the work that is the subject of that contract out of the Contractor's hands.

GC5.10 ASSESSMENTS AND DAMAGES FOR LATE COMPLETION

- 1) For the purposes of this clause:
- (a) the Work shall be deemed to be completed on the date of the Certificate of Completion; and
 - (b) the "period of delay" means the number of days commencing on the day fixed for completion of the Work and ending on the day immediately preceding the day on which the Work is completed but does not include any day within a period of extension granted pursuant to GC6.5 DELAYS AND EXTENSION OF TIME and any other day on which, in the opinion of the NCC, completion of the Work was delayed for reasons beyond the control of the Contractor.
- 2) If the Contractor does not complete the Work by the day fixed for its completion but completes it thereafter, the Contractor shall pay the NCC an amount equal to the aggregate of:
- (a) all salaries, wages and travelling expenses incurred by the NCC in respect of persons overseeing the performance of the Work during the period of delay;

- (b) the cost incurred by the NCC as a result of the inability to use the completed Work for the period of delay; and
 - (c) all other expenses and damages incurred or sustained by the NCC during the period of delay as a result of the Work not being completed by the day fixed for its completion.
- 3) The NCC may waive the right of the NCC to the whole or any part of the amount payable by the Contractor pursuant to paragraph 2) of GC5.10 if, in the opinion of the NCC, it is in the public interest to do so.

GC5.11 DELAY IN MAKING PAYMENT

- 1) Notwithstanding GC1.5 TIME OF THE ESSENCE, any delay by the NCC in making any payment when it is due pursuant to GC5 TERMS OF PAYMENT, shall not be a breach of the Contract by the NCC.
- 2) Subject to paragraph 3) of GC5.11, the NCC shall pay to the Contractor simple interest at the Average Bank Rate plus 3 percent per annum on any amount that is overdue pursuant to paragraph 3) of GC5.1 INTERPRETATION, and the interest shall apply from and include the day such amount became overdue until the day prior to the date of payment.
- 3) Interest shall be paid, on demand by the Contractor, except that:
- (a) in respect of amounts that are less than 15 days overdue, no interest shall be paid in respect of payment made within such 15 days; and
 - (b) interest shall not be payable or paid on overdue advance payments, if any.

GC5.12 INTEREST ON SETTLED CLAIMS

- 1) For the purposes of this clause, a claim means a disputed amount subject to negotiation between the NCC and the Contractor under the Contract.
- 2) A claim is deemed to have been settled when an agreement in writing is signed by the NCC and the Contractor setting out the amount of the claim to be paid by the NCC and the items of work for which the said amount is to be paid.
- 3) A settled claim is deemed to be outstanding from the day immediately following the date the said claim would have been due and payable under the Contract had it not been disputed.
- 4) The NCC shall pay to the Contractor simple interest on the amount of a settled claim at the Average Bank Rate plus 3 per cent per annum from the date the settled claim was deemed to be outstanding until the day prior to the date of payment.

GC5.13 RETURN OF SECURITY DEPOSIT

- 1) After a Certificate of Substantial Performance has been issued, and if the Contractor is not in breach of nor in default under the Contract, the NCC shall return to the Contractor all or any part of a Security Deposit that, in the opinion of the NCC, is not required for the purposes of the Contract.
- 2) After a Certificate of Completion has been issued, the NCC shall return to the Contractor the remainder of any security deposit unless the Contract stipulates otherwise.
- 3) If the security deposit was paid to the NCC, the NCC shall pay interest thereon to the Contractor at a rate established pursuant to section 21(2) of the Financial Administration Act.

- GC6.1 CHANGES IN THE WORK
- GC6.2 CHANGES IN SUBSURFACE CONDITIONS
- GC6.3 HUMAN REMAINS, ARCHAEOLOGICAL REMAINS AND ITEMS OF HISTORICAL OR SCIENTIFIC INTEREST
- GC6.4 DETERMINATION OF PRICE
 - GC6.4.1 Price Determination Prior to Undertaking Changes
 - GC6.4.2 Price Determination Following Completion of Changes
 - GC6.4.3 Price Determination - Variations in Tendered Quantities
- GC6.5 DELAYS AND EXTENSION OF TIME
- GC6.6 ALLOWABLE COSTS FOR CONTRACT CHANGES UNDER GC6.4.1
 - GC6.6.1 General
 - GC6.6.2 Hourly Labour Rates
 - GC6.6.3 Material, Plant and Equipment Costs
 - GC6.6.4 Allowance to the Contractor or Subcontractor

GC6.1 CHANGES IN THE WORK

- 1) At any time before issuance of a Certificate of Completion, Canada may issue orders for additions, deletions or other changes to the Work, or changes in the location or position of the whole or any part of the Work, if the addition, deletion, change or other revision is deemed by Canada to be consistent with the general intent of the Contract.
- 2) An order referred to in paragraph 1) of GC6.1 shall be in writing and given to the Contractor in accordance with GC2.3 NOTICES.
- 3) Upon receipt of an order, the Contractor shall promptly perform the work in accordance with the order as if the order had appeared in and been part of the original Contract.
- 4) If anything done or omitted by the Contractor pursuant to an order increases or decreases the cost of the Work to the Contractor, payment for the work shall be made in accordance with GC6.4 DETERMINATION OF PRICE.

GC6.2 CHANGES IN SUBSURFACE CONDITIONS

- 1) If, during the performance of the Work, the Contractor encounters subsurface conditions that are substantially different from the subsurface conditions described in the tender documents supplied to the Contractor, or a reasonable assumption of fact based thereon, the Contractor shall give notice to Canada immediately upon becoming aware of the situation.
- 2) If the Contractor is of the opinion that the Contractor may incur or sustain any extra expense or any loss or damage that is directly attributable to the changed subsurface conditions, the Contractor shall within 10 days of the date the changed subsurface conditions were encountered, give Canada written notice of intention to claim for that extra expense, loss or damage.
- 3) If the Contractor has given a notice referred to in paragraph 2) of GC6.2, the Contractor shall give Canada a written claim for extra expense, loss or damage no later than 30 days after the date that a Certificate of Substantial Performance is issued.
- 4) A written claim referred to in paragraph 3) of GC6.2 shall contain a sufficient description of the facts and circumstances of the occurrence that is the subject of the claim to enable Canada to determine whether or not the claim is justified, and the Contractor shall supply such further and other information for that purpose as Canada requires.

- 5) If Canada determines that a claim referred to in paragraph 3) of GC6.2 is justified, Canada shall make an extra payment to the Contractor in an amount that is calculated in accordance with GC6.4 DETERMINATION OF PRICE.
- 6) If, in the opinion of Canada, the Contractor effects a saving of expenditure that is directly attributable to a substantial difference between the information relating to subsurface conditions at the site of the Work that is contained in the tender documents, or a reasonable assumption of fact based thereon, and the actual subsurface conditions encountered by the Contractor, the Contract Amount shall be reduced by the amount of the saving of expenditure determined in accordance with GC6.4 DETERMINATION OF PRICE.
- 7) If the Contractor fails to give a notice referred to in paragraph 2) of GC6.2 and a claim referred to in paragraph 3) of GC6.2 within the times stipulated, an extra payment shall not be made to the Contractor in respect of the occurrence.
- 8) Canada does not warrant the content expressed in any subsurface report available for the perusal of the Contractor that does not form part of the tender and contract documents.

GC6.3 HUMAN REMAINS, ARCHAEOLOGICAL REMAINS AND ITEMS OF HISTORICAL OR SCIENTIFIC INTEREST

- 1) For the purposes of this clause
 - (a) "human remains" means the whole or any part of a deceased human being, irrespective of the time of death;
 - (b) "archaeological remains" are items, artefacts or things made, modified or used by human beings in antiquity and may include, but not be limited to, stone, wood or iron structures or monuments, dump deposits, bone artefacts, weapons, tools, coins, and pottery; and
 - (c) "items of historical or scientific interest" are naturally occurring or manufactured objects or things of any age that are not archaeological remains but may be of interest to society because of their historical or scientific significance, value, rarity, natural beauty, or other quality.
- 2) If, during the course of the Work, the Contractor encounters any object, item or thing which is described in paragraph 1) of GC6.3 or which resembles any object, item or thing described in paragraph 1) of GC6.3, the Contractor shall
 - (a) take all reasonable steps, including stopping work in the affected area, to protect and preserve the object, item or thing;
 - (b) immediately notify Canada of the circumstances in writing; and
 - (c) take all reasonable steps to minimize additional costs that may accrue as a result of any work stoppage.
- 3) Upon receipt of a notification in accordance with subparagraph 2)(b) of GC6.3, Canada shall promptly determine whether the object, item or thing is one described in, or contemplated by paragraph 1) of GC6.3, and shall notify the Contractor in writing of any action to be performed, or work to be carried out, by the Contractor as a result of Canada's determination.
- 4) Canada may, at any time, enlist the services of experts to assist in the investigation, examination, taking of measurements or other such recordings, placing of permanent protection around or removing of the object, item or thing encountered by the Contractor, and the Contractor shall, to the satisfaction

of Canada, allow them access and co-operate with them in the carrying out of their duties and obligations.

- 5) Human remains, archaeological remains and items of historical or scientific interest encountered at the site of the Work shall be deemed to be the property of Canada.
- 6) Except as may be otherwise provided for in the Contract, the provisions of GC6.4 DETERMINATION OF PRICE and GC6.5 DELAYS AND EXTENSION OF TIME shall apply.

GC6.4 DETERMINATION OF PRICE

GC6.4.1 Price Determination Prior to Undertaking Changes

- 1) If a Lump Sum Arrangement applies to the Contract or a part thereof, the price of any change shall be the aggregate estimated cost of labour, Plant and Material that is required for the change as agreed upon in writing by the Contractor and Canada plus an allowance for supervision, co-ordination, administration, overhead, margin and the risk of undertaking the work within the stipulated amount, which allowance shall be equal to
 - (a) 20% of the aggregate costs referred to herein for that portion of the Work done by the Contractor's own forces, if the aggregate cost of the Work does not exceed \$50,000;
 - (b) 15% of the aggregate costs referred to herein for that portion of the Work that is done by subcontract, if the aggregate cost of the Work does not exceed \$50,000; or
 - (c) a negotiated percentage of the aggregate costs referred to herein or a negotiated amount
 - (i) if the aggregate cost of the Work exceeds \$50,000; or
 - (ii) if the Contractor and Canada agree in writing.
- 2) If a Unit Price Arrangement applies to the Contract or a part thereof, the Contractor and Canada may, by agreement in writing, add items, units of measurement, estimated quantities and prices per unit to the Unit Price Table.
- 3) A price per unit referred to in paragraph 2) of GC6.4.1 shall be determined on the basis of the aggregate estimated cost of labour, Plant and Material that is required for the additional item as agreed upon by the Contractor and Canada, plus an allowance determined in accordance with paragraph 1) of GC6.4.1.
- 4) To facilitate approval of the price of the change or the additional price per unit as applicable, the Contractor shall submit a cost estimate breakdown identifying, as a minimum, the estimated cost of labour, Plant, Material, each subcontract amount, and the amount of the allowance.
- 5) If no agreement is reached as contemplated in paragraph 1) of GC6.4.1, the price shall be determined in accordance with GC6.4.2.
- 6) If no agreement is reached, as contemplated in paragraphs 2) and 3) of GC6.4.1, Canada shall determine the class and the unit of measurement of the item of labour, Plant or Material and the price per unit shall be determined in accordance with GC6.4.2.

GC6.4.2 Price Determination Following Completion of Changes

- 1) If it is not possible to predetermine, or if there is failure to agree upon the price of a change in the Work, the price of the change shall be equal to the aggregate of

- (a) all reasonable and proper amounts actually expended or legally payable by the Contractor in respect of the labour, Plant and Material that fall within one of the classes of expenditure described in paragraph 2) of GC6.4.2, that are directly attributable to the performance of the Contract;
 - (b) an allowance for profit and all other expenditures or costs, including overhead, general administration costs, financing and interest charges, in an amount that is equal to 10% of the sum of the expenses referred to in subparagraph 1)(a) of GC6.4.2; and
 - (c) interest on the amounts determined under subparagraphs 1)(a) and 1)(b) of GC6.4.2 calculated in accordance with GC5.12 INTEREST ON SETTLED CLAIMS;
- 2) The cost of labour, Plant and Material referred to in subparagraph 1)(a) of GC6.4.2 shall be limited to the following categories of expenditure:
- (a) payments to Subcontractors and Suppliers;
 - (b) wages, salaries, bonuses and, if applicable, travel and lodging expenses of employees of the Contractor located at the site of the Work and that portion of wages, salaries, bonuses and, if applicable, travel and lodging expenses of personnel of the Contractor generally employed at the head office or at a general office of the Contractor provided they are actually and properly engaged on the Work under the Contract;
 - (c) assessments payable under any statutory authority relating to workers' compensation, employment insurance, pension plan or holidays with pay, provincial health or insurance plans, environmental reviews, and GST / HST collection costs;
 - (d) rent that is paid for Plant, or an amount equivalent to the said rent if the Plant is owned by the Contractor, that is necessary for and used in the performance of the Work, if the rent or the equivalent amount is reasonable and use of that Plant has been approved by Canada;
 - (e) payments for maintaining and operating Plant necessary for and used in the performance of the Work, and payments for effecting repairs thereto that, in the opinion of Canada, are necessary for the proper performance of the Contract, other than payments for any repairs to the Plant arising out of defects existing before its allocation to the Work;
 - (f) payments for Material that is necessary for and incorporated in the Work, or that is necessary for and consumed in the performance of the Contract;
 - (g) payments for preparation, delivery, handling, erection, installation, inspection, protection and removal of the Plant and Material necessary for and used in the performance of the Contract; and
 - (h) any other payments made by the Contractor with the approval Canada that are necessary for the performance of the Contract in accordance with the Contract Documents.

GC6.4.3 Price Determination - Variations in Tendered Quantities

- 1) Except as provided in paragraphs 2), 3), 4) and 5) of GC6.4.3, if it appears that the final quantity of labour, Plant and Material under a price per unit item shall exceed or be less than the estimated tendered quantity, the Contractor shall perform the Work or supply the Plant and Material required to complete the item and payment shall be made for the actual Work performed or Plant and Material supplied at the price per unit set out in the Contract.
- 2) If the final quantity of the price per unit item exceeds the estimated tendered quantity by more than 15%, either party to the Contract may make a written request to the other party to negotiate an

amended price per unit for that portion of the item which exceeds 115% of the estimated tendered quantity, and to facilitate approval of any amended price per unit, the Contractor shall, on request, provide Canada with

- (a) detailed records of the actual cost to the Contractor of performing or supplying the tendered quantity for the price per unit item up to the time the negotiation was requested; and
 - (b) the estimated unit cost of labour, Plant and Material required for the portion of the item that is in excess of 115% of the tendered quantity.
- 3) If agreement is not reached as contemplated in paragraph 2) of GC6.4.3, the price per unit shall be determined in accordance with GC6.4.2.
- 4) If it appears that the final quantity of labour, Plant and Material under a price per unit item shall be less than 85% of the estimated tendered quantity, either party to the Contract may make a written request to the other party to negotiate a change to the price per unit for the item if
- (a) there is a demonstrable difference between the unit cost to the Contractor of performing or supplying the estimated tendered quantity and the unit cost to the Contractor for performing or supplying the final quantity; and
 - (b) the difference in unit cost is due solely to the decrease in quantity and not to any other cause.
- 5) For the purposes of the negotiation referred to in paragraph 4) of GC6.4.3
- (a) the onus of establishing, justifying and quantifying a proposed change lies with the party making the request for negotiation; and
 - (b) in no event shall the total price for an item that has been amended as a result of a reduction in quantity pursuant to paragraph 4) of GC6.4.3 exceed the amount that would have been payable to the Contractor had 85% of the tendered quantity actually been performed or supplied.

GC6.5 DELAYS AND EXTENSION OF TIME

- 1) Upon application of the Contractor made before the date first fixed for completion of the Work or before any other date previously fixed under this clause, Canada may extend the time for completion of the Work by fixing a new date if Canada determines that causes beyond the control of the Contractor have delayed its completion.
- 2) The Contractor's application shall be accompanied by the written consent of the bonding company whose bond forms part of the Contract Security.
- 3) Subject to paragraph 4) of GC6.5, no payment, other than a payment that is expressly stipulated in the Contract, shall be made by Canada to the Contractor for any extra expense, loss or damage incurred or sustained by the Contractor due to delay, whether or not the delay is caused by circumstances beyond the control of the Contractor.
- 4) If the Contractor incurs or sustains any extra expense or any loss or damage that is directly attributable to any neglect or delay that occurs after the date of the Contract on the part of Canada in providing any information or in doing any act that the Contract either expressly requires Canada to do or that would ordinarily be done by an owner in accordance with the practice of the trade, the Contractor shall give Canada written notice of intention to claim for that extra expense or loss or damage within ten working days of the date the neglect or delay first occurred.

- 5) When the Contractor has given a notice referred to in paragraph 4) of GC6.5, the Contractor shall give Canada a written claim for the extra expense, loss or damage no later than 30 days after the date that a Certificate of Completion is issued and not afterwards.
- 6) A written claim referred to in paragraph 5) of GC6.5 shall contain a sufficient description of the facts and circumstances of the occurrence that is the subject of the claim to enable Canada to determine whether or not the claim is justified and the Contractor shall supply such further and other information for that purpose as Canada may require.
- 7) If Canada determines that a claim referred to in paragraph 5) of GC6.5 is justified, Canada shall make an extra payment to the Contractor in an amount that is calculated in accordance with GC6.4 DETERMINATION OF PRICE.
- 8) If the Contractor fails to give a notice referred to in paragraph 4) and a claim referred to in paragraph 5) of GC6.5 within the times stipulated, an extra payment shall not be made to the Contractor in respect of the occurrence.

GC6.6 ALLOWABLE COSTS FOR CONTRACT CHANGES UNDER GC6.4.1

GC6.6.1 General

- 1) The Contractor shall submit a cost estimate breakdown for each contemplated change, in accordance with paragraph 4) of GC6.4.1 PRICE DETERMINATION PRIOR TO UNDERTAKING CHANGES. The breakdown shall itemize all labour, material, plant and equipment costs estimated by the Contractor and subcontractors, and the amount of each allowance.
- 2) It is the responsibility of the Contractor to ensure that all prices included in the Contractor's breakdown to the NCC, including those of subcontractors, are fair and reasonable in view of the terms expressed herein.
- 3) The labour hours required for the contemplated change shall be based on the estimated number of hours to perform the work.
- 4) Time spent by a working foreman may be included in the number of labour hours, at a rate agreed to in writing by the Contractor and the NCC.
- 5) Time attributable to material handling, productivity factors and approved rest periods is to be included in the number of hours required by the contemplated change and will not be paid as a separate item under hourly rates.
- 6) Allowances referred to in section 04 below are not to be included in the hourly labour rates.
- 7) Credit for work deleted will only be for the work directly associated with the change.
- 8) When a change deletes work which has not yet been performed, the NCC is entitled to an adjustment in the Contract Amount equal to the cost the Contractor would have incurred had the work not been deleted.
- 9) Allowances referred to in Section 04 below shall not be applied to any credit amounts for deleted work.
- 10) In those cases where the change involves additions and deletions to the work, the allowances referred to in section 04 below shall apply only when the cost of the additions minus the cost of the deletions would result in an increase in the Contract Amount. The percentage allowance shall only be applied to that portion of the costs of the additions that is in excess of the cost of the deletions.

- 11) If the contemplated change in the work necessitates a change in the contract completion date, or has an impact on the work, the Contractor shall identify and include the resulting cost in the breakdown.

GC6.6.2 Hourly Labour Rates

- 1) The hourly labour rates listed in the Contractor's breakdown shall be determined in accordance with the collective agreements that are applicable at the site of the work and shall include:
- (a) the base rate of pay;
 - (b) vacation pay;
 - (c) benefits which includes:
 - (i) welfare contributions;
 - (ii) pension contributions;
 - (iii) union dues;
 - (iv) training and industry funds contributions; and
 - (v) other applicable benefits, 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 Québec Pension Plan contributions;
 - (ii) Worker's Compensation Board or Commission de la santé et de la sécurité du travail premiums;
 - (iv) Public Liability and Property Damage insurance premiums; and
 - (v) health tax premiums.
- 2) In the case of nonunion labour, all rates claimed shall be in accordance with the terms of the Labour Conditions forming part of this contract and the Contractor must provide satisfactory proof of the rates actually paid.

GC6.6.3 Material, Plant and Equipment Costs

- 1) The costs of all purchases and rentals must be based on the actual amount paid to the suppliers by the Contractor or subcontractor and said costs are to include all applicable discounts.

GC6.6.4 Allowance to the Contractor or Subcontractor

- 1) The allowances determined in accordance with paragraph 1) of GC6.4.1 PRICE DETERMINATION PRIOR TO UNDERTAKING CHANGES shall be considered as full compensation for:
- (a) supervision, co-ordination, administration, overhead, margin and the risk of undertaking the work within the stipulated amount; and

- (b) miscellaneous additional costs related to:
 - (i) the purchase or rental of material, plant and equipment;
 - (ii) the purchase of small tools and supplies;
 - (iii) safety and protection measures; and
 - (iv) permits, bonds, insurance, engineering, as built drawings, commissioning and site office.

- GC7.1 TAKING THE WORK OUT OF THE CONTRACTOR'S HANDS
- GC7.2 SUSPENSION OF WORK
- GC7.3 TERMINATION OF CONTRACT
- GC7.4 SECURITY DEPOSIT - FORFEITURE OR RETURN

GC7.1 TAKING THE WORK OUT OF THE CONTRACTOR'S HANDS

- 1) By giving notice in writing to the Contractor in accordance with GC2.3 NOTICES, the NCC, without any other authorization, may take all or any part of the Work out of the Contractor's hands, and may employ such means as the NCC sees fit to have the Work completed if the Contractor:
 - (a) fails to remedy any delay in the commencement or default in the diligent performance of the Work to the satisfaction of the NCC within six days of the NCC giving notice to the Contractor in writing in accordance with GC2.3 NOTICES;
 - (b) defaults in the completion of any part of the Work within the time fixed for its completion by the Contract;
 - (c) becomes insolvent, or has committed an act of bankruptcy, and has neither made a proposal to its creditors nor filed a notice of intention to make such a proposal, pursuant to the Bankruptcy and Insolvency Act;
 - (d) abandons the work;
 - (e) makes an assignment of the Contract without the consent required by GC1.16 ASSIGNMENT;
or
 - (f) otherwise fails to observe or perform any of the provisions of the Contract.
- 2) If the whole or any part of the Work is taken out of the Contractor's hands, the Contractor's right to any further payment that is due or accruing due under the Contract is, subject only to paragraph 3) of GC7.1, extinguished, and the Contractor is liable to pay the NCC, upon demand, an amount that is equal to the amount of all loss and damage incurred or sustained by the NCC in respect of the Contractor's failure to complete the Work.
- 3) If the whole or any part of the Work that is taken out of the Contractor's hands is completed by the NCC, the NCC may pay the Contractor the amount, if any, of the holdback or a progress claim as determined by the NCC that had accrued and was due prior to the date on which the Work was taken out of the Contractor's hands and that is not required for the purposes of having the Work performed or of compensating the NCC for any other loss or damage incurred or sustained by reason of the Contractor's default.
- 4) The taking of the Work or any part thereof out of the Contractor's hands does not relieve the Contractor from any obligation under the Contract or imposed by law except the obligation to complete the performance of that part of the Work that was taken out of the Contractor's hands.
- 5) If the Work or any part thereof is taken out of the Contractor's hands, all Plant and Material and the interest of the Contractor, or its suppliers or subcontractors at any tier, in all real property, licences, powers and privileges acquired, used or provided by the Contractor, or its suppliers or subcontractors at any tier, under the Contract shall continue to be the property of the NCC without compensation.
- 6) When the NCC certifies that any Plant, Material, or any interest of the Contractor is no longer required for the purposes of the Work, or that it is not in the interests of the NCC to retain that Plant, Material, or interest, it shall revert to the Contractor.

- 7) If the Contractor has become insolvent or has committed an act of bankruptcy, and has either made a proposal to its creditors or filed a notice of intention to make such a proposal, pursuant to the Bankruptcy and Insolvency Act, the Contractor shall immediately forward a copy of the proposal or the notice of intention to the NCC.

GC7.2 SUSPENSION OF WORK

- 1) When, in the NCC's opinion, it is in the public interest to do so, the NCC may require the Contractor to suspend performance of the Work either for a specified or an unspecified period, by giving a notice of suspension in writing to the Contractor in accordance with GC2.3 NOTICES.
- 2) When a notice of suspension is received by the Contractor, the Contractor shall suspend all operations in respect of the Work except those that the NCC determines are necessary for the care and preservation of the Work, Plant and Material.
- 3) During a period of suspension, the Contractor shall not remove any part of the Work, Plant or Material from its site without the consent of the NCC.
- 4) If a period of suspension is 60 days or less, the Contractor shall resume the performance of the Work on the expiration of that period, and the Contractor is entitled to be paid the extra costs necessarily incurred by the Contractor as a result of the suspension, determined in accordance with GC6.4 DETERMINATION OF PRICE.
- 5) If a period of suspension is more than 60 days, the NCC and the Contractor may agree that the performance of the Work shall be continued by the Contractor, and the Contractor shall resume performance of the Work subject to any terms and conditions agreed upon by the NCC and the Contractor. If the NCC and the Contractor do not agree that performance of the Work shall be continued by the Contractor, or upon the terms and conditions under which the Contractor shall continue the Work, the notice of suspension shall be deemed to be a notice of termination pursuant to GC7.3 TERMINATION OF CONTRACT.

GC7.3 TERMINATION OF CONTRACT

- 1) The NCC may terminate the Contract at any time by giving a notice of termination in writing to the Contractor in accordance with GC2.3 NOTICES.
- 2) If the Contractor receives a notice of termination, the Contractor shall forthwith cease all operations in performance of the Contract, subject to any conditions stipulated in the notice.
- 3) Subject to paragraph 4) of GC7.3, if the Contract is terminated, the NCC shall pay the Contractor an amount determined to be due to the Contractor pursuant to GC6.4 DETERMINATION OF PRICE less the aggregate of all amounts that were paid to the Contractor by the NCC and all amounts that are due to the NCC from the Contractor pursuant to the Contract.
- 4) In no event shall the total amount payable by the NCC to the Contractor exceed the amount, calculated in accordance with GC5 TERMS OF PAYMENT, that would have been payable to the Contractor had the Contractor completed the Work.
- 5) Payment to the Contractor, if any, shall be made as soon as practicable under the circumstances.

GC7.4 SECURITY DEPOSIT - FORFEITURE OR RETURN

- 1) If the Work is taken out of the Contractor's hands, or the Contractor is in breach of, or in default under, the Contract, the NCC may convert a security deposit to the NCC's own use.

- 2) If the NCC converts a security deposit, the amount realized shall be deemed to be an amount due from the NCC to the Contractor under the Contract.
- 3) Any balance of the amount realized that remains after payment of all losses, damage and claims of the NCC and others shall be paid by the NCC to the Contractor if, in the opinion of the NCC, it is not required for the purposes of the Contract.

- 1) The Contractor may, within 10 days after the communication to the Contractor of any decision or direction referred to in GC6.1 CHANGES IN THE WORK and GC2.2 INTERPRETATION OF CONTRACT, protest that decision or direction.
- 2) A protest referred to in paragraph 1) of GC8 shall be in writing, contain full reasons for the protest, be signed by the Contractor and be given to the NCC.
- 3) If the Contractor gives a protest pursuant to paragraph 2) of GC8, any compliance by the Contractor with the decision or direction that was protested shall not be construed as an admission by the Contractor of the correctness of that decision or direction, or prevent the Contractor from taking whatever action the Contractor considers appropriate in the circumstances.
- 4) The giving of a protest by the Contractor pursuant to paragraph 2) of GC8 shall not relieve the Contractor from complying with the decision or direction that is the subject of the protest.
- 5) Subject to paragraph 6) of GC8, the Contractor shall take any action referred to in paragraph 3) of GC8 within 3 months after the date of the Certificate of Completion referred to in GC5.6 FINAL COMPLETION and not afterwards, except where it is otherwise provided by law.
- 6) The Contractor shall take any action referred to in paragraph 3) of GC8 resulting from a direction under GC3.13 WARRANTY AND RECTIFICATION OF DEFECTS IN WORK, within 3 months after the expiry of a warranty or guarantee period and not afterwards, except where it is otherwise provided by law.
- 7) Subject to paragraph 8) of GC8, if the NCC determines that the Contractor's protest is justified, the NCC shall pay the Contractor the cost of the additional labour, Plant and Material necessarily incurred by the Contractor in carrying out the protested decision or direction.
- 8) Costs referred to in paragraph 7) of GC8 shall be calculated in accordance with GC6.4 DETERMINATION OF PRICE.

- GC9.1 OBLIGATION TO PROVIDE CONTRACT SECURITY
- GC9.2 TYPES AND AMOUNTS OF CONTRACT SECURITY
- GC9.3 IRREVOCABLE STANDBY LETTER OF CREDIT

GC9.1 OBLIGATION TO PROVIDE CONTRACT SECURITY

- 1) The Contractor shall, at the Contractor's expense and within 7 days after the date that the Contractor receives notice that the Contractor's bid was accepted by the NCC, obtain and deliver Contract Security to the NCC in one or more of the forms prescribed in GC9.2 TYPES AND AMOUNTS OF CONTRACT SECURITY.
- 2) If the whole or a part of the Contract Security provided is in the form of a security deposit, it shall be held and disposed of in accordance with GC5.13 RETURN OF SECURITY DEPOSIT and GC7.4 SECURITY DEPOSIT - FORFEITURE OR RETURN.
- 3) If a part of the Contract Security provided is in the form of a labour and material payment bond, the Contractor shall post a copy of that bond at the site of the Work.
- 4) It is a condition precedent to the release of the first progress payment that the Contractor has provided the Contract Security as specified herein.
- 5) In addition to the limitation imposed in paragraph 4) of GC9.1, the Contractor further acknowledges and agrees that it will not be entitled to have access to the site, nor to commence work pursuant to this contract until it has delivered the Contract Security as specified herein.

GC9.2 TYPES AND AMOUNTS OF CONTRACT SECURITY

- 1) The Contractor shall deliver to the NCC (a), (b) or (c):
 - (a) A performance bond and a labour and material payment bond each in an amount that is equal to not less than 50% of the Contract Amount including taxes
 - (b) A labour and material payment bond in an amount that is equal to not less than 50% of the Contract Amount including taxes, and a security deposit in an amount that is equal to not less than 10% of the Contract Amount including taxes.
 - (c) A security deposit in an amount prescribed by subparagraph 1)(b) of GC9.2, plus an additional amount that is equal to 10% of the Contract Amount including taxes.
- 2) The amount of a security deposit referred to in subparagraph 1)(b) of GC9.2 shall not exceed \$2,000,000 regardless of the Contract Amount including taxes.
- 3) A performance bond and a labour and material payment bond referred to in paragraph 1) of GC9.2 shall be in a form and be issued by a bonding or surety company that is approved by the NCC.
 - (a) The approved form for the performance bond is enclosed at the end of GC9.
 - (b) The approved form for the labour and material payment bond is enclosed at the end of GC9
 - (c) The list of approved bonding or surety companies is displayed at the following Website:
<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12027> .
- 4) A security deposit referred to in subparagraphs 1)(b) and 1)(c) of GC9.2 shall be in the form of:

- (a) a bill of exchange, bank draft or money order made payable to the NCC and certified by an approved financial institution or drawn by an approved financial institution on itself; or
 - (b) bonds of, or unconditionally guaranteed as to principal and interest by, the Government of Canada.
- 5) For the purposes of subparagraph 4)(a) of GC9.2:
- (a) a bill of exchange is an unconditional order in writing signed by the Contractor and addressed to an approved financial institution, requiring the said institution to pay, on demand, at a fixed or determinable future time a certain sum of money to, or to the order of, the NCC;
 - (b) if a bill of exchange, bank draft or money order is certified by or drawn on an institution or corporation other than a chartered bank, it must be accompanied by proof that the said institution or corporation meets at least one of the criteria described in subparagraph 5)(c) of GC9.2, either by letter or by a stamped certification on the bill of exchange, bank draft or money; and
 - (c) An approved financial institution is:
 - (i) a corporation or institution that is a member of the Canadian Payments Association as defined in the Canadian Payments Act;
 - (ii) a corporation that accepts deposits that are insured, to the maximum permitted by law, by the Canada Deposit Insurance Corporation or the Régie de l'assurance-dépôts du Québec;
 - (iii) a corporation that accepts deposits from the public if repayment of the deposit is guaranteed by Her Majesty the Queen in right of a province;
 - (iv) a corporation, association or federation incorporated or organized as a credit union or co-operative credit society that conforms to the requirements of a credit union which are more particularly described in paragraph 137(6) of the Income Tax Act; or
 - (v) Canada Post Corporation.
- 6) Bonds referred to in subparagraph 4)(b) of GC9.2 shall be provided on the basis of their market value current at the date of the Contract, and shall be:
- (a) made payable to bearer; or
 - (b) accompanied by a duly executed instrument of transfer of the bonds to the NCC in the form prescribed by the Domestic Bonds of Canada Regulations; or
 - (c) registered as to principal, or as to principal and interest, in the name of the NCC pursuant to the Domestic Bonds of Canada Regulations.

GC9.3 IRREVOCABLE STANDBY LETTER OF CREDIT

- 1) As an alternative to a security deposit, an irrevocable standby letter of credit is acceptable to the NCC, the amount of which shall be determined in the same manner as a security deposit referred to in GC9.2
TYPES AND AMOUNTS OF CONTRACT SECURITY.
- 2) An irrevocable standby letter of credit shall:
 - (a) be an arrangement, however named or described, whereby a financial institution (the “Issuer”) acting at the request and on the instructions of a customer (the “Applicant”) or on its own behalf:

- (i) is to make a payment to, or to the order of, the NCC as the beneficiary;
- (ii) is to accept and pay bills of exchange drawn by the NCC;
- (ii) authorizes another financial institution to effect such payment or accept and pay such bills of exchange; or
- (iv) authorizes another financial institution to negotiate against written demand(s) for payment provided that the terms and conditions of the letter of credit are complied with;
- (b) state the face amount that may be drawn against it;
- (c) state its expiry date;
- (d) provide for sight payment to the NCC by way of the financial institution's draft against presentation of a written demand for payment signed by the NCC;
- (e) provide that more than one written demand for payment may be presented subject to the sum of those demands not exceeding the face value of the letter of credit;
- (f) provide that it is subject to the International Chamber of Commerce (ICC) Uniform Customs and Practice for Documentary Credits, 2007 Revision, ICC Publication No. 600;
- (g) clearly specify that it is irrevocable or deemed to be irrevocable pursuant to article 6 c) of the International Chamber of Commerce (ICC) Uniform Customs and Practice for Documentary Credits, 2007 Revision, ICC Publication No. 600; and
- (h) be issued or confirmed, in either official language in a format left to the discretion of the issuer or confirmer, by an approved financial institution on its letterhead.

PERFORMANCE BOND

Bond Number _____

Amount \$ _____

KNOW ALL MEN BY THESE PRESENTS, that _____ as Principal,
hereinafter called the Principal, and _____ as Surety, hereinafter

called the Surety, are, subject to the conditions hereinafter contained, held and firmly bound unto the National Capital Commission as

Obligee, hereinafter called the NCC, In the amount of _____ dollars

(\$ _____), lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the

Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

SIGNED AND SEALED this _____ day of _____, _____. WHEREAS, the Principal has

entered into a Contract with the NCC, dated the _____ day of _____, _____,

for: _____.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION are such that if the Principal shall well and faithfully observe and perform all the obligations on the part of the Principal to be observed and performed in connection with the Contract, then this obligation shall be void, otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. Whenever the Principal shall be, and declared by the NCC to be, in default under the Contract, the Surety shall
 - (a) if the work is not taken out of the Principal's hands, remedy the default of the Principal,
 - (b) if the work is taken out of the Principal's hands and the NCC directs the Surety to undertake the completion of the work, complete the work in accordance with the Contract provided that if a contract is entered into for the completion of the work,
 - (i) it shall be between the Surety and the completing contractor, and
 - (ii) the selection of such completing contractor shall be subject to the approval of the NCC,
 - (c) if the work is taken out of the Principal's hands and the NCC, after reasonable notice to the Surety, does not direct the Surety to undertake the completion of the work, assume the financial responsibility for the cost of completion in excess of the moneys available to the NCC under the Contract,
 - (d) be liable for and pay all the excess costs of completion of the Contract, and
 - (e) not be entitled to any Contract moneys earned by the Principal, up to the date of his default on the Contract and any holdbacks relating to such earned Contract moneys held by the NCC, and the liability of the Surety under this Bond shall remain unchanged provided, however, and without restricting the generality of the foregoing, upon the completion of the Contract to the satisfaction of the NCC, any Contract moneys earned by the Principal or holdbacks related thereto held by the NCC may be paid to the Surety by the NCC.
2. The Surety shall not be liable for a greater sum than the amount specified in this Bond.
3. No suit or action shall be instituted by the NCC herein against the Surety pursuant to these presents after the expiration of two (2) years from the date on which final payment under the Contract is payable.

IN TESTIMONY WHEREOF, the Principal has hereto set its hand and affixed its seal, and the Surety has caused these presents to be sealed with its corporate seal duly attested by the signature of its authorized signing authority, the day and year first above written.

SIGNED, SEALED AND DELIVERED in the presence of:

Principal _____

Witness _____

Surety _____

Note: Affix Corporate seal if applicable.

LABOUR AND MATERIAL PAYMENT BOND

Bond Number _____

Amount \$ _____

KNOW ALL MEN BY THESE PRESENTS, that _____ as Principal,
hereinafter called the Principal, and _____ as Surety, hereinafter

called the Surety, are, subject to the conditions hereinafter contained, held and firmly bound unto the National Capital Commission as Oblige, hereinafter called the NCC, In the amount of _____ dollars

(\$ _____), lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

SIGNED AND SEALED this _____ day of _____, _____ . WHEREAS, the Principal has entered into a Contract with the NCC, dated the _____ day of _____, _____, for: _____

_____ which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION are such that, if payment is promptly made to all Claimants who have performed labour or services or supplied material in connection with the Contract and any and all duly authorized modifications and extensions of the Contract that may hereafter be made, notice of which modifications and extensions to the Surety being hereby waived, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. For the purpose of this bond, a Claimant is defined as one having a direct contract with the Principal or any Sub-Contractor of the Principal for labour, material or both, used or reasonably required for use in the performance of the Contract, labour and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone services or rental of equipment (but excluding rental of equipment where the rent pursuant to an agreement is to be applied towards the purchase price thereof) directly applicable to the Contract.
2. For the purpose of this Bond, no payment is required to be made in respect of a claim for payment for labour or services performed or material supplied in connection with the Contract that represents a capital expenditure, overhead or general administration costs incurred by the Principal during the currency or in respect of the Contract.
3. The Principal and the Surety hereby jointly and severally agree with the NCC that if any Claimant has not been paid as provided for under the terms of his contract with the Principal or a Sub-Contractor of the Principal before the expiration of a period of ninety (90) days after the date on which the last of such Claimant's labour or service was done or performed or materials were supplied by such Claimant, the NCC may sue on this bond, have the right to prosecute the suit to final judgment for such sum or sums as may be due and have execution thereon; and such right of the NCC is assigned by virtue of Part VIII of the Financial Administration Act to such Claimant.
4. For the purpose of this bond the liability of the Surety and the Principal to make payment to any claimant not having a contract directly with the Principal shall be limited to that amount which the Principal would have been obliged to pay to such claimant had the provisions of the applicable provincial or territorial legislation on lien or privileges been applicable to the work. A claimant need not comply with provisions of such legislation setting out steps by way of notice, registration or otherwise as might have been necessary to preserve or perfect any claim for lien or privilege which the claimant might have had. Any such claimant shall be entitled to pursue a claim and to recover judgment hereunder subject to the terms and notification provisions of the Bond.
5. Any material change in the Contract between the Principal and the NCC shall not prejudice the rights or interest of any Claimant under this Bond who is not instrumental in bringing about or has not caused such change.
6. No suit or action shall be commenced hereunder by any Claimant:
 - (a) Unless such Claimant shall have given written notice within the time limits hereinafter set forth to the Principal and the Surety above named, stating with substantial accuracy the amount claimed. Such notice shall be served by mailing the same by registered mail to the Principal and the Surety at any place where an office is regularly maintained for the transaction of business by such persons or served in any manner in which legal process may be served in the Province or other part of Canada in which the subject matter of the Contract is located. Such notice shall be given
 - (i) in respect of any claim for the amount or any portion thereof required to be held back from the Claimant by the Principal or by the Sub-Contractor of the Principal under either the terms of the Claimant's Contract with the Principal or the Claimant's Contract with the Sub-Contractor of the Principal within one hundred and twenty (120) days after such Claimant should have been paid in full under this Contract;

.../2

- (ii) in respect of any claim other than for the holdback or portion thereof referred to above within one hundred and twenty (120) days after the date upon which such Claimant did or performed the last of the service, work or labour or furnished the last of the materials for which such claim is made under the Claimant's Contract with the Principal or a Sub-Contractor of the Principal
 - (b) After the expiration of one (1) year following the date on which the Principal ceased work on the said Contract, including work performed under the guarantees provided in the Contract;
 - (c) Other than in a court of competent jurisdiction in the province or district of Canada in which the subject matter of the Contract or any part thereof is situated and not elsewhere, and the parties hereto hereby agree to submit to the jurisdiction of such court.
7. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder.
8. The Surety shall not be entitled to claim any moneys relating to the Contract and the liability of the Surety under this Bond shall remain unchanged and, without restricting the generality of the foregoing, the Surety shall pay all valid claims of Claimants under this Bond before any moneys relating to the Contract held by the NCC are paid to the Surety by the NCC.
9. The Surety shall not be liable for a greater sum than the amount specified in this bond.

IN TESTIMONY WHEREOF, the Principal has hereto set its hand and affixed its seal, and the Surety has caused these presents to be sealed with its corporate seal duly attested by the signature of its authorized signing authority, the day and year first above written.

SIGNED, SEALED AND DELIVERED in the presence of:

Principal _____

Witness _____

Surety _____

Note: Affix Corporate seal if applicable.

GC10.1 INSURANCE CONTRACTS
 GC10.2 INSURANCE PROCEEDS
 GC10.3 INSURANCE TERMS
 GC10.3.1 General
 GC10.3.1.1 Proof of Insurance
 GC10.3.1.2 Payment of Deductible
 GC10.3.2 Commercial General Liability
 GC10.3.2.1 Scope of Policy
 GC10.3.2.2 Insured
 GC10.3.2.3 Period of Insurance
 GC10.3.3 Builder's Risk / Installation Floater
 GC10.3.3.1 Scope of Policy
 GC10.3.3.2 Amount of Insurance
 GC10.3.3.3 Insurance Proceeds

GC10.1 INSURANCE CONTRACTS

- 1) The Contractor shall, at the Contractor's expense, obtain and maintain insurance contracts in respect of the work and shall provide evidence thereof to the NCC in accordance with the requirements of GC10.
- 2) The insurance contracts referred to in paragraph 1) of GC10.1 shall:
 - (a) be in a form, of the nature, in the amounts, for the periods and containing the terms and conditions specified in GC10; and
 - (b) provide for the payment of claims under such insurance contracts in accordance with GC10.2 INSURANCE PROCEEDS.

GC10.2 INSURANCE PROCEEDS

- 1) In the case of a claim payable under a Builders Risk/Installation (All Risks) insurance contract maintained by the Contractor pursuant to GC10.1 INSURANCE CONTRACTS, the proceeds of the claim shall be paid directly to the NCC, and:
 - (a) the monies so paid shall be held by the NCC for the purposes of the contract; or
 - (b) if the NCC elects, shall be retained by the NCC, in which event they vest in the NCC absolutely.
- 2) In the case of a claim payable under a General Liability insurance contract maintained by the Contractor pursuant to GC10.1 INSURANCE CONTRACTS, the proceeds of the claim shall be paid by the insurer directly to the claimant.
- 3) If an election is made pursuant to paragraph 1) of GC10.2, the NCC may cause an audit to be made of the accounts of the Contractor and of the NCC in respect of the part of the work that was lost, damaged or destroyed for the purpose of establishing the difference, if any, between:
 - (a) the aggregate of the amount of the loss or damage suffered or sustained by the NCC, including any costs incurred in respect of the clearing of the work and its site and any other amount that is payable by the Contractor to the NCC under the contract, minus any monies retained pursuant to subparagraph 1)(b) of GC10.2; and
 - (b) the aggregate of the amounts payable by the NCC to the Contractor pursuant to the contract up to the date of the loss or damage.

- 4) A difference that is established pursuant to paragraph 3) of GC10.2 shall be paid forthwith by the party who is determined by the audit to be the debtor to the party who is determined by the audit to be the creditor.
- 5) When payment of a deficiency has been made pursuant to paragraph 4) of GC10.2, all rights and obligations of the NCC and the Contractor under the contract shall, with respect only to the part of the work that was the subject of the audit referred to in paragraph 3) of GC10.2, be deemed to have been expended and discharged.
- 6) If an election is not made pursuant to subparagraph 1)(b) of GC10.2, the Contractor shall, subject to paragraph 7) of GC10.2, clear and clean the work and its site and restore and replace the part of the work that was lost, damaged or destroyed at the Contractor's expense as if that part of the work had not yet been performed.
- 7) When the Contractor clears and cleans the work and its site and restores and replaces the work referred to in paragraph 6) of GC10.2, the NCC shall pay the Contractor out of the monies referred to in paragraph 1) of GC10.2 so far as they will thereunto extend.
- 8) Subject to paragraph 7) of GC10.2, payment by the NCC pursuant to paragraph 7) of GC10.2 shall be made in accordance with the contract but the amount of each payment shall be 100% of the amount claimed notwithstanding subparagraphs 3)(a) and 3)(b) of GC5.4 PROGRESS PAYMENT.

GC10.3 INSURANCE TERMS

GC10.3.1 General

GC10.3.1.1 Proof of Insurance

- 1) Before commencement of the Work, and prior to contract award, the Contractor shall deposit with the NCC a Certificate of Insurance (approved Insurance form is enclosed at the end of this section).
- 2) Upon request by the NCC, the Contractor shall provide originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the provisions contained herein.
- 3) The insurance policies shall be endorsed to provide the NCC with no less than 30 days notice in writing in advance of a cancellation of insurance or any reduction in coverage.

GC10.3.1.2 Payment of Deductible

- 1) Any moneys paid or payable in respect of a deductible amount shall be borne exclusively by the Contractor.

GC10.3.2 Commercial General Liability

GC10.3.2.1 Scope of Policy

- 1) 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) an Each Occurrence Limit of not less than \$5,000,000;
 - (b) a Products/Completed Operations Aggregate Limit of not less than \$5,000,000; and
 - (c) a General Aggregate Limit of not be less than \$10,000,000 per policy year, if the policy is subject to such a limit.

- 2) The policy shall either include or be endorsed to include coverage for the following exposures or hazards if the Work is subject thereto:
 - (a) Blasting;
 - (b) Pile driving and caisson work;
 - (c) Underpinning;
 - (d) Removal or weakening of support of any building or land whether such support be natural or otherwise if the work is performed by the insured Contractor.

GC10.3.2.2 Insured

- 1) The policy shall insure the Contractor and shall include the NCC as an additional Insured, with respect to liability arising out of the operations of the Contractor with regard to the work.

GC10.3.2.3 Period of Insurance

- 1) Unless otherwise directed in writing by the NCC, or, otherwise stipulated elsewhere herein, the policy required herein shall be in force and be maintained from the date of contract award until the day of issue of the Certificate of Completion except that the coverage for Completed Operations Liability shall, in any event, be maintained for a period of at least six (6) years beyond the date of the Certificate of Substantial Performance.

GC10.3.3 Builder's Risk / Installation Floater

GC10.3.3.1 Scope of Policy

- 1) The insurance coverage provided by a Builder's Risk policy or an Installation Floater policy shall not be less than that provided by IBC Forms 4042 and 4047, as amended from time to time.
- 2) The policy shall permit use and occupancy of the project, or any part thereof, where such use and occupancy is for the purposes for which the project is intended upon completion.
- 3) The policy may exclude or be endorsed to exclude coverage for loss or damage caused by any of the following:
 - (a) Asbestos;
 - (b) Fungi or spores;
 - (c) Cyber;
 - (d) Terrorism.

GC10.3.3.2 Amount of Insurance

- 1) The amount of insurance shall not be less than the sum of the contract value plus the declared value (if any) set forth in the contract documents of all material and equipment supplied by the NCC at the site of the project to be incorporated into and form part of the finished Work. If the value of the Work is changed, the policy shall be changed to reflect the revised contract value.

GC10.3.3.3 Insurance Proceeds

- 1) The policy shall provide that the proceeds thereof are payable to the NCC may direct in accordance with GC10.2, "Insurance Proceeds".
- 2) The Contractor shall, without delay, do such things and execute such documents as are necessary to effect payment of the proceeds.

• To be completed by the insurer / À être rempli par l'assureur

CONTRACT / MARCHÉ					
Description and location of work / Description et endroit des travaux				Contract no. / N° de contrat	
INSURER / ASSUREUR					
Name / Nom					
Address / Adresse		No., Street / N°, rue			
		City / Ville	Province	Postal code / Code postal	
BROKER / COURTIER					
Name / Nom					
Address / Adresse		No., Street / N°, rue			
		City / Ville	Province	Postal code / Code postal	
INSURED / ASSURÉ					
Name of contractor / Nom de l'entrepreneur					
Address / Adresse		No., Street / N°, rue			
		City / Ville	Province	Postal code / Code postal	
ADDITIONAL INSURED / ASSURÉ ADDITIONNEL					
The National Capital Commission / La Commission de la capitale nationale					
<p>This insurer certifies that the following policies of insurance are at present in force covering all operations of the Insured, in connection with the contract made between the named insured and the National Capital Commission.</p> <p>L'assureur atteste que les polices d'assurances suivantes sont présentement en vigueur et couvrent toutes les activités de l'assuré en fonction du marché conclu entre l'Assuré dénommé la Commission de la capitale nationale</p>					
POLICY / POLICE					
Type Genre	Number Numéro	Inception Date Date d'effet	Expiry Date Date d'expiration	Limit of Liability Limites de garantie	
Commercial General Liability Responsabilité civile des entreprises					
Builder's Risk "All Risks" Assurance des chantiers « tous risques »					
Installation Floater "All Risks" Risques d'installation « tous risques »					
Other (list) / Autre (énumérer)					
<p>Each of these policies includes the coverages and provisions as specified in Insurance Terms and each policy has been endorsed to cover the National Capital Commission as an Additional Insured. The Insurer agrees to notify the National Capital Commission in writing thirty (30) days prior to any material change in, or cancellation of any policy or coverage.</p>			<p>Chacune des présentes polices renferment des garanties et dispositions spécifiées aux Conditions d'assurance, et chaque police a été amendée pour couvrir la Commission de la capitale nationale en tant qu'assuré additionnel. L'assureur convient de donner un préavis de trente (30) jours à la Commission de la capitale nationale en cas de changement visant la garantie d'assurance ou les conditions ou de l'annulation de n'importe quelle police ou garantie.</p>		
<p>_____ Name of Insurer's Office or Authorized Employee / Nom du cadre ou de la personne autorisée</p>			<p>_____ Telephone number / Numéro de téléphone</p>		
<p>_____ Signature</p>			<p>_____ Date</p>		

- 01 Interpretation
- 02 General Fair Wage Clause
- 03 Hours of Work
- 04 Labour Conditions to be Posted
- 05 The Contractor to Keep Records which are to be Kept Open for Inspection
- 06 NCC Requirements before Payment made to Contractor
- 07 Authority to pay Wages in the Event of Default by the Contractor
- 08 Conditions of Subcontracting
- 09 Non-discrimination in Hiring and Employment of Labour

01 Interpretation

1. In these Conditions

"Act" means the Fair Wages and Hours of Labour Act;

"Regulations" means the Fair Wages and Hours of Labour Regulations made pursuant to the Act;

"Contract" means the contract of which these Labour Conditions are part;

"the NCC" means the National Capital Commission;

"Contractor" means the person who has entered into the contract with the NCC ;

"Regional Director" means the director of a regional office of the Department of Human Resources and Skills Development or the director's designated representative;

"Inspector" has the meaning assigned to the term by Part III of the Canada Labour Code;

"Minister" means the Minister of Labour of Canada;

"persons" means those workers employed by the contractor, subcontractor or any other person doing or contracting to do the whole or any part of the work contemplated by the contract;

02 General Fair Wage Clause

- 1. All persons in the employ of the Contractor, subcontractor, or any other person doing or contracting to do the whole or any part of the work contemplated by the Contract, shall during the continuance of the work:
 - (a) be paid fair wages that is, such wages as are generally accepted as current for competent workers in the district in which the work is being performed for the character or class of work in which such workers are respectively engaged; and
 - (b) in all cases, be paid no less than the minimum hourly rate of pay established by the Labour Program of the Department of Human Resources and Social Development in the Schedules of Wage Rates which form a part of this Contract and these labour conditions; and
 - (c) for contracts covering work performed in the province of Quebec, be paid at least the wage rates established by that province for the purposes of the Quebec "Construction Decree".
- 2. Where there is no wage rate in the schedules referred to in paragraph 1 for a particular character or class of work, the Contractor shall pay wages for that character or class of work at a rate not less than the rate for an equivalent character or class of work.

3. Where during the term of the Contract, the Contractor receives notice from the NCC of any change in wage rates, the Contractor shall pay not less than the changed wage rate beginning on the first day after receipt, by the Contractor, of the notice of the change in wage rates.

03 Hours of Work

1. The hours of work in a day and in a week of persons employed in the execution of the Contract, including the hours of work in excess of which a person shall be paid overtime at a rate at least equal to one and one half times the fair wage, are the hours of work for the province in which the work is being performed as set out from time to time in an Act of that province.
2. The daily or weekly hours of work referred to in paragraph 1 may be exceeded in accordance with the applicable provincial law.

04 Labour Conditions to be Posted

1. For the information and the protection of all persons, the Contractor agrees to post and keep posted, in a conspicuous place on the premises where work contemplated by the Contract is being carried out or on premises occupied or used by persons engaged in carrying out such work, a copy of these Labour Conditions, and a copy of the applicable Schedules of Wage Rates along with any subsequent changes.

05 The Contractor to Keep Records which are to be Kept Open for Inspection

1. The Contractor agrees to keep books and records showing the names, addresses, classifications of employment and work of all workers employed under the Contract, the rate of wages to be paid, the wages paid and the daily hours worked by the workers.
2. The Contractor also agrees that the Contractor's books, records and premises will be open at all reasonable times for inspection by an Inspector.
3. The Contractor also agrees to furnish the Inspector and the NCC, on request, with such further information as is required to ascertain that the requirements of the Act, the Regulations and the Contract with respect to wages, hours of work and other labour conditions have been complied with.

06 NCC Requirements before Payment made to Contractor

1. The Contractor agrees that the Contractor will not be entitled to payment of any money otherwise payable under the Contract until the Contractor has filed with the NCC in support of a claim for payment a sworn statement:
 - (a) that the Contractor has kept the books and records required by these Regulations;
 - (b) that there are no wages in arrears in respect of work performed under the Contract; and
 - (c) that to the Contractor's knowledge, all the conditions in the Contract required by the Act and the Regulations have been complied with.
2. The Contractor also agrees that, where fair wages have not been paid by the Contractor to persons employed under the Contract, the NCC shall withhold from any money otherwise payable under the Contract to the Contractor the amount necessary to ensure that fair wages are paid to all employees until fair wages are paid.

07 Authority to pay Wages in the Event of Default by the Contractor

1. The Contractor agrees that where the Contractor is in default of payment of fair wages to an employee, the Contractor will pay the NCC the amount the Contractor is in default.
2. The Contractor agrees that where the Contractor fails to comply with paragraph 1, the NCC will pay to the Receiver General, out of any money otherwise payable to the Contractor, the amount for which the Contractor is in default.

08 Conditions of Subcontracting

1. The Contractor and the subcontractor agree that in subcontracting any part of the work contemplated by the Contract, they will place in the subcontract the conditions respecting fair wages, hours of work and other labour conditions set out in the Contract and the requirements set out in Article 4 of the Section. The Contractor further agrees that the Contractor will be responsible for carrying out these conditions in the event the subcontractor fails to carry them out.

09 Non-discrimination in Hiring and Employment of Labour

1. The Contractor agrees that in the hiring and employment of workers to perform any work under the Contract, the Contractor will not refuse to employ and will not discriminate in any manner against any person because:
 - (a) of that person's race, national or ethnic origin, colour, religion, age, sex, sexual orientation, marital status, disability, conviction for which a pardon has been granted, or family status;
 - (b) of the race, national or ethnic origin, colour, religion, age, sex, sexual orientation, marital status, disability, conviction for which a pardon has been granted, or family status of any person having a relationship or association with that person, or;
 - (c) a complaint has been made or information has been given in respect of that person relating to an alleged failure by the Contractor to comply with subparagraph (a) or (b).

1. General

- 1.1 In this Contract “OHS” means “occupational health and safety”.
- 1.2 With respect to the work to be performed under the Contract, the Contractor covenants and agrees to perform at, and to enforce conformity with, a standard equivalent to or greater than the best practices prevailing in the construction industry at that time.
- 1.3 The Contractor acknowledges that, to the extent that the following matters may be affected by conduct of the work, it is responsible for the:
- 1.3.1 health and safety of persons on site;
 - 1.3.2 safety of property on site;
 - 1.3.3 protection of persons adjacent to the site; and,
 - 1.3.4 protection of the environment.
- 1.4 Without limiting the generality of section 1.3, the Contractor acknowledges that it is required to, and covenants and agrees to, comply and to enforce compliance with all laws or regulations that may be applicable to the conduct of the work including, without limitation:
- (a) the provisions of the *Occupational Health and Safety Act* of Ontario and all regulations, policies or directives issued thereunder for work performed in Ontario;
 - (b) *La Loi sur la santé et la sécurité du travail* of Québec and all regulations, policies or directives issued thereunder for work performed in Québec;
 - (c) Applicable provisions of the *Canada Labour Code, Part II*;
 - (d) Employment standards legislation in the province(s) in which any part of the work is performed; and
 - (e) Any policies or directives issued by the NCC in respect of the subject matter of the contract.

The NCC will present any such policies or directives referred to in paragraph (e) to the Contractor in written form by not later than the pre-construction meeting. The Contractor is obliged to ensure that the relevant policies and directives have been communicated to and acknowledged by all its employees and that they will be complied with. The NCC reserves the right to require the Contractor to produce evidence satisfactory to the NCC acting reasonably that the Contractor has discharged the foregoing obligations.

- 1.5 By entering into the Contract with the NCC, the Contractor represents and warrants to the NCC that it has informed itself of and is knowledgeable about the obligations imposed by the legislation referred to in 1.4. above.
- 1.6 For purposes of the relevant provincial OHS legislative regime the Contractor acknowledges and agrees that it is the “Constructor” and covenants to discharge and accept all liability for the performance of the obligations of the “Constructor” in respect of the work provided for in the Contract. Notwithstanding a determination by the relevant authority having jurisdiction that the NCC is the “Constructor” in the event of a dispute between the Contractor and the NCC, the Contractor acknowledges and agrees that the Contractor shall be financially responsible for the implementation of protective measures necessary to fulfill the obligations of the “Constructor”.

- 1.7 As between the NCC and the Contractor, the NCC's decision as to whether the Contractor is discharging its obligations in respect of OHS issues shall be definitive. Without limiting the generality of the foregoing, in the event of any dispute with respect to instructions given by the NCC's designated representative, the Contractor may note such dispute, but must nevertheless forthwith comply with any such instructions.
- 1.8 The Contractor hereby indemnifies and agrees to hold harmless the NCC, its agents and employees, from and against any and all claims, demands, losses, costs (including legal fees on a full indemnity basis), damages, actions, suits or proceedings (hereinafter collectively referred to as "claims") by third parties that arise out of or are attributable to the Contractor's errors or omissions in the performance of the Contract. Without limiting the generality of the foregoing, this indemnification extends to any claims related to any violation of any statute or regulation relating to OHS matters.
- 1.9 The NCC shall provide the contractor:
- 1.9.1 a written description of every known and foreseeable health and safety hazard to which persons employed in the performance of the work may be exposed because of the nature of the site;
 - 1.9.2 a list of any prescribed materials, equipment, devices and clothing necessary because of the nature of the site;
 - 1.9.3 with written information indicating the prescribed circumstances and manner to use all prescribed materials, equipment, devices and clothing listed pursuant to 1.9.2; and,
 - 1.9.4 with a copy of any NCC policies and procedures that may be applicable in relation to the work site.
- 1.10 Without limiting the generality of 1.9, prior to the commencement of the work by the contractor, the contractor shall, at the contractor's expense:
- 1.10.1 take all reasonable care to ensure that all persons employed in the performance of the work or granted access to the work or its site are informed of any health and safety hazard described pursuant to 1.9.1;
 - 1.10.2 provide all persons employed in the performance of the work or granted access to the work or its site with prescribed materials, equipment, devices and clothing listed pursuant to 1.9.2;
 - 1.10.3 take all reasonable care to ensure that all persons employed in the performance of the work or granted access to the work or its site are familiar with the prescribed circumstances and manner all prescribed materials, equipment, devices and clothing listed pursuant to 1.9.2; and
 - 1.10.4 take all reasonable care to ensure that all persons employed in the performance of the work or granted access to the work or its site are familiar with policies and procedures referred to in 1.9.4.

2. Qualifications of Personnel

- 2.1 By entering into this agreement the contractor represents and warrants that it has the requisite experience, training, formal certification and equipment to enable it to discharge the obligations enumerated in sections 1.3, 1.4, 1.5 and 1.6 above.
- 2.2 The Contractor represents and warrants that supervisory personnel employed by the Contractor in respect of performance of any part of the work have the requisite experience, authority, training, formal certification and equipment to ensure that the obligations enumerated in sections 1.3, 1.4, 1.5

and 1.6 above are discharged and agrees to deliver such evidence as may be required by the NCC from time to time to verify same.

3. Certification

- 3.1 After receiving notification that its bid has been retained and prior to and as a condition of contract award, the Contractor covenants and agrees to deliver a Worker's Compensation Clearance Certificate. Where the duration of the project is greater than sixty days, the Contractor covenants and agrees to deliver up-dated certificates at least every 60 days. In the event of a failure by the Contractor to deliver up-dated certificates, the NCC shall be entitled to immediately terminate the contract without notice and without incurring any liability to the Contractor.
- 3.2 After receiving notification that its bid has been retained and prior to and as a condition of contract award, the Contractor covenants and agrees to deliver historical information on its injury experience including any pertinent Worker's Compensation Experience Reports. Such historical information shall report data for the previous three years.

4. Plans Policies and Procedures

- 4.1 After receiving notification that its bid has been retained and prior to and as a condition of contract award, the Contractor covenants and agrees to deliver for the review and approval of the NCC:
- (a) A copy of the contractor's OHS policy;
 - (b) A safety program and plan specific to the work to be performed pursuant to the Contract which plan shall include a risk assessment and analysis, a description of safe working methods, injury and incident reporting protocols, regular periodic reporting on compliance with OHS obligations including any policies, practices and procedures otherwise provided for herein, and a site-specific contingency and emergency response plan; and
 - (c) Health and safety training records of personnel and alternates responsible for OHS issues on site.

The Contractor covenants and agrees to deliver the necessary material safety data sheets for the review and approval of the NCC prior to entering the site to perform work related to the relevant material.

Approval by the NCC does not amend the provisions of the Contract with respect to the allocation of liability for discharging or failing to discharge OHS obligations. Such liability remains with the Contractor notwithstanding the granting of such approval.

- 4.2 The Contractor acknowledges and agrees that prior to commencement of work it must attend a pre-construction briefing at which any special or additional practices and procedures to be followed in completing the work are to be established. Without limiting the provisions of section 1.4(e) above, the representatives of the Contractor attending the briefing will be required to deliver a signed acknowledgement that the practices and procedures set out in the pre-construction briefing have been understood and will be complied with.
- 4.3 At any time and from time to time during the performance of the work, the NCC shall have the right to audit the manner in which the Contractor is discharging its OHS obligations and to determine whether the project specification and/or OHS policies, practices and procedures are being complied with. In the event that the audit discloses any failure by the Contractor to discharge such OHS obligations, the NCC shall be entitled to forthwith rectify at the Contractor's expense any such deficiency and the NCC shall have the further right to immediately terminate the contract without notice and without incurring any liability to the Contractor.

- 4.4 The Contractor covenants and agrees to conform with all requirements of the Workplace Hazardous Materials Information System.
- 4.5 The Contractor acknowledges and agrees that where required by any law or regulation applicable to the performance of the work it must establish and maintain a project health and safety committee. The contractor further acknowledges and agrees that it must enable staff to attend all relevant safety meetings, and that the cost of same, including costs attributable to standing down equipment is included in its bid price and is not independently recoverable.
- 4.6 Where required by the relevant provincial regulatory regime, the Contractor acknowledges and agrees that it is responsible for delivery of notice of the project to the relevant regulatory authority, and for the performance of any other administrative activity required to meet the obligations imposed in the pertinent provincial regulatory regime.
- 4.7 **(Optional depending on hazard or scope of project)**. The contractor covenants and agrees that it shall employ and assign to the work, a competent OHS professional as Health and Safety Coordinator that must:
- (a) have a minimum two (2) years' site-related working experience specific to activities associated with.(identify specific subject matter)
 - (b) have basic working knowledge of specified occupational safety and health regulations,
 - (c) be responsible for completing health and safety training session and ensuring that personnel not successfully completing the required training are not permitted to enter the site to perform the Work,
 - (d) be responsible for implementing, enforcing daily and monitoring the site-specific Health and Safety Plan, and
 - (e) be on site during execution of the Work.

The parties acknowledge that in lieu of employing an OHS professional, the Contractor may provide same by sub-contracting for such services.

- 4.8 Upon completion of the work the Contractor covenants and agrees to participate with the NCC in a post performance interview to evaluate the performance of the Contractor in respect of the OHS obligations under the contract. Without limiting the generality of the foregoing, the interview will identify areas of compliance and non-compliance in terms of:
- (a) actual performance of the work;
 - (b) reporting or procedural requirements;
 - (c) resolution of deficiencies.

The contractor acknowledges and agrees that the results of the post-completion interview may be relied upon by the NCC in evaluating bids subsequently submitted by the Contractor on other NCC projects.

Security Requirements

The NCC complies with Treasury Board's *Policy on Government Security* and consequently, it will require that the Contractor's employees 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.

The NCC reserves the right to not award the Contract until such time as the Contractor's 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**.

The NCC also reserves the right to request that the Contractor submit to a *Designated Organisation Screening* and/or *Facility Security Clearance*— depending on the nature of the information it will be entrusted with. In the event that the Contractor does not meet the requirements to obtain the requested clearance, the Contractor shall take the corrective measures recommended by the Canadian Industrial Security Directorate (of PWGSC) or by the NCC's Corporate Security in order to meet these requirements. If no corrective measures are possible or if the Contractor fails to take the recommended measures, then the Contractor shall be in default of its obligations under this Contract and the NCC shall have the rights and remedies listed in section 2.14, including the right to terminate the Contract without further notice to the Contractor.

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.

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;
- 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 employees 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

SECURITY REQUIREMENTS

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 reliability status, 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.

Lac Philippe Covered Bridge Rehabilitation

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1 References

- .1 Section 01 11 01 - Pay Item Descriptions
- .2 National Capital Commission (NCC)
Standard Drawings
- .3 Cahier des charges et devis généraux -
Infrastructures routières - Construction
et réparation (CCDG 2010)
- .4 Normes - Ouvrages routiers (Tomes I à
VII) de Transports Québec (MTQ)

2 Description of
Work

- .1 Work under this contract covers the
following:

Work on Structure

Rehabilitation of the Lac Pilippe
Covered Bridge includes:

- .1 Asphalt and waterproofing removal
- .2 Concrete repairs and deck overlay
- .3 Waterproofing membrane
- .4 Paving
- .5 Pavement markings
- .6 Structural steel repairs
- .7 Coating structural steel
- .8 Remove and replace deck drains
- .9 The Removal and reconstruction of
the ballast walls
- .10 Replacement of bearing on north
abutment
- .11 Substructure concrete repairs
- .12 Repair timber elements on cover
structure
- .13 Install gabion retaining walls
- .14 Excavate and backfill
- .15 Modify bridge guardrail
- .16 Rehabilitation of site
- .17 Other related work

Work at approaches

Works consist in the rehabilitation of
the overpass and approaches and include:

- .1 Asphalt removal

- .2 Excavation and backfill
- .3 Paving
- .4 Pavement markings
- .5 Guard rails
- .6 Top soil and sod
- .7 Other related work

3 Codes

- .1 Perform work in accordance with the contract specifications, "Cahier des charges et devis généraux (CCDG)" and National Capital Commission Standards and any other code of provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.
- .2 Meet or exceed requirements of:
 - .1 contract documents,
 - .2 specified standards, codes and referenced documents.

4 Documents Required

- .1 Maintain at job site, one copy each of following:
 - .1 Contract drawings
 - .2 Specifications
 - .3 Addenda
 - .4 Approved work schedule
 - .5 Approved traffic control plan
 - .6 Reviewed shop drawings
 - .7 Change orders
 - .8 Other modifications to Contract
 - .9 Field test reports
 - .10 Manufacturers' installation and application instructions

5 Work Schedule

- .1 Provide, within 7 working days after Contract award, schedule showing anticipated progress stages and final completion of work.
- .2 Interim reviews of work progress based on work schedule will be conducted as decided by Engineer and schedule updated by Contractor in conjunction with and to

approval of Engineer.

6 Contractor's Use
of Site

- .1 Use areas as directed by the Engineer for storage.
- .2 Obtain and pay for use of additional storage or work areas.
- .3 Limit construction activity to the limits identified on the contract drawings.

7 Project Meetings

- .1 Engineer will arrange project meetings and assume responsibility for setting times and recording and distributing minutes.

8 Existing Utilities

- .1 Locations of existing utilities are to be considered as approximate. Contractor shall arrange for utility locations prior to commencing work.
- .2 Where work involves breaking into or connecting to existing services, carry out work at times directed by authorities having jurisdiction, with minimum of disturbance to pedestrian and vehicular traffic.
- .3 Where unknown services are encountered, immediately advise Engineer and confirm findings in writing.
- .4 Record locations of maintained, re-routed and abandoned service lines.
- .5 Contractor is responsible for any damage to any existing and temporary utility.

9 Additional Drawings

- .1 Engineer may furnish additional drawings for clarification. These additional drawings have same meaning and intent as

if they were included with plans referred to in Contract documents.

10 Payment

- .1 Any minor or miscellaneous items indicated on the drawing as being part of the work of this Contract and for which there are no specific pay items listed on the unit price table must be included by the Contractor in his overhead and indirect charges and incorporated into the unit prices which are listed on the unit price tables.
- .2 No separate payment will be made for work performed in respect to any of the specifications for which there is no specific pay item on the unit price table. The cost of these works must be appropriated among, and included in, the unit prices bid for the pay items listed.
- .3 Included in the unit prices bid for the respective items shall be, in addition to the actual cost of construction, all other items of work required to complete the Contract to the extent indicated on the drawings and specified herein.
- .4 Unit prices shall not be adjusted regardless of quantities of work done on site (+ or -).

11 Damages

- .1 Existing plant material, landscaping, roadways, curbs, pathways, structures, finishes and public utilities damaged during the execution of the work of this Contract, will be restored to their original condition, replaced, or adequate compensation made to affected parties by the Contractor.
- .2 It is understood that restored or replaced work includes labour, equipment and material costs.

12 Permits and
By-Laws

- .1 The Contractor shall make himself fully acquainted with all Provincial, Local and other By-laws relating to the work of this Contract, as he will be required to comply with such by-laws without extra compensation of any nature.
- .2 Obtain and pay for permits, factory inspector's approval, and other licenses required for this project and also pay any other charges incidental to such permits.

13 Taxes

- .1 Include in the tender amount all sales taxes and other taxes levied by the Federal, Provincial and Municipal government or other Authority. There will be no refunds made by the National Capital Commission to the Contractor for taxes paid by him.

14 Compaction of
Materials

- .1 The thickness of asphalt shown on the drawings shall be the real thickness after the materials have been compacted as specified.

15 Measurement for
Payment

- .1 The Engineer shall take measurements prior to commencement in all areas and additional measurements as required to determine pay quantities. The Engineer and Contractor shall take measurements at the same time (when practical) and endeavour to agree on all quantities prior to the submission of invoices.
- .2 The Contractor shall notify the Engineer two (2) full work days in advance of any requirements for survey work to be done by the Engineer.
- .3 The Contractor shall ensure that the Engineer has obtained the necessary measurements prior to commencement of subsequent operations.

- 16 Addendas .1 Answers to questions directed to the Engineer, and any amendments to the drawings and specifications during the Tender period will be communicated in the Form of "Addenda" to all General Contractors tendering. Such "Addenda" to be considered as and read as part of the specifications, and thereby included in the Contract Documents.
- 17 Interpretation of Bilingual Documents .1 If the two (2) language versions of these specifications differ, the preference shall be given to the version thereof, that according to the true spirit, intent and meaning of the text best insures the attainment of its objective.
- 18 Relics and Antiquities .1 Protect relics, archaeological evidence, antiquities, items of historical or scientific interest such as cornerstones and contents, commemorative plaques, inscribed tablets, and similar objects found during course of work.
- .2 Give immediate notice to Engineer and await Engineer's written instructions before proceeding with work in this area.
- .3 Relics, antiquities and items of historical or scientific interest remain her Majesty's property.

END OF SECTION

1 Sitework

- .1 The cost of the work shown on the drawings or implicitly required without items in the tender price table must be included in the cost of the items in the tender price table or be in the site organization cost.
- .2 Dewatering systems and cofferdams shall be built to dry up the excavation and all work areas at the abutment and retaining walls. The work includes all site preparation for the dewatering and cofferdams and the supply of all necessary documents. It includes all excavations required to construct the dewatering system (including cofferdams), all equipment and materials required for its construction and for its removal at the end of the work. It also includes the implementation of all environmental protections, turbidity curtains and incidental works. Contractor shall use the method of his choice; cofferdams built with sand bags and waterproof membrane, steel sheetpiles or other equivalent dewatering system to be approved by NCC. Contractor shall refer to General Condition GC3.4.5 stipulating that temporary structures are of the sole responsibility of Contractor, dewatering systems or cofferdams being considered as temporary structures. Avoid dispersion of any materials in the waterways.
- .3 Work of this item is primarily described on drawings and in Sections 01 33 00, 01 35 43, 01 74 11, 01 74 21, 35 20 22.
- .4 There will be no measurement for payment. Payment at the contract lump sum price shall be full compensation for all labour, materials and equipment to do the work.

2 Traffic control

- .1 The work under this item consists of all traffic control /. detour required to perform rehabilitation work on bridge and approaches and associated works. Control and protection of vehicular,

pedestrian and cyclist traffic is included under this item. The Contractor shall supply, locate, relocate, erect, operate, maintain, replace and remove all temporary traffic control devices and supply flagpersons as required by the construction operations as per Section 01 35 14.

.2 Lac Philippe Bridge can be closed during construction. Traffic detour will be done through Brazeau road and bridge and Schnob Road as shown on drawings and specifications. These are owned by the Municipality of Lapêche. Brazeau bridge is a one lane bridge with yield signs. If existing signs are not sufficient, Contractor shall have to install proper signage as per Section 01 35 14 under his responsibility at its own cost with prior approval of NCC and the Municipality of Lapêche.

.3 The number, configuration and location of all traffic control devices shall be in accordance with the MTQ Traffic control devices, Volume V, Latest Edition and shall be in both official languages. The preparation of Québec Engineer signed and stamped Traffic Control Plan for approval is included in the work.

.4 There will be no measurement for payment. Payment at the contract lump sum price shall be full compensation for all labour, materials and equipment to do the work.

3 Protection of
Utilities_____

.1 The work under this item consists of, without limitation:

- Performing utility locates within the limits of construction;
- Protection of all utilities as required by the utility agencies and to prevent any an all damage.

.2 The cost of the work shown on the drawings or implicitly required without items in the tender price table must be

included in the cost of the items in the tender price table for the location and protection of utilities.

- .3 There will be no measurement for payment. Payment at the contract lump sum price shall be full compensation for all labour, materials and equipment to do the work.

4 Environmental Protection

- .1 The work under this item consists of, without limitation:

- Preparing the environmental protection plan and submission to the NCC and any other regulatory agencies for review and comments. The plan shall be prepared, sealed and signed by a professional engineer licensed by the Ordre des ingénieurs du Québec;
- Modification of the environmental protection plan per comments provided;
- Obtaining and paying for permits as required;
- Implement all environmental protection measures required to perform the work, per the contract and by the NCC or other regulatory agencies.

- .2 The cost of the work shown on the drawings or implicitly required without items in the tender price table must be included in the cost of the items in the tender price table or be in the environmental protection costs.

- .3 There will be no measurement for payment. Payment at the contract lump sum price shall be full compensation for all labour, materials and equipment to do the work.

5 Dewatering

- .1 The cost of the work shown on the drawings or implicitly required without items in the tender price table must be included in the cost of the items in the tender price table or be in the dewatering cost.

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- .2 Dewatering systems and cofferdams shall be built to dry up the excavation and work areas for all work on the abutments and retaining walls. The work includes all site preparation for the dewatering and cofferdams and the supply of all necessary documents. It includes all excavations required to construct the dewatering system (including cofferdams), all equipment and materials required for its construction and for its removal at the end of the work. It also includes the implementation of all environmental protections, turbidity curtains and incidental works. Contractor shall use the method of his choice; cofferdams built with sand bags and waterproof membrane, steel sheetpiles or other equivalent dewatering system to be approved by NCC. Contractor shall refer to General Condition GC3.4.5 stipulating that temporary structures are of the sole responsibility of Contractor, dewatering systems or cofferdams being considered as temporary structures. Avoid dispersion of any materials in the waterways.
- .3 Work of this item is primarily described on drawings and in Sections 01 33 00, 01 74 11, 01 74 21, 35 20 22.
- .4 This item will be paid on a lump sum basis at the price included in the Tender form.
- .5 There will be no measurement for payment. Payment at the contract lump sum price shall be full compensation for all labor, materials and equipment to do the work.
- 6 Site Office for Contract Administrator .1 The work under this item consists of, without limitation:
- The Contract Administrator's office along with all utilities (phone, fax, electricity, air conditioning etc.

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- .2 The cost of the work shown on the drawings or implicitly required without items in the tender price table must be included in the cost of the items in the tender price table or be in the site office for contract administrator cost.
- .3 There will be no measurement for payment. Payment at the contract lump sum price shall be full compensation for all labor, materials and equipment to do the work.
- 7 Access to Work Area, Work Platforms and Scaffolding .1 This item includes the required temporary working platform, scaffolding and protection required to perform and access the work.
- All platforms, scaffolding and access systems plans shall be prepared, sealed and signed by a professional engineer licensed by the Ordre des ingénieurs du Québec;
- .2 The cost of the work shown on the drawings or implicitly required without items in the tender price table must be included in the cost of the items in the tender price table or be in the access to work area, work platforms and scaffolding cost.
- .3 This item will not be measured and payment will be a lump sum. Payment shall be full compensation for all labor, equipment and materials necessary to complete the work.
- 8/37 Removal of asphalt pavement and Waterproofing / Removal of Asphalt Pavement, Full and Partial Depth .1 The work shall include: the full depth and partial depth removal of asphalt from the bridge deck and approaches; removal of waterproofing from the bridge deck after removal of the asphalt; sawcut a smooth / sawcut joint at the removal limits; disposal of the removed materials at an approved site arranged for by the Contractor; cleaning of remaining pavement surfaces.
- .2 The method of payment for this item will

		be based on square meters of asphalt removed.
	.3	The unit price bid shall be full compensation for all labour, equipment and material necessary to do the work including disposal.
<u>9 Temporary Support of Timber Structure</u>	.1	This item includes the supply, erection, maintenance and removals of the temporary support of the timber structure required to complete all repairs / modifications to the timber structure. All temporary support systems shall be prepared, sealed and signed by a professional engineer licensed by the Ordre des ingénieurs du Québec.
	.2	This item will not be measured and payment will be a lump sum.
	.3	Payment shall be full compensation for all labor, equipment and materials necessary to complete the work.
<u>10/38 Earth Excavation for Structure / Earth Excavation for Retaining Walls</u>	.1	The work shall include excavating, hauling, handling, placing, shaping, compacting and trimming of soils as required, including excavation, hauling and disposal of excess material at an approved site arranged for by the Contractor as indicated on the Contract Drawings.
	.2	The method of payment for this item will be based on cubic meters of excavation.
	.3	The unit price bid shall be full compensation for all labour, equipment and material necessary to do the work including disposal.
<u>11 Scarify concrete deck</u>	.1	The work shall include the removal of 50mm of concrete by scarifying the top of the bridge deck and the disposal of

		the removed concrete as shown on the contract drawings.
	.2	The method of payment for this item will be based on square meters of scarification. The works includes the surface preparations with high pressure wash.
	.3	The unit price bid shall be full compensation for all labour, equipment and material necessary to do the work including disposal as required.
<u>12 Partial Depth Concrete Removals, Deck</u>	.1	This item pertains to partial depth concrete removals of deteriorated areas on the top of the deck after scarification. All work required to complete the removals shall be included in this section.
	.2	Payment for this item shall be on a unit price basis per square meter defined as follows: - Horizontal dimensions for payment shall be calculated: after sawcutting spalls and delamination along lines delineated by the Contract Administrator. - Assume a 100mm average depth of removals for bidding purposes.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
<u>13 Full Depth Concrete Removals, Deck</u>	.1	This item pertains to full depth repairs to the concrete deck to remove all deteriorated areas and to extend the deck. All work required to complete the removals shall be included in this section.
	.2	Payment for this item shall be on a unit price basis per square meter defined as follows: Horizontal dimensions for payment shall

be calculated: after sawcutting spalls and delamination along lines delineated by the Engineer.

- .3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.

14 Partial Depth
Concrete Removals,
Bearing Seats

- .1 This item pertains to concrete removals partial depth at the top of the bearing seats. All work required to complete the removals shall be included in this section.

- .2 Payment for this item shall be on a unit price basis per square meter defined as follows:

- Horizontal dimensions for payment shall be calculated: after sawcutting spalls and delamination along lines delineated by the Engineer.

- Assume a 100mm average depth of removals for bidding purposes.

- .3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.

15 Partial Depth
Concrete Removals,
Abutment Faces

- .1 This item pertains to concrete removals partial depth at the face of the abutments. All work required to complete the removals shall be included in this section.

- .2 Payment for this item shall be on a unit price basis per square meter defined as follows:

- Horizontal dimensions for payment shall be calculated: after sawcutting spalls and delamination along lines delineated by the Engineer.

- Assume a 100mm average depth of removals for bidding purposes.

- .3 Payment shall be full compensation for all labour, equipment and materials

necessary to complete the work.

16 Full Depth Concrete
Removals, Ballast
Walls

- .1 This item pertains to concrete removals full depth of the ballast walls to the limits indicated on the contract drawings. All work required to complete the removals shall be included in this section.
- .2 This item will not be measured and payment will be a lump sum.
- .3 Payment shall be full compensation for all labor, equipment and materials necessary to complete the work.

17 Remove Deck Drains

- .1 This item pertains to the removal of existing deck drains. All work required to complete the removals shall be included in this section.
- .2 Payment for this item shall be on a unit price basis per deck drain removed.
- .3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.

18 Remove Damaged
Timber Members for the
Timber Structure

- .1 This item pertains to the removal of sections of damaged timber diagonal members. All work required to complete the removals shall be included in this section.
- .2 This item will not be measured and payment will be a lump sum.
- .3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.

19 Jack and
Temporarily Support
Bridge

- .1 This item pertains to the jacking and temporary support of the bridge for the replacement of bearing and any other work requiring the lifting of the bridge. Removal of the temporary supports, jacking system and any other work required by virtue of the

installation of the jacking system shall also be included in this item.

All jacking and temporary support plans shall be prepared, sealed and signed by a professional engineer licensed by the Ordre des ingénieurs du Québec;

.2 This item will not be measured and payment will be a lump sum.

.3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.

20 Remove Bearings

.1 This item pertains to the removal of existing bearings. All work required to complete the removals shall be included in this section.

.2 Payment for this item shall be on a unit price basis per bearing removed.

.3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.

21 Structural Steel Repairs

.1 This item pertains to structural steel repairs for the girders and diaphragms (particularly the ends the bridge). All work required to complete the repairs (including the cleaning to sound steel of girders and diaphragms) shall be included in this section.

The repairs will consist of reinforcing plates welded to deteriorated elements. The exact scope of the repairs will not be known until all steel is cleaned, bearings are removed and ballast walls are removed. For bidding purposes, the contractor shall assume the following:

- Supply and fabricate steel plate, 10mm thick, based on 10 different repair areas of varying sizes: 2 square meters

- Welding for repairs: 24 hours

	.2	This item will not be measured and payment will be a lump sum.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
<u>22 Abrasive Blast Clean and Structural Steel at Ends of Bridge</u>	.1	<p>This item pertains to abrasive blast cleaning and coating of all structural steel elements at the ends of the bridge. The cleaning and coating shall be performed after all removals and prior to the reconstruction of the ballast wall. All work required to complete the cleaning and coating including all environmental protection and cleanup shall be included in this section.</p> <p>All structural steel within the end 2 metres of the bridge shall be cleaned and coated. The remainder of the structure steel shall remain uncoated.</p>
	.2	This item will not be measured and payment will be a lump sum.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
<u>23 New Deck Drains</u>	.1	This item pertains to the installation of new deck drains. All work required to complete the supply, fabrication and installation of the deck drains shall be included in this section.
	.2	Payment for this item shall be on a unit price basis per deck drain removed.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
<u>24 Place Concrete in Deck, Partial Depth</u>	.1	This item pertains to the placement of concrete in partial depth removal areas on the top of the deck. All work required to complete the placement of the concrete in repair areas shall be

		included in this section including prewetting, bonding agent and wet curing for a period of 7 days.
	.2	Payment for this item shall be on a unit price basis per square meter.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
<u>25 Place Concrete in Deck, Full Depth</u>	.1	This item pertains to the placement of concrete in full depth removal areas on the top of the deck and the extension of the ends of the deck. All work required to complete the placement of the concrete in full depth repair / extension areas shall be included in this section including formwork prewetting, bonding agent and wet curing for a period of 7 days.
	.2	Payment for this item shall be on a unit price basis per square meter.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
<u>26 Place Concrete Overlay</u>	.1	The work shall include the placement of the 50mm thick overlay on of the bridge deck as indicated on the Contract Drawings including prewetting, bonding agent and wet curing for a period of 7 days.
	.2	Payment for this item shall be on a unit price basis per square meter.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
<u>27 Place Concrete Partial Depth, Bearing Seats</u>	.1	This item pertains to the placement of concrete in partial depth removal areas on the top of the bearing seats. All work required to complete the placement of the concrete in repair areas shall be included in this section including

prewetting, bonding agent and wet curing for a period of 7 days.

.2 Payment for this item shall be on a unit price basis per square meter.

.3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.

28 Place Concrete
Partial Depth,
Abutment Faces

.1 This item pertains to the placement of concrete in partial depth removal areas on the face of the abutments by pumping under pressure. All work required to complete the placement of the concrete in repair areas shall be included in this section including formwork, pumping under pressure, prewetting, bonding agent and curing (maintain formwork in place)for a period of 7 days.

.2 Payment for this item shall be on a unit price basis per square meter.

.3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.

29 Place Concrete in
Ballast Walls

.1 This item pertains to the placement of concrete in ballast walls. All work required to complete the placement of the concrete in ballast walls shall be included in this section including formwork, prewetting, bonding agent and wet curing (exposed surfaces)/ maintenance of formwork in place for a period of 7 days.

.2 There will be no measurement for payment.

.3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.

30 New Bearings

.1 This item pertains to the installation of new bearings including all materials and welding. All work required to complete the bearings shall be included in this section.

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- .2 Payment for this item shall be on a unit price basis per bearing installed.
- .3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
- 31 Reinforcing Steel .1 This item pertains to the placement of all reinforcing steel required to complete the work. All work required to complete the reinforcing steel placement shall be included in this section.
- .2 Payment for this item shall be on a unit price basis per tonne of reinforcing steel placed.
- .3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
- 32/41 Granular Backfill to Structure / Granular Backfill for Retaining Walls .1 This item pertains to the placement of granular backfill (MG-20) in structure excavations, for roadway grading and for retaining wall bedding. All work required to complete the placement of the granular backfill shall be included in this section including compaction, water for compaction, compaction testing, dust control any any other related work.
- .2 Payment for this item shall be on a unit price basis per tonne of backfill placed.
- .3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
- 33 Waterproofing .1 This item pertains to the waterproofing (hot rubberized asphalt waterproofing) of all exposed surfaces of the deck. All work required to complete the waterproofing shall be included in this section including surface preparation, primer, cleaning, protection, protection board.

- .2 This item will be measured in square meters of waterproofing on the deck.
- .3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
- 34 New Timber Traffic Rail
- .1 This item pertains to the installation of an addition timber traffic rail on each side of the roadway on the bridge. All work required to complete the placement of new rails shall be included in this section including rails and anchorages.
- .2 There will be no measurement for payment.
- .3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
- 35 Repair Damaged Members on timber structure
- .1 This item pertains to the replacement of sections of damaged timber diagonal members. All work required to complete the work shall be included in this section including timbers, steel reinforcement (plates) and anchorages.
- .2 This item will not be measured and payment will be a lump sum.
- .3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
- 36 Timber Structure Modifications
- .1 This item pertains to the modifications of the timber cover structure. All work required to complete the work shall be included in this section including new timbers, anchors, bolts, tie down brackets, nails, glue, steel plates, welding etc.
- .2 This item will not be measured and payment will be a lump sum.
- .3 Payment shall be full compensation for all labour, equipment and materials

necessary to complete the work.

39 Remove Timber
Retaining walls

- .1 This item pertains to the removal of the existing timber pile and lagging retaining walls. All work required to complete the removals shall be included in this section.
- .2 This item will not be measured and payment will be a lump sum.
- .3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.

40 New Gabion
Retaining Walls

- .1 This item pertains to the construction of new gabion retaining walls. All work required to complete the work shall be included in this section including gabion baskets, gabion stone, geotextile.
- .2 This item will be measured in cubic meters of gabion walls installed.
- .3 Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.

42/43 New Steel Beam
Guiderail / New Steel
Beam Guiderail End
Treatments

- .1 Works under this item includes the supply and installation of steel beam guiderail and end treatments at the approaches to the bridge. All work required to complete the installation shall be included in this section including connection at the bridge.
- .2 Measurement for payment shall be the total length of guide rails installed in metres and each end treatment installed.
- .3 The unit price bid shall be full compensation for all labour, equipment and materials necessary to complete the installation of the guiderail and end treatments as indicated on the Contract Drawings.

44 Asphalt pavement
(Bridge Deck and
approaches)

- .1 The work includes the supply, placing and compaction of ESG-10 hot mix asphalt as specified in the Contract Drawings. The application of tack coat on vertical joints and sawcutting and sealing of groove in asphalt is included. The asphalt cement to be used will be performance grade 58-34.
- .2 Measurement for payment shall be in metric tons of hot mix asphalt and compacted to line, grade, depth and required density. The Contractor shall provide "tickets" electronically prepared from a commercial source.
- .3 The unit price bid will be full compensation for supply, all labour, equipment and materials necessary and all associated works.

45 Pavement Markings

- .1 This item includes supply and placement of pavement markings on the bridge deck and the approaches.
- .2 Pavement markings will not be measured for payment as payment will be by lump sum.
- .3 Payment at the contract lump sum price shall be full compensation for all materials, labour, equipment required to layout and reinstate the pavement markings as required on new or existing asphalt pavement within the contract limits and as indicated on the Contract Drawings.

46 Top soil and Seed

- .1 This item includes supply and placement of 100mm of topsoil and hydroseeding for all areas disturbed by the construction.
- .2 Supply and placement of 100 mm topsoil and hydroseeding will be measured in square meters for payment.

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- .3 Payment shall be full compensation for grading, supply and placing of 100 mm of topsoil (including imported topsoil), supply and placing of hydroseeding and maintenance. The unit price bid will be full compensation for supply, all labour, equipment and materials necessary and all associated works.

47 Rip-Rap

- .1 This item includes supply and placement of rip-rap to the lines and thickness indicated on the contract drawings.
- .2 This item will be measured in square meters for payment.
- .3 The unit price bid will be full compensation for supply, all labour, equipment and materials necessary and to complete the work.

1 Related
Requirements
Specified Elsewhere

- .1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by Engineer are specified under various sections.

2 Appointment and
Payment

- .1 The NCC will appoint and pay for services of testing laboratory. Where tests or inspections by designated testing laboratory reveal work not in accordance with contract requirements, the Contractor shall pay costs for additional tests or inspections as Engineer may require to verify acceptability of corrected work.

3 Contractor's
Responsibilities

- .1 Furnish labour and facilities to:
 - .1 Provide access to work to be inspected and tested.
 - .2 Facilitate inspections and tests.
 - .3 Make good work disturbed by inspection and test.
 - .4 Provide storage on site for laboratory's exclusive use to store equipment and cure test samples.
- .2 Notify Engineer sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .4 Pay costs for uncovering and making good work that is covered before required inspection or testing is completed and approved by Engineer.

- 1 Section Includes_
- .1 Shop drawings and product data.
 - .2 Samples.
 - .3 Certificates and transcripts.
- 2 Precedence
- .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 3 References
- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-94, Stipulated Price Contract.
- 4 Administrative
- .1 Submit to Engineer submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
 - .2 Work affected by submittal shall not proceed until review is complete.
 - .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
 - .4 Where items or information is not produced in SI Metric units converted values are acceptable.
 - .5 Review submittals prior to submission to Engineer. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned

without being examined and shall be considered rejected.

- .6 Notify Engineer, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are coordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Engineer's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Engineer review.
- .10 Keep one reviewed copy of each submission on site.

5 Shop Drawings
and Product Data

- .1 Refer to CCDC 2 GC 3.11.
- .2 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.

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- .4 Allow five days for Engineer's review of each submission.
 - .5 Adjustments made on shop drawings by Engineer are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Engineer prior to proceeding with Work.
 - .6 Make changes in shop drawings as Engineer may require, consistent with Contract Documents. When resubmitting, notify Engineer in writing of any revisions other than those requested.
 - .7 Accompany submissions with transmittal letter, in duplicate, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
 - .8 Submissions shall include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.

- .8 Wiring diagrams.
- .9 Single line and schematic diagrams.
- .10 Relationship to adjacent work.

- .9 After Engineer's review, distribute copies.
- .10 Submit one transparency on plastic film of shop drawings for each requirement requested in specification Sections and as consultant may reasonably request.
- .11 Submit 6 copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Engineer where shop drawings will not be prepared due to standardized manufacture of product.
- .12 Delete information not applicable to project.
- .13 Supplement standard information to provide details applicable to project.
- .14 If upon review by Engineer, no errors or omissions are discovered or if only minor corrections are made, transparency will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

6 Samples

- .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Engineer's business address.

- .3 Notify Engineer in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by Engineer are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Engineer prior to proceeding with Work.
- .6 Make changes in samples which Engineer may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

7 Certificates
and Transcripts

- .1 Immediately after award of Contract, submit Workers' Compensation Board status.

1 Related Work

- .1 Section 01 11 01 - Pay Item Description
- .2 Section 02 41 14 - Asphalt Pavement Removal
- .3 Section 32 12 17 - Asphalt Paving

2 References

- .1 MTQ Volume V Traffic Control Manual, Latest Edition

3 Protection of
Public Traffic

- .1 Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic or use of roadways upon or over which it is necessary to carry out work or haul materials or equipment.
- .2 When working on traveled way:
 - .1 Place equipment in position to present minimum of interference and hazard to traveling public.
 - .2 Keep equipment units as close together as working conditions permit and preferably on same side of traveled way.
 - .3 Do not leave equipment on traveled way overnight.
- .3 Keep traveled way graded, free of pot holes and of sufficient width for required number of lanes of traffic.
 - .1 Provide minimum 7 m wide temporary roadway for traffic in two-way sections through work and on detours.
 - .2 Provide minimum 3.1 m wide temporary roadway for traffic in one-way sections through work and on detours.
- .4 Provide and maintain road access and egress to property fronting along work under Contract and in other areas as indicated, unless other means of road access exist that meet approval of

Engineer.

4 Informational
and Warning Devices

- .1 Provide and maintain signs, flashing warning lights and other devices required to indicate construction activities or other temporary and unusual conditions resulting from project work which requires road user response.
- .2 Supply and erect signs, delineators, barricades and miscellaneous warning devices as specified in the OTM. All signs to be bilingual.
- .3 Place signs and other devices in locations recommended in the OTM.
- .4 Meet with Engineer prior to commencement of work to prepare list of signs and other devices required for project. If situation on site changes, revise list to approval of Engineer.
- .5 Continually maintain traffic control devices in use by:
 - .1 Checking signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
 - .2 Removing or covering signs which do not apply to conditions existing from day to day.
- .6 Seven day advance notice of parkway closures using lighted changeable bilingual message signs shall be provided. Three message signs shall be provided.

5 Control of
Public Traffic

- .1 Provide flag persons, trained in accordance with, and properly equipped as specified in the OTM in the following situations:
 - .1 When public traffic is required to

pass working vehicles or equipment which block all or part of traveled roadway.

- .2 When it is necessary to institute one-way traffic system through construction area or other blockage where traffic volumes are heavy, approach speeds are high and traffic signal system is not in use.
- .3 When workmen or equipment are employed on traveled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.
- .4 Where temporary protection is required while other traffic control devices are being erected or taken down.
- .5 For emergency protection when other traffic control devices are not readily available.
- .6 In situations where complete protection for workmen, working equipment and public traffic is not provided by other traffic control devices.
- .7 Delays to public traffic due to contractor's operators: maximum 2 minutes.

6 Traffic Control Plan .1 The Contractor shall provide a detailed Traffic Control Plan within 7 working days after Contract award showing all required traffic control and protection systems to be installed, operated, maintained and removed by the Contractor. The Contractor shall be responsible to ensure that the proposed traffic control and protection shall comply with Ministry of Labour requirements, Occupational Health and Safety Act regulations and the QTM.

1 Related
Sections

.1 Section 01 33 00 - Submittal procedures

2 References

.1 Canada Labour Code, Part 2, Canada
Occupational Safety and Health
Regulations.

.2 Province of Québec
.1 Loi sur la santé et la sécurité du
travail, L.R.Q., c. S-2.1 and the
corresponding regulations.

.3 CSA s269.1-1975 Falsework for
Construction Purposes.

.4 CAN/CSA-s269.2-M87 Access Scaffolding
for construction Operations.

.5 FCC No. 301-1982 Standard for
Construction Operations.

3 Submittals

.1 Make submittals in accordance with
Section 01 33 00 - Submittal Procedures.

.2 Submit site-specific Health and Safety
Plan: Within 7 days after date of Notice
to Proceed and prior to commencement of
Work. Health and Safety Plan must
include:

.1 Results of site specific safety
hazard assessment.

.2 Results of safety and health risk
or hazard analysis for site tasks and
operation.

.3 Submit two (2) copies of Contractor's
authorized representative's work site
health and safety inspection reports to
Engineer.

.4 Submit copies of reports or directions
issued by Federal and Provincial health
and safety inspectors.

.5 Submit copies of incident and accident

reports.

- .6 Submit Material Safety Data Sheets (MSDS) to Engineer.
- .7 Engineer will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 5 days after receipt of plan. Revise plan as appropriate and resubmit plan to Engineer within 5 days after receipt of comments from Engineer.
- .8 Engineer's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .9 Medical Surveillance: Where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Engineer.

4 Filing of
Notice_____

- .1 File Notice of Project with Provincial authorities prior to commencement of Work.

5 Safety
Assessment

- .1 Perform site specific safety hazard assessment related to project.

6 Meetings

- .1 Schedule and administer Health and Safety meeting with Engineer prior to commencement of Work.

7 General
Requirements

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to commencing any site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Engineer may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

8 Responsibility

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

9 Compliance
Requirements

- .1 Comply with Ontario Health and Safety Act and Regulations for Construction Projects.
- .2 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.

- 10 Unforeseen Hazards_____ .1 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, and follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction. Advise Engineer verbally and in writing.
- 11 Posting of Documents_____ .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Engineer.
- 12 Correction of Non-Compliance___ .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Engineer.
- .2 Provide Engineer with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Engineer may stop Work if non-compliance of health and safety regulations is not corrected.
- 13 Work Stoppage_____ .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.
- 14 Construction Safety Measures_____ .1 Observe construction safety measures of National Building Code 1995 Part 8, Provincial Government, Workers'/Workmen's Compensation Board and municipal authority provided that in any case of conflict or discrepancy more stringent requirements shall apply.

.2 Comply with requirements of FCC No. 301.

15 WHMIS

.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada and Health and Welfare Canada.

.2 Deliver copies of WHMIS data sheets to Engineer on delivery of materials.

16 Overloading

.1 Ensure no part of Work is subjected to loading that will endanger its safety or will cause permanent deformation.

17 Falsework

.1 Design and construct falsework in accordance with CSA S269.1.

18 Scaffolding

.1 Design and construct scaffolding in accordance with CSA S269.2

PART 1 – GENERAL

1.1 Fires

- .1 Fires and burning of rubbish on site are not permitted.

1.2 Disposal of Wastes

- .1 Do not bury rubbish and waste materials on site.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

1.3 Drainage

- .1 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .2 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

1.4 Site Clearing and Plant Protection

- .1 Protect trees and plants on site and adjacent properties where indicated.
- .2 Wrap in burlap, trees and shrubs adjacent to construction work, storage areas and trucking lanes, and encase with protective wood framework from grade level to height of 2 m.
- .3 Protect roots of designated trees to dripline during excavation and site grading to prevent disturbance or damage. Avoid unnecessary traffic, dumping and storage of materials over root zones. Minimise stripping of topsoil and vegetation.
- .4 Restrict tree removal to areas indicated or designated by Engineer.
- .5 Any tree larger than 10 cm of DHP which could be damaged by the equipment during construction shall be protected by putting in place the protection measures shown in standard NQ 0605-100/2001 of Bureau de normalisation du Québec at Part IX: *conservation des arbres et des arbustes lors de travaux d'aménagement et de construction* (available free: http://www-es.criq.qc.ca/pls/owa_es/ncw_enquete_publicue.liste_promo?p_lang=fr)

1.5 Pollution Control

- .1 Maintain temporary erosion and pollution control features installed under this contract.

- .2 Control emissions from equipment and plant to local authorities emission requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.
- .5 Environmental Emergency Plan: An Environmental Emergency Plan (EEP) shall be prepared by the Contractor which outlines a spills response procedure and any other procedures required to deal with potential emergencies. Hence, in the event of a spill, the contractor shall immediately clean up any spills of contamination, water or other substances which may be either detrimental to marine or terrestrial life or quality of surface water, groundwater or soil in accordance with the appropriate federal and provincial guidelines/regulations. If a leak or a problem is detected, corrective measures shall be implemented and maintenance of defective equipment or vehicle shall be executed immediately and at least than 60 meters of any waterways. The contractor will have on site spill containment equipment. The contractor shall notify all appropriate provincial and federal agencies as required by law and the NCC. Prior to construction, the contractor is required to provide a Spills Response Plan, which will provide specific details on spill management for the project.
- .6 Comply to mitigation measures stipulated in Operational Statement for province of Quebec by Department Fish and Oceans Canada (http://www.dfo-mpo.gc.ca/oceans-habitat/habitat/modernizing-moderniser/epmp-pmpe/qc/bridge_f.asp), as well as guidelines for the design of waterway crossing in Province of Quebec.
- .7 Comply to conditions and to mitigation measures described in Authorization Certificate of ministère du Développement durable, de l'Environnement et des Parcs (MDDEP) obtained by NCC in virtue of Article 22 of the *Loi sur la qualité de l'environnement* (L.Q.E).
- .8 Comply to conditions of permit from municipality of Pontiac obtained by NCC as well to law and rules dispositions related to permit.

1.6 Works adjacent to
Waterways

- .1 It is forbidden to circulate with machinery in the creek and swamps.
- .2 When equipment is not used, get it out of protected shoreline 15 m away from watercourse.
- .3 Creek shorelines shall be restored to their original condition if they were disturbed by the construction or excavation.
- .4 Do not use waterway beds for borrow material.
- .5 Do not dump excavated fill, waste material or debris in waterways. All debris introduced accidentally in watercourse shall be removed as early as possible.
- .6 No debris shall be accumulated at less than 30 m from lake or watercourse. Localise a temporary depot on site and re-instate the site at its original condition at the end of construction works. Provide site with proper necessary amenities (portable chemical toilets, garbage cans, bins, etc) to prevent any debris dispersion in the environment.
- .7 Recuperate and dispose of garbage and debris in conformity with regulations in force. Transport contaminated materials and soils at authorized dumping sites.
- .8 Washing of concrete delivery trucks and other equipment used for concrete mixing shall not be done at least than 30 meters from waterways and off construction site.
- .9 All concrete delivery trucks shall recuperate their rinsing water to dispose them in an authorized site.
- .10 Non-used concrete shall be also disposed in an authorized site.
- .11 Any intervention in water shall be done out of periods sensitive for the ichthyan species present in waterways (ex. Between April 1st and June 1st to protect the sensitive periods for meunier noir). Also the Éperlan nain du Lake Utopia, a rare species, resides in the lake.
- .12 At all times insure the free flow of water current and sufficient water quantity to maintain proper functionality of fish habitat

(feeding, stocking, spawning) upstream and downstream of the construction zone.

- .13 Take necessary measures to avoid all impacts (ex. Flooding, land emergence, matters in suspension, erosion, etc) upstream and downstream of the construction zone.

1.7 Special requirements

- .1 Contractor shall respect all measures required to protect fishes and their habitat during the construction by referring to and respecting recommendations of Operational Statements of Department of Fish and Oceans for the short span bridge as described on web site <http://www.dfo-mpo.gc.ca/habitat/what-quoi/os-eo/qc/pdf/span-eng.pdf>, as well as guidelines for the design of waterway crossing in Province of Quebec.

Special attention shall be carried for the construction and cleaning due to sensitive nature of environment and the permanence of traces or damage on its surface.

- .2 Preventive and control measures of erosion and sediments, as the maintenance of existing vegetation and installation of silt curtains shall be installed appropriately to avoid any matter in suspension in the watercourse and these measures shall stay in place until construction work completion.
- .3 Silt curtains shall be installed on the sides of existing caissons to demolished and around the cofferdams and new caissons to avoid dispersion of matters in suspension in the watercourse.
- .4 A floating platform if necessary shall be used for the concrete repairs of existing abutments. Tarps shall be placed on platforms so to recuperate all construction debris.
- .5 Stabilize the residual matters excavated from site so they wil not be disperse in watercourse. It shall include covering of depot materials with a net or biodegradable tarp or the planting of plants or bushes, indigenous of preference, on top of it.
- .6 Maintain in good condition all the works protecting the environment.
- .7 By taking necessary precautions, avoid transporting fine particles in the aquatic environment outside of immediate work area.

- .8 Stabilize all disturbed areas, particularly sloped embankments, as work is progressing. If delay is necessary for a permanent stabilization, control and protection erosion measures shall remain in place to prevent erosion and capture any eroded material.
- .9 No earthwork or excavation shall be executed near watercourse during flooding periods or heavy rains.
- .10 Take all necessary precautions so to avoid soil erosion during temporary closure of construction site.
- .11 Limit to strict minimal clearing, scouring, excavation, earth works and levelling in the working areas.
- .12 All temporary works shall be protected for eroding with proper stabilization, with the help of adequate geotextile membrane or rip-rap. In addition, they shall be built to resist flooding that could occur during construction works.
- .13 All construction activities shall in the area ultimately covered by the bridge, including transport of materials, installation, cleaning, etc.
- .14 Construction debris or materials shall not fall into creek: protection/recuperation nets shall be used under the bridge to capture debris or materials during construction. All construction debris shall be transported off-site at contractor's costs; no debris shall be burnt or dig into ground.
- .15 All tools and equipment shall be filled up at a reasonable distance from creek; all vehicles shall be filled up with gas and oil out of site totally. Any spilling of petroleum products shall be reported to site inspector and a clean-up shall be immediately done by Contractor as per instructions of NCC.
- .16 Motorized equipment shall cross the river bed once (one-time levent - back and over), but must be authorized by NCC. The nature of work does not necessitate to cross the river bed which is deep. Passage in river at low water level is not allowed.
- .17 Do not manipulate oil or gas within 60m of the natural high water line of watercourse.
- .18 Ensure that all heavy machinery is washed before it's use, at more than 30 m of the natural high water line of the Ottawa river,

in order to limit all deposit of grease or oil within the work area; the contractor is to use machinery and equipment in good working order and showing no oil leaks.

If an oil leak or problem is detected, corrective measures shall be taken and cleaning of machinery or defective machineries shall be done immediately and at least 60 meters of any watercourse.

- .19 Frequent inspections of heavy machinery and equipment will have to be done to ensure good working order and to detect leaks of fuel, oil, grease, etc. Proper corrective measures will have to be taken and maintenance done immediately if a problem is detected.
- .20 Shut off any motorized equipment used on site when not used.
- .21 Use as small equipment as possible. Limit travelling of equipment and machinery.
- .22 Following completion of construction, seeds and fertilizers shall be spread as soon as possible to help prevent erosion.
- .23 Restrain vehicular traffic to proposed roadways that shall be identified clearly.
- .24 If cutting works in vegetation shall be done during nesting period of migratory birds, a biologist shall do a reconnaissance of work areas to locate active nests so to avoid to disrupt migratory birds during the nesting period (from May 1st to August 31st).
- .25 Not applicable.
- .26 Following measures shall be applied to preserve the quality of surface water:
 - .1 Execute works below high water level during the period recommended by DFO for the protection of fish habitat, i.e. from 2nd of August to 31st of March;
 - .2 A special attention shall be bare on all works executed in aquatic environment between September and November so to limit sediments in suspension during the spawning of possible other fish species;
 - .3 Insure at all times the free water flow and a sufficient quantity of water to maintain the functionality of fish habitat upstream and downstream of the construction area. Take necessary measures to avoid impacts upstream and

- downstream of the construction area (i.e. flooding, dryness, matters in suspension, erosion, etc).
- .4 No concrete shall be fabricated directly on construction site. All concrete necessary for the execution of construction shall be delivered by concrete trucks or other transport means.
 - .5 Clean washing of concrete trucks and other equipment used to mix concrete shall not be done at least 30 m from waterways and outside the construction site.
 - .6 All concrete trucks shall recuperate their washing water to be disposed to an authorized dump site; and
 - .7 Unused concrete shall be also disposed to an authorized dump site.
- .27 Install protection fences on ground around trees located nearby the construction site so to not damage their root system. These fences shall be installed at the vertical limit of tree crown to be protected.
- .28 Not applicable.
- .29 Except for tree shown on drawings, trees (with outside diameter larger than 10cm) shall not be cut. If cutting of trees with outside diameter larger than 10cm is required, an authorization from *Section for Management of natural resources and of land of NCC Gatineau Park* shall to be obtained by Contractor.
- These cut trees shall be replaced in a ratio 2 for 1 with non invading species and indigenous in Gatineau park approved by Park biologists. Contractor shall get his plantation plan approved by NCC before the planting of trees.
- .30 Limit cut of vegetation (diameter at trunk level smaller than 10 cm) to strict minimum, i.e. vegetation impeding access of machinery and construction work.
- .31 If shrubs or trees have to be cut, cut them into sections (1 metre long) and disperse them in the nearby forest.
- .32 Execute pruning according following rules :
1. Use pruning-scissors or a pruning saw preferably;
 2. The best to prune a branch is at collar level (bark rim located at 2 to 3 cm from base of branch);
 3. Avoid pruning at the base of branches so to not create a large scar;

4. Cut out at angle to avoid water infiltration or accumulation in the cut limb surface;
 5. Cut out in sections of 1 metre long maximum;
 6. Disperse branches in nearby forest, with caution to not damage smaller trees which regenerate the glades.
- .33 Fauna on site shall not be hunted, harassed or tracked down.
- .34 All debris shall be collected and eliminated each day, or stocked in safe containers to prevent garbage effects on consuming animals. All motorized vehicles and machinery shall stay in the designated road or pathways to avoid perturbing the fauna habitat.
- .35 Residual matters that cannot be recycled, recuperated or re-used shall be disposed in an appropriate site outside of Park in compliance with applicable requirements of MDDEP.
- .36 Clean site of all residues. Residual matters on site shall be sorted and, if possible, recycled, recuperated or re-used outside NCC lands. Contractor shall transmit to Gatineau Park biologists (for Park projects) and to NCC Environmental Services a report documenting the volumes and types of materials sorted, recuperated or re-cycled.
- .37 Contractor shall remove all fences and temporary signage. Contractor shall remove debris and garbage before closure of construction site.
- .38 If excavation works are planned, recuperate the excavated vegetal soil and use it to rehabilitate the site following construction completion.
- .39 Clean and remove debris and sediments that obstruct storm sewer drains and dispose of these materials taking care for none falling in watercourse.
- .40 Remove debris manually or with help of machinery used from the shoreline or from floating dam.
- .41 Watercourse bed as well as its shorelines shall be re-instated to their natural condition.
- .42 Contractor shall be responsible for the re-instatement of all degraded areas of fauna habitat within the vicinity of site.

- .43 Re-instate to original condition all damaged ditches by machinery (damage to drainage slope, shoulders of embankments, etc).
- .44 Re-instate to original condition shorelines using known vegetal stabilization technologies which consider stability, erosion sensitivity, slope and height of embankment. Vegetalization works shall be done as soon as possible following earthwork completion by privileging indigenous species in Gatineau Park.
- .45 Re-instate site with vegetal soil and seed with mix approved by Engineer as follows (percentages may vary, substitutions shall be approved) :
 - For fields and road shoulders:
 - 50% *Phleum pratense* (Phléole des près);
 - 25% *Poa trivialis* (Pâturin rude);
 - 10% *Agrostis alba* (Agrostide blanche);
 - 8% *Trifolium repens* (Trèfle blanc);
 - 7% *Medicago lupulina* (Luzerne lupuline).
- .46 An emergency intervention kit and recognized absorbents in sufficient quantity will be available on site to be prepared in case of an accidental hydrocarbon leak (petrol products).
- .47 In the case of a hydrocarbon leak or any accident which could cause damage to the environment, report immediately to NCC urgency (613-239-5353) and to the Engineer, as well to URGENCE ENVIRONNEMENT QUÉBEC at 1-866-694-5454 or 1-888-626-6663 (extension 32391) and recuperate hydrocarbons and any contaminated soils by a specialized firm.
- .48 The Contractor must grant, at any reasonable hour, access to employees from “le ministère des Ressources naturelles et de la Faune” to the site, in order to ensure that special requirements, listed above, are followed.
- .49 A copy of the authorization of the ministry MDDEP and permit from municipality provided by NCC as well as all documents required to execute the work (ie : drawing and specification) shall be available on site at all times during construction so that anyone (foreman, inspector, etc.) can consult them.
- .50 If the contractor cannot respect one of the above mentioned conditions for any reasons, following uncontrollable events for example, he must contact with the Engineer before starting or

proceeding with work so that the latter can analyze the situation and modify the authorization, if necessary.

- .51 If human remains are discovered during activities related to project, all works in the affected area shall stop immediately and Contractor shall contact immediately the Engineer and archeologist, NCC Patrimonial Program (Ian Badgley, 613-239-5751). No work shall be done near discovery site of human remains.
- .52 Contractor shall pump water accumulating in the cofferdams towards downstream 15 m from creek and pump shall be installed out of waterways, pumping insuring clear water flow downstream. Recommendations indicated in the *Guide d'aménagements des ponts et des ponceaux dans le milieu forestier* (MRNF,1997) shall be implemented including installation of sieve at the upstream extremity of pumping conduit and installation of a waterproof membrane (polythene sheet for example) long enough at downstream extremity of pumping conduit to prevent erosion of creek bed and shorelines. Refer to http://www.mrnf.gouv.qc.ca/publications/faune/habitat_poisson_ponts_ponceaux.pdf
- .53 Existing treated timber pieces shall be transported in dump approved to receive this type of debris. Recuperate and dispose debris according regulations in place. Transport material and contaminated soils in authorized dump sites. Dispose excavated material in an adequate site for this purpose. No debris shall be accumulated at less than 30 meters of waterways. Locate temporary storage site on construction area and re-instate site to its original conditions at the end of construction. Provide on site all necessary equipment (portable chemical toilets, garbage cans, bins, etc) to prevent debris dispersion in the environment. Avoid with all necessary precautions any transportation of fine particles in the aquatic environment outside the immediate construction area. Do not store material or park machinery at less than 30 meters from any waterways (i.e. creeks and their tributaries, humid lands, rivers, lakes and reservoirs).
- .54 Transport used oil residue from use of equipment and debris to a site approved to this effect.
- .55 Comply to conditions and mitigation measures stipulated in the authorized certificate of Ministère des Ressources naturelles et de la faune (MRNF) obtained by the Commission in virtue of

the *Loi sur la conservation et la mise en œuvre de la faune*.

- .56 Prior to start of construction, install all efficient erosion control measures so to avoid sediments to fall in waterways and latter shall stay in place until completion of works. Inspect works regularly and as needed bring required corrections.
57. Turbidity curtains shall be installed on all sides of caissons to avoid dispersion of material in suspension within waterways.
58. Use clean material (exempt of fine particles) for the installation of cofferdam and privilege use of membrane to insure waterproofing of cofferdam.
59. All tools and equipments shall be filled up at a distance of more 60m of waterways. Insure that machinery is cleaned before entering in Gatineau Park; machinery shall not be cleaned on site, neither in park.
60. Execute general maintenance and gas fill-up of machinery and vehicles as well as handling and storage of hydrocarbons at a distance of more 60m from natural high water line (HWL).
61. Limit travelling of machinery and vehicles within the construction areas.
62. Avoid any debris, concrete or wet grout residue in waterways. All debris introduced accidentally in waterways shall be removed in the shortest delays.
63. Contact the regional Outaouais direction of the Ministère de la Culture, des Communications et de la Condition Féminine du Québec (819-772-3002) in the event of finding patrimonial artefacts and local police in the event of discovery of human remains.
64. Contractor shall be imposed penalties by local and/or provincial authorities if Contractor does not enforce all required environmental mitigation clauses and measures.
65. If scrubs or trees of exterior diameter < 10 cm have to be cut at least than 20m of natural high water line, execute cut manually and cut them in pieces (1m long) and disperse them in the nearby forest outside of high water line

1.8 Methods of construction

- .1 Contractor shall use methods of construction approved by MDDEP and the National Capital Commission.

END OF SECTION

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- 1 Related Sections .1 Section 01 11 01 - Pay Item Descriptions
- 2 Access .1 Provide and maintain adequate access to project site.
- .2 If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractors' use of roads.
- .3 Clean all areas used by Contractor's equipment.
- 3 Engineer's Site Office .1 Engineer's Site Office is required for the duration of the project. Location to be indicated by Engineer.
- 4 Storage Sheds .1 Provide adequate weathertight sheds with raised floors, for storage of materials, tools and equipment that are subject to damage by weather.
- 5 Sanitary Facilities .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.
- 6 Parking .1 Do not park vehicles on grassed surfaces.
- 7 Drainage .1 Refer to Section 01 35 43 - Environmental Procedures for site drainage and pumping requirements.

<u>8 Removal of Temporary Facilities</u>	.1	Remove temporary facilities from site when directed by Engineer.
<u>9 Water</u>	.1	Contractor is to provide is own source of water.
<u>10 Electrical Power</u>	.1	Contractor is to provide is own source of electrical power.

- 1 General
- .1 Within 7 days of written request by Engineer, submit following information for materials and equipment proposed for supply:
 - .1 name and address of manufacturer,
 - .2 trade name, model and catalogue number,
 - .3 performance, descriptive and test data,
 - .4 manufacturer's installation or application instructions,
 - .5 evidence of arrangements to procure.
 - .2 Use products of one manufacturer for material and equipment of same type or classification unless otherwise specified.
- 2 Section Includes
- .1 Product quality, availability, storage, handling, protection, and transportation.
 - .2 Manufacturer's instructions.
 - .3 Quality of Work, coordination and fastenings.
 - .4 Existing facilities.
- 3 Precedence
- .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 4 Reference Standards
- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-94, Stipulated Price Contract.
 - .2 DOC 14-2000, Design-Build Stipulated Price Contract.
 - .3 DOC 15-2000, Design-Builder/Consultant Contract.
 - .2 Within text of each specifications section, reference may be made to reference standards.

- .3 Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .4 If there is question as to whether any product or system is in conformance with applicable standards, Engineer reserves right to have such products or systems tested to prove or disprove conformance.
- .5 Cost for such testing will be borne by Owner in event of conformance with Contract Documents or by Contractor in event of non-conformance.
- .6 Conform to latest date of issue of referenced standards in effect on date of submission of Tenders, except where specific date or issue is specifically noted.

5 Quality

- .1 Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .3 Should any dispute arise as to quality or fitness of products, decision rests strictly with Engineer based upon requirements of Contract Documents.

- .4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

6 Availability

- .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify Engineer of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .2 In event of failure to notify Engineer at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Engineer reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

7 Storage,
Handling and
Protection

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from

weather in weatherproof enclosures.

- .4 Store material and equipment in accordance with suppliers instructions.
- .5 Store cementitious products clear of earth or concrete floors, and away from walls.
- .6 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .7 Store sheet materials, lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .8 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .9 Remove and replace damaged products at own expense and to satisfaction of Engineer.
- .10 Touch-up damaged factory finished surfaces to Engineer's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

8 Transportation

- .1 Pay costs of transportation of products required in performance of Work.
- .2 Transportation cost of products supplied by Owner will be paid for by Owner. Unload, handle and store such products.

9 Manufacturer's
Instructions

- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or

enclosures provided with products. Obtain written instructions directly from manufacturers.

- .2 Notify Engineer in writing, of conflicts between specifications and manufacturer's instructions, so that Engineer may establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Engineer to require removal and re-installation at no increase in Contract Price or Contract Time.

10 Quality of Work

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Engineer if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Engineer reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Engineer, whose decision is final.

11 Co-Ordination

- .1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.

12 Concealment

- .1 In finished areas, conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.

- .2 Before installation, inform Engineer if there is interference. Install as directed by Engineer.

13 Remedial Work

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

14 Location of
Fixtures

- .1 Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.
- .2 Inform Engineer of conflicting installation. Install as directed.

15 Fastenings

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.

- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

16 Fastenings -
Equipment

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

17 Protection of
Work in Progress

- .1 Prevent overloading of any part of building. Do not cut, drill or sleeve any load bearing structural member, unless specifically indicated without written approval of [Engineer] [Consultant].

18 Existing
Utilities

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work and pedestrian and vehicular traffic.
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

19 Contractor's Options for Selection of Materials for Tendering_____

.1 Materials specified by referenced standard, select any material that meets or exceeds the specified standard.

.2 Where materials are required to be listed on the "Canadian General Standards Board, Qualified Products List" select any manufacturer so listed.

.3 Materials specified by "Prescriptive" or "Performance" specification, select any material meeting or exceeding specification.

.4 Materials specified by naming one or more materials, select any material named. For the purpose of these specifications, the term "Acceptable Material" is deemed to be a complete and working commodity as described by a manufacturer's name, catalogue number, trade name or any combination thereof.

.5 When materials are specified by a Standard, Prescriptive or Performance specifications, upon request of the Engineer, obtain from manufacturer an independent testing laboratory reporting, showing that the material or equipment meets or exceeds the specified requirements.

20 Substitution

- .1 No substitutions will be permitted without prior written approval of Engineer.
- .2 Proposals for substitution may only be submitted after award of contract. Such request must include statements of respective costs of items originally specified and the proposed substitution.
- .3 Proposals will be considered by Engineer if:

- .1 materials selected by tenderer from those specified are not available;
- .2 delivery date of materials selected from those materials specified would unduly delay completion of contract, or
- .3 alternative material to those specified, which are brought to the attention of and considered by Engineer as equivalent to the material specified and will result in a credit to the Contract amount.
- .4 Should proposed substitution be accepted either in part or in whole, assume full responsibility and costs when substitution affects other work on project. Pay for design or drawing changes required as result of substitution.
- .5 Amounts of all credits arising from approval of substitutions will be determined by Engineer and Contract Price will be reduced accordingly.

21 Construction
Equipment and Plant

- .1 On request, prove to the satisfaction of Engineer that the construction equipment and plant are adequate to manufacture, transport, place and finish work to quality and production rates specified. If inadequate, replace or provide additional equipment or plant as directed.
- .2 Maintain construction equipment and plant in good operating order.

End of Section

1 General

- .1 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
- .2 Store volatile waste in covered metal containers, and remove from premises at end of each working day.

2 Materials

- .1 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

3 Cleaning During Construction

- .1 Provide on-site containers for collection of waste materials, and debris.
- .2 Dispose of waste materials, and debris off site.
- .3 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

4 Final Cleaning

- .1 Remove grease, dust dirt, stains, labels, fingerprints, and other foreign materials, from interior and exterior finished surfaces.
- .2 Clean lighting reflectors, lenses, and other lighting surfaces.
- .3 Broom clean paved surfaces; rake clean other surfaces of grounds.
- .4 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.

PART 1 - GENERAL

- 1.1 Section Includes
- .1 List significant generic types of products, work, or requirements specified. Does not include procedure, process, preparatory work, or final adjusting and cleaning. Includes Waste Audit, Waste Reduction Workplan, Materials Source Separation Program, and Cost/Revenue Analysis Workplan.
- 1.2 Precedence
- .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.3 Definitions
- .1 Waste Audit (WA): Relates to projected waste generation. Involves measuring and estimating quantity and composition of waste, reasons for waste generation, and operational factors which contribute to waste.
- .2 Waste Reduction Workplan (WRW): Written report which addresses opportunities for reduction, reuse, or recycling of materials. WRW is based on information acquired from WA (Schedule A).
- .3 Demolition Waste Audit (DWA): Relates to actual waste generated from project.
- .4 Materials Source Separation Program (MSS P): Consists of a series of ongoing activities to separate reusable and recyclable waste material into material categories from other types of waste at point of generation.
- .5 Cost/Revenue Analysis Workplan (CRAW): Based on information from WRW, and intended as financial tracking tool for determining economic status of waste management practices.

- .6 Waste Management Coordinator (WMC):
Designate individual who is in attendance on-site, full-time. Designate, or have designated, individuals from each Subcontractor to be responsible for waste management related to their trade and for coordinating activities with WMC.
- .7 Separate Condition: Refers to waste sorted into individual types.

1.4 Site Visit

- .1 Pre-tender site visit: Walk-through of project site prior to completion of tender submittal is mandatory. Date, time and location to be arranged by Owner.

1.5 Documents

- .1 Maintain at job site, one copy of following documents:
 - .1 Waste Audit
 - .2 Waste Reduction Workplan
 - .3 Material Source Separation Plan
 - .4 Schedules completed for project.

1.6 Use of Site and Facilities

- .1 Execute work with least possible interference or disturbance to normal use of premises.
- .2 Maintain security measures established by existing facility.

1.7 Submittal

- .1 Submit requested submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Prepare and submit the following submittals prior to [project start-up]:
 - .1 Submit 2 copies of completed Waste Audit (WA): Schedule A.
 - .2 Submit 2 copies of completed Waste Reduction Workplan (WRW): Schedule B.
 - .3 Submit 2 copies of completed

Demolition Waste Audit (DWA):
Schedule C.

- .4 Submit 2 copies of Cost/Revenue Analysis Workplan (CRAW): Schedule D.
- .5 Submit 2 copies of Materials Source Separation Program description.

- | | | |
|--|----|--|
| <u>1.8 Waste Audit</u> | .1 | Conduct WA prior to project start-up. |
| | .2 | Prepare Waste Audit: Schedule A. |
| | .3 | Record, on Waste Audit - Schedule A, extent to which materials or products used consist of recycled or reused materials or products. |
| <u>1.9 Waste Reduction Workplan</u> | .1 | Prepare WRW prior to project start-up. |
| | .2 | Structure WRW to prioritize actions and follow 3R's hierarchy, with Reduction as first priority, followed by Reuse, then Recycle. |
| | .3 | Describes management of waste. |
| | .4 | Identify opportunities for reduction, reuse, and/or recycling (3Rs) of materials. Based on information acquired from WA. |
| | .5 | Post workplan or summary where workers at site are able to review its content. |
| <u>1.10 Demolition Waste Audit</u> | .1 | Prepare Demolition Waste Audit (DWA) prior to project start-up. |
| | .2 | Complete Demolition Waste Audit (DWA): Schedule C. |
| <u>1.11 Cost/Revenue Analysis Workplan</u> | .1 | Prepare CRAW: Schedule D. |

1.12 Materials
Source Separation
Program

- .1 Prepare MSSP and have ready for use prior to project start-up.
- .2 Implement MSSP for waste generated on project in compliance with approved methods and as approved by Engineer.
- .3 Provide on-site facilities for collection, handling, and storage of anticipated quantities of reusable and/or recyclable materials.
- .4 Provide containers to deposit reusable and/or recyclable materials.
- .5 Locate containers in locations, to facilitate deposit of materials without hindering daily operations.
- .6 Locate separated materials in areas which minimize material damage.
- .7 Collect, handle, store on-site, and transport off-site, salvaged materials in separate condition. Transport to approved and authorized recycling facility.
- .8 Collect, handle, store on-site, and transport off-site, salvaged materials in combined condition. Ship materials to site operating under Certificate of Approval. Materials must be immediately separated into required categories for reuse of recycling.

1.13 Waste
Processing Sites

- .1 Contractor shall identify the approved waste processing site he plans on using during the project pertaining to reuse and/or recycling of materials.

1.14 Disposal of
Wastes

- .1 Burying of rubbish and waste materials is prohibited unless approved by Engineer.

.2 Disposal of waste, volatile materials, mineral spirits, oil and paint thinner into waterways, storm, or sanitary sewers is prohibited.

1.15 Storage,
Handling and
Protection

.1 Store, materials to be reused, recycled and salvaged in locations as directed by Owner.

.2 Unless specified otherwise, materials for removal become Contractor's property.

.3 Protect, stockpile, store and catalogue salvaged items.

.4 Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility.

.5 Protect structural components not removed for demolition from movement or damage.

.6 Support affected structures. If safety of building is endangered, cease operations and immediately notify Engineer.

.7 Protect surface drainage, mechanical and electrical from damage and blockage.

1.16 Scheduling

.1 Coordinate work with other activities at site to ensure timely and orderly progress of the work.

PART 2 - PRODUCTS

2.1 Not Used

.1 Not Used.

PART 3 - EXECUTION

3.1 Application

- .1 Do work in compliance with WRW.
- .2 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

3.2 Cleaning

- .1 Remove tools and waste materials on completion of work, and leave work area in clean and orderly condition.
- .2 Clean-up work area as work progresses.
- .3 Source separate materials to be reused/recycled into specified sort areas.

3.3 Diversion of Materials

- .1 From following list, separate materials from general waste stream and stockpile in separate piles or containers, to approval of Engineer, and consistent with applicable fire regulations. Mark containers or stockpile areas. Provide instruction on disposal practices.
- .2 On-site sale of recyclable materials is not permitted.
- .3 Demolition Waste

Material Type	Recommended Diversion %	Actual Diversion %
Electrical Equipment	[80]	[]
Metals	[100]	[]
Rubble	[100]	[]
Wood (uncontaminated)	[100]	[]
Other		[]

.4 Construction Waste

Material Type	Recommended Diversion %	Actual Diversion %
Cardboard	[100]	[]
Plastic Packaging	[100]	[]
Rubble	[100]	[]

Steel	[100]	[]
Wood (uncontaminated)	[100]	[]
Other		[]

3.4 Waste Audit .1 Schedule A

(1) Material Category	(2) Material Quantity Unit	(3) Estimated Waste %	(4) Total Quantity of Waste (unit)	(5) Generation Point	(6) Percent Recycled	(7) Percent Reused
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Concrete

Steel

Timber

Lead

Soil

Other

3.5 Waste Reduction
Workplan .1 Schedule B

(1) Material Category	(2) Person(s) Responsible	(3) Total Quantity of Waste (unit)	(4) Reused Amount (units) projected	(5) Actual Recycled Amount	(6) Actual Material Destination
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Concrete

Steel

Timber

Lead

Soil

Other

3.6 Demolition .1 Demolition Waste Audit

Waste Audit

(1) Material Description	(2) Quantity	(3) Unit	(4) Total	(5) Volume (m ³)	(6) Weight	(7) Remarks and Assumptions
<hr/>						
Concrete						
Steel						
Timber						
Lead						
Soil						
Other						

3.7 Cost/Revenue .1 Schedule D
Analysis Workplan

(1) Material Description	(2) Total Quantity (unit)	(3) Volume (m ³)	(4) Weight	(5) Disposal Cost/Credit (± \$)	(6) Category Sub-Total (± \$)
<hr/>					
Concrete					
Steel					
Timber					
Lead					
Soil					
Other					

3.8 Canadian .1 Schedule E

Governmental
Departments Chief
Responsibility for
the Environment

Province	Address	General Inquires	Fax
Ontario	Ministry of Environment and Energy 135 St. Clair Avenue West Toronto, ON M4V 1P5	(416) 323-4321 1-800-565-4923	(416) 323-4682
	Environment Canada Toronto, ON	(416) 734-4494	
Québec	Ministère de l'Environnement et de la Faune, Siège social 150 boul, René-Léves que est Québec, QC G1R 4Y1	(418) 643-3127 1-800 561-1616	(418) 646-5974
	Conseil de la conservation et de l'environnement 800 Place d'Youville, 19e étage Québec, QC G1R 3P4	(418) 643-3818	

1 Record Drawings

- .1 Engineer will provide two sets of white prints for record drawing purposes.
- .2 Maintain project record drawings and record accurately deviations from Contract documents.
- .3 Record changes in red. Mark on one set of prints and at completion of project and prior to final inspection, neatly transfer notations to second set and submit both sets to Engineer.
- .4 Record field information:
 - .1 Field changes of dimension and detail.
 - .2 Changes made by Change Order or Field Order.
 - .3 Depths of various elements.
 - .4 Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvement.
- .5 Other project record documents:
 - .1 Maintain a record of all other construction documents in an easily accessible (by Engineer) format such as:
 - testing results
 - product data
 - telephone and fax numbers of all suppliers, subcontractors and testing agencies and contact persons for each.
 - .2 Copies of material tickets for all items paid by unit weight or volume.
 - .3 Copies of all correspondance with utilities concerned.
 - .4 Updated schedule.
 - .5 All Engineer's written approvals issued as permission to use alternative equipment, etc.

PART 1 - GENERAL

1.1 Related
Sections

- .1 Section 01 11 01 Pay Item Descriptions
- .2 Section 02 41 14 Asphalt Pavement Removal
- .3 Section 31 23 10 Excavating, Trenching and Backfilling.

1.2 Measurement
Procedures

- .1 No separate measurement will be made for removals unless otherwise identified as items in the Contract.

1.3 Storage and
Protection

- .1 Protect existing items according with the requirements of section 31 23 10 - Excavating, Trenching and Backfilling.
- .2 Protect existing items designated to remain and items designated for salvage. In event of damage to such items, immediately replace or make repairs to approval of Engineer at no cost to Owner.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 Preparation

- .1 Inspect site with Engineer and verify extent and location of items designated for removal, disposal, alternative disposal, recycling, salvage and items to remain.
- .2 Locate and protect utilities. Preserve active utilities traversing site in operating condition.
- .3 Notify and obtain approval of utility companies before starting demolition.

3.2 Sequences of
Operation

- .1 Removal and salvage
 - .1 Remove and salvage items as indicated.
 - .2 Do not disturb items designated to remain in place.
 - .3 In removal of pavements, curbs and gutters:
 - .1 Square up adjacent surfaces to remain in place by saw cutting or other method approved by Engineer.
 - .2 Protect adjacent joints and load transfer devices.
 - .3 Protect underlying and adjacent granular materials.
- .2 Disposal of Material
 - .1 Dispose of materials not designated for salvage or re-use in work off-site.
- .3 Backfilling
 - .1 Perform backfilling where indicated and in accordance with the requirements of section 02315 - Excavating, Trenching and Backfilling.

3.3 Restoration

- .1 Restore areas and existing works outside areas of demolition to match condition of adjacent, undisturbed areas.

3.4 Cleanup

- .1 Upon completion of work, remove debris, trim surfaces and leave work site clean.

PART 1 - GENERAL

- 1.1 Related Work
- .1 Section 01 11 01 - Pay Item Descriptions
 - .2 Section 02 41 13 - Selective Sit Demolition
 - .4 Section 32 12 17 - Asphalt Paving
- 1.2 Protection
- .1 Protect existing pavement not designated for removal, light units and structures from damage. In event of damage, immediately replace or make repairs to approval of Engineer at no additional cost.

PART 2 - PRODUCTS

Not applicable to this section.

PART 3 - EXECUTION

- 3.1 Preparation
- .1 Prior to commencing removal operation, inspect and verify with Engineer areas, depths and lines of asphalt pavement to be removed.
- 3.2 Removal
- .1 Remove existing asphalt pavement to lines and grades indicated or established by Engineer in field.
 - .2 Use equipment and methods of removal and hauling which do not tear, gouge, break or otherwise damage or disturb underlying or adjacent pavement.
 - .3 Prevent contamination of removed asphalt pavement by topsoil, underlying gravel or other materials.
 - .4 Provide for suppression of dust generated by removal process.
 - .5 Dispose off-site at no cost to owner.

-
- 3.3 Sweeping .1 Sweep remaining surfaces clean of debris resulting from removal operations using rotary power brooms and hand brooms as required.
- 3.4 Finish Tolerances .1 Finished surfaces in areas where asphalt pavement has been removed to be within +/- 5 mm of grade specified but not uniformly high or low.

PART 1 - GENERAL

1.1 SECTION INCLUDES

- .1 Demolition of Structures, methods and procedures for demolition of structures and parts of structure.

1.2 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 74 21 - Construction and Demolition Waste Management and Disposal.

1.3 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CSA S350-M1980(R1998), Code of Practice for Safety in Demolition of Structures.

1.4 SUBMITTALS

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Before proceeding with full depth demolition of bridge deck and where required by authority having jurisdiction submit for review by Engineer shoring drawings prepared by qualified professional engineer registered or licensed in the Province of Québec in Canada showing proposed method.
 - .3 Prior to beginning of Work on site submit detailed Waste Reduction Workplan in accordance with Section 01 74 21 - Construction and Demolition Waste Management and Disposal:
 - .1 Descriptions of and anticipated quantities of materials to be salvaged reused, recycled and landfilled.
 - .2 Schedule of selective demolition.
-

-
- .3 Number and location of dumpsters.
 - .4 Anticipated frequency of tippage.
 - .5 Name and address of waste facilities.

1.5 WASTE MANAGEMENT
AND DISPOSAL

- .1 Separate waste materials for reuse and recycling in accordance with Section 01355 - Waste Management and Disposal.

1.6 SITE CONDITIONS

- .1 Review designated substance report and take precautions to protect environment.
- .2 Should material resembling spray or trowel-applied asbestos or other designated substance be encountered, stop work, take preventative measures, and notify Engineer immediately.
 - .1 Do not proceed until written instructions have been received from Engineer.
- .3 Notify Engineer before disrupting traffic access.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not used.

PART 3 - EXECUTION

3.1 PROTECTION

- .1 Do Work in accordance with Section 01 35 30 - Health and Safety Requirements.
 - .2 Prevent movement, settlement, or damage to adjacent structures, utilities to remain in place. Provide bracing and shoring required.
-

3.2 PARTIAL DEMOLITION
OF STRUCTURES

- .1 Remove parts of existing concrete surfaces to permit new construction.
- .2 Refer to demolition drawings and specifications for items to be salvaged for reuse.
- .3 Remove items to be reused, store as directed by Engineer.
- .4 Dispose of removed materials, to appropriate recycling facilities except where specified otherwise, in accordance with authority having jurisdiction.

END OF SECTION

PART 1 - GENERAL

- 1.1 Related Sections .1 Section 07 55 57 - Hot Applied Rubberized Waterproofing.
- 1.2 Measurement Procedures .1 No measurement will be made under this Section. Include costs in items of work for which concrete formwork and falsework is required.
- 1.3 References .1 Canadian Standards Association (CSA)
.1 CAN/CSA-A23.1-04, Concrete Materials and Methods of Concrete Construction.
.2 CAN/CSA-086-01, Engineering Design in Wood (Limit States Design).
.3 CSA O121-M1978 (R2003), Douglas Fir Plywood.
.4 CSA O151-04, Canadian Softwood Plywood.
.5 CSA O153-M1980 (R2003), Poplar Plywood.
.6 CAN3-0325.1-88, Construction Sheathing.
.7 CSA O437 Series-93 (R2001), Standards for OSB and Waferboard.
.8 CSA S269.1-1975 (R2003), Falsework for Construction Purposes.
.9 CAN/CSA-S269.3-M92 (R2003), Concrete Formwork.
.2 Council of Forest Industries of British Columbia (COFI)
.1 COFI Exterior Plywood for Concrete Formwork.
- 1.4 Shop Drawings .1 Submit shop drawings for formwork and falsework in accordance with Section 01 33 00 - Submittal Procedures.
.2 Indicate method and schedule of

construction, shoring, stripping and re-shoring procedures, materials, arrangement of joints, special architectural exposed finishes, ties, liners, and locations of temporary embedded parts. Comply with CSA S269.1, for falsework drawings. Comply with CAN/CSA-S269.3, for formwork drawings.

- .3 Indicate formwork design data, such as permissible rate of concrete placement, and temperature of concrete, in forms.
- .4 Indicate sequence of erection and removal of formwork/falsework as directed by Engineer.
- .5 Each shop drawings shall be signed and sealed by a qualified Engineer licensed to practice in Canada, in the province of Québec.

1.5 Waste
Management and
Disposal

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction and Demolition Waste Management and Disposal and the Waste Reduction Workplan.
- .2 Place materials defined as hazardous or toxic waste in designated containers.
- .3 Ensure emptied containers are sealed and stored safely for disposal away from children.
- .4 Use sealers, form release and stripping agents that are non-toxic, biodegradable and have zero or low VOC's.

PART 2 - PRODUCTS

2.1 Materials

- .1 Formwork materials:
 - .1 Use plywood and wood formwork materials to CSA-0121 and CAN/CSA-086.1.
- .2 Form ties:
 - .1 Refer to drawings
- .3 Form release agent: chemically active release agents containing compounds that react with free lime in concrete resulting in water insoluble soaps.
- .4 Form stripping agent: colourless mineral oil, free of kerosene, with viscosity between 70 and 110s Saybolt Universal at 40°C, flashpoint minimum 150°C, open cup.
- .5 Falsework materials: to CSA-S269.1.
- .6 Sealant: to Section 07 55 57 - Hot Applied Rubberized Waterproofing.

PART 3 - EXECUTION

3.1 Fabrication and
Erection

- .1 Verify lines, levels and centres before proceeding with formwork/falsework and ensure dimensions agree with drawings.
- .2 Obtain Engineer's approval for use of earth forms framing openings not indicated on drawings.
- .3 Hand trim sides and bottoms and remove loose earth from earth forms before placing concrete.
- .4 Fabricate and erect falsework in accordance with CSA S269.1 and COFI Exterior Plywood for Concrete Formwork.
- .5 Refer to drawings for concrete members

requiring architectural exposed finishes.

- .6 Do not place shores and mud sills on frozen ground.
- .7 Provide site drainage to prevent washout of soil supporting mud sills and shores.
- .8 Fabricate and erect formwork in accordance with CAN/CSA-S269.3 to produce finished concrete conforming to shape, dimensions, locations and levels indicated within tolerances required by CAN/CSA-A23.1.
- .9 Align form joints and make watertight. Keep form joints to minimum.
- .10 Locate horizontal form joints for exposed columns 2400mm above finished floor elevation.
- .11 Use 25 mm chamfer strips on external corners and/or 25 mm fillets at interior corners , joints, unless specified otherwise.
- .12 Form chases, slots, openings, drips, recesses, expansion and control joints as indicated.
- .13 Construct forms for architectural concrete, and place ties as indicated and/or as directed. Joint pattern not necessarily based on using standard size panels or maximum permissible spacing of ties.
- .14 Build in anchors, sleeves, and other inserts required to accommodate Work specified in other sections. Assure that all anchors and inserts will not protrude beyond surfaces designated to receive applied finishes, including painting.
- .15 Line forms for following surfaces:
 - .1 Outer face of beams and vertical edge of bridge apron slab.

- .2 Soffit of girders and underside of bridge decks if exposed.
 - .3 Exposed faces of abutments, wingwalls, piers and pylons. Do not stagger joints of form lining material. Align joints to obtain uniform pattern.
 - .16 Clean formwork in accordance with CAN/CSA-A23.1, before placing concrete.
 - .17 If slip forming and flying forms are used, submit details of equipment and procedures for Engineer's approval.
- 3.2 Removal and Reshoring
- .1 Leave formwork in place for minimum 7 days after placing concrete.
 - .2 Re-use formwork and falsework subject to requirements of CAN/CSA-A23.1.

PART 1 - GENERAL

- 1.1 Related Sections
- .1 Section 03 10 00 - Concrete Forming and Accessories.
 - .2 Section 03 30 00 - Cast-in-Place Concrete.
- 1.2 Measurement Procedures
- .1 No measurement will be made under this section. Include costs in items of concrete work for which reinforcement is required.
- 1.3 References
- .1 American Concrete Institute (ACI)
 - .1 ACI 315R-04, Manual of Engineering and Placing Drawings for Reinforced Concrete Structure.
 - .2 American National Standards Institute/American Concrete Institute (ANSI/ACI)
 - .1 ANSI/ACI 315-99, Details and Detailing of Concrete Reinforcement.
 - .3 American Society for Testing and Materials (ASTM)
 - .1 ASTM A 775/A 775M-04a, Specification for Epoxy-Coated Reinforcing Steel Bars.
 - .4 Canadian Standards Association (CSA)
 - .1 CAN/CSA-A23.1-04, Concrete Materials and Methods of Concrete Construction.
 - .2 CAN3-A23.3-04, Design of Concrete Structures for Buildings.
 - .3 CAN/CSA-G30.18-M92 (R2002), Billet-Steel Bars for Concrete Reinforcement.
 - .4 CAN/CSA-G40.21-04, Structural Quality Steels.
 - .5 CAN/CSA-G164-M92 (R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .6 CSA W186-M1990 (R2002) Welding of

Reinforcing Bars in Reinforced
Concrete Construction.

- 1.4 Shop Drawings
- .1 Submit shop drawings including placing of reinforcement in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Indicate on shop drawings, bar bending details, lists, quantities of reinforcement, sizes, spacings, locations of reinforcement and mechanical splices if approved by Engineer, with identifying code marks to permit correct placement without reference to structural drawings. Indicate sizes, spacings and locations of chairs, spacers and hangers. Prepare reinforcement drawings in accordance with Reinforcing Steel Manual of Standard Practice - by Reinforcing Steel Institute of Canada. ANSI/ACI 315 and ACI 315R, Manual of Engineering and Placing Drawings for Reinforced Concrete Structure.
 - .3 Detail lap lengths and bar development lengths to CAN3-A23.3, unless otherwise indicated. Provide type C tension lap splices unless otherwise indicated.
- 1.5 Waste Management and Disposal
- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction and Demolition Waste Management and Disposal and the Waste Reduction Workplan.

PART 2 - PRODUCTS

- 2.1 Materials
- .1 Substitute different size bars only if permitted in writing by Engineer.
 - .2 Reinforcing steel: billet steel, grade 400W, deformed bars to CAN/CSA-G30.18, unless indicated otherwise.
 - .3 Cold-drawn annealed steel wire ties: to CSA G30.3.

- .4 Deformed steel wire for concrete reinforcement: to CSA G30.14.
- .5 Welded steel wire fabric: to CSA G30.5. Provide in flat sheets only.
- .6 Welded deformed steel wire fabric: to CSA G30.15. Provide in flat sheets only.
- .7 Epoxy coating of non-prestressed reinforcement: to ASTM A 775/A 775M.
- .8 Galvanizing of non-prestressed reinforcement: to CSA G164, minimum zinc coating 600 g/m². touch-up primer for galvanized surfaces: zinc rich primer in accordance with ONCG 1-GP-181a.
- .9 Chairs, bolsters, bar supports, spacers: to CAN/CSA-A23.1.
- .10 Mechanical splices: subject to approval of Engineer.
- .11 Plain round bars: to CAN/CSA-G40.21.

2.2 Fabrication

- .1 Fabricate reinforcing steel in accordance with CAN/CSA-A23.1, ANSI/ACI 315, and Reinforcing Steel Manual of Standard Practice by the Reinforcing Steel Institute of Canada unless indicated otherwise.
- .2 Obtain Engineer's approval for locations of reinforcement splices other than those shown on placing drawings.
- .3 Upon approval of Engineer, weld reinforcement in accordance with CSA W186.
- .4 Ship bundles of bar reinforcement, clearly identified in accordance with bar bending details and lists.

2.3 Source Quality

- .1 Upon request, provide Engineer with

Control

certified copy of mill test report of reinforcing steel, showing physical and chemical analysis, minimum 4 weeks prior to commencing reinforcing work.

- .2 Upon request inform Engineer of proposed source of material to be supplied.

PART 3 - EXECUTION

3.1 Field Bending

- .1 Do not field bend or field weld reinforcement except where indicated or authorized by Engineer.
- .2 When field bending is authorized, bend without heat, applying a slow and steady pressure.
- .3 Replace bars which develop cracks or splits.

3.2 Placing
Reinforcement

- .1 Place reinforcing steel as indicated on reviewed placing drawings and in accordance with CAN/CSA-A23.1.
- .2 Use plain round bars as slip dowels in concrete. Paint portion of dowel intended to move within hardened concrete with [one coat of asphalt paint]. When paint is dry, apply a thick even film of mineral lubricating grease.
- .3 Prior to placing concrete, obtain Engineer's approval of reinforcing material and placement.
- .4 Ensure cover to reinforcement is maintained during concrete pour.
- .5 Protect coated portions of bars with covering during transportation and handling.

3.3 Field Touch-up

- .1 Touch up damaged and cut ends of epoxy

coated or galvanized reinforcing steel
with compatible finish to provide
continuous coating.

END OF SECTION

PART 1 - GENERAL

- 1.1 Related Sections
- .1 Section 01 74 21 - Construction and Demolition Waste Management and Disposal.
 - .2 Section 03 10 00 - Concrete Forms and Accessories.
 - .3 Section 03 20 00 - Concrete Reinforcing.
- 1.2 References
- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM D 1751-04, Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
 - .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-19.24-M90, Multicomponent, Chemical-Curing Sealing Compound.
 - .3 Canadian Standards Association (CSA)
 - .1 CAN/CSA-A23.1-04, Concrete Materials and Methods of Concrete Construction.
 - .2 CAN/CSA-A23.2-04, Methods of Test for Concrete.
 - .3 CAN/CSA-A3000-03-A5-03, Portland Cement.
 - .4 CAN/CSA-G30.18-M92 (R2002), Billet-Steel Bars for Concrete Reinforcement.
- 1.3 Submittals
- .1 Shop Drawings
 - .1 Submit placing drawings prepared in accordance with plans to clearly show size, shape, location and all necessary details of reinforcing.
 - .2 Submit drawings showing formwork and falsework design to: CAN/CSA-A23.1.
 - .3 Drawings to bear stamp and signature of qualified professional engineer

registered or licensed in province of
Québec, Canada.

1.4 Waste
Management and
Disposal

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction and Demolition Waste Management and Disposal.
- .2 Collect and separate plastic, paper packaging and corrugated cardboard in accordance with Waste Management Plan.
- .3 Place materials defined as hazardous or toxic in designated containers.
- .4 Ensure emptied containers are sealed and stored safely.
- .5 Use trigger operated spray nozzles for water hoses.
- .6 Designate cleaning area for tools to limit water use and runoff.

PART 2 - PRODUCTS

2.1 Materials

- .1 Portland cement : to CAN/CSA-A3000-A5, Type GU.
- .2 Reinforcing bars: to CAN/CSA-G30.18, Grade 400W.
- .3 Welded steel wire fabric: to CAN/CSA-30.5.
- .4 Other concrete materials: to CAN/CSA-A23.1.

2.2 Mixes

- .1 Proportion concrete in accordance with CAN/CSA-A23.1.
- .2 Minimum compressive strength at 28 days, 35 MPa as specified by Engineer.

- .3 Class of exposure: C-1 to CAN/CSA-A23.1, Table 11.
- .4 Nominal maximum size of coarse aggregate: to CAN/CSA-A23.1.
- .5 Slump: to CAN/CSA-A23.1.
- .6 Air content: concrete to contain purposely entrained air in accordance with CAN/CSA-A23.1, Table 10.
- .7 Admixtures: to CAN/CSA-A23.1.

PART 3 - EXECUTION

3.1 Construction

- .1 Do cast-in-place concrete work in accordance with CAN/CSA-A23.1.
- .2 Dampen existing concrete surface prior to new concrete placement (saturated concrete, dry surface).

3.2 Inserts

- .1 Cast in sleeves, ties, slots, anchors, reinforcement, frames, conduit, bolts, waterstops, joint fillers and other inserts required to be built-in. Sleeves and openings greater than 100 mm x 100 mm not indicated, must be approved by Engineer.

3.3 Finishes

- .1 Formed surfaces exposed to view: in accordance with CAN/CSA-A23.1.
- .2 Pavements, walks, curbs and exposed site concrete:
 - .1 Screed to plane surfaces and use wood floats.
 - .2 Provide round edges and joint spacings using standard tools.
 - .3 Trowel smooth to provide lightly brushed non-slip finish.

- 3.4 Curing .1 Cure and protect concrete in accordance with CAN/CSA-A23.1 as amended by the contract documents.
- .1 Do not use curing compounds where bond is required by subsequent topping or coating.
- .2 Winter condition protection starts by November 1, 2013 and are at Contractor's cost.
- 3.5 Site Tolerances .1 Concrete slab finishing tolerance in accordance with CAN/CSA-A23.1.
- 3.6 Field Quality Control .1 Concrete testing: to CAN/CSA-A23.2 by testing laboratory designated by Engineer.

END OF SECTION

PART 1 GENERAL

1.1 Related Sections

- .1 Section 09 97 19 - Painting Exterior Metal Surfaces

1.2 References

- .1 CSA G40.20-04/G40.21-04(R2009), General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
- .2 CAN/CSA G164-M92(R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.
- .3 CAN/CSA S6-06, Canadian Highway Bridge Design Code
- .4 CSA W47.1-09, Certification of Companies for Fusion Welding of Steel.
- .5 CSA W48-06, Filler Metals and Allied Materials for Metal Arc Welding.
- .6 CSA W55.3-08, Certification of Companies for Resistance Welding of Steel and Aluminum.
- .7 CSA W59-03(R2008), Welded Steel Construction (Metal Arc Welding).

1.3 Shop Drawings

- .1 Submit shop drawings including fabrication and erection documents and materials list in accordance with Section 01 33 00 - Submittal Procedures.

1.4 Samples

- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.

1.5 Quality Assurance

- .1 Submit 4 copies of mill test reports 4 weeks prior to fabrication of structural steel.
- .2 Provide mill test reports certified by

metallurgists qualified to practice in province of Ontario, Canada.

1.6 Waste Management
and Disposal

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for diversion paper, plastic, and corrugated cardboard packaging material in appropriate on-site for recycling in accordance with Waste Reduction Workplan. Polystyrene cannot be recycled as such it is recommended as a requirement to prevent or minimize its use/waste on-site.
- .4 Divert unused metal materials from landfill to metal recycling facility approved by Departmental Representative.

PART 2 PRODUCTS

2.1 Materials

- .1 Structural steel: to CAN/CSA G40.20/G40.21 Grade 350W.
- .2 Threaded rod: to ASTM A307.
- .3 Bolts, nuts and washers: to ASTM A325.
- .4 Welding materials: to CSA W59 and certified by Canadian Welding Bureau.

2.2 Fabrication

- .1 Fabricate structural steel in accordance with CSA S6 and in accordance with reviewed shop drawings.

PART 3 EXECUTION

3.1 General

- .1 Structural steel work: in accordance with CSA S6.

-
- .2 Welding: in accordance with CSA W59.
- .3 Companies to be certified under Division 1 or 2.1 of CSA W47.1 for fusion welding of steel structures.
- 3.2 Connection to Existing Work
- .1 Verify dimensions and condition of existing work, report discrepancies and potential problem areas to Contract Administrator for direction before commencing fabrication.
- 3.3 Erection
- .1 Erect structural steel, as indicated and in accordance with CSA S6 and in accordance with approved erection drawings.
- .2 Field cutting or altering structural members: to approval of Contract Administrator.
- 3.4 Field Quality Control
- .1 Inspection and testing of materials and workmanship will be carried out by testing laboratory designated by Contract Administrator.
- .2 Provide safe access and working areas for testing on site, as required by testing agency and as authorized by Contract Administrator.
- .3 Contract Administrator will pay costs of tests as specified in Section 01 29 83 - Payment Procedures: Testing Laboratory Services.

END OF SECTION

PART 1 GENERAL

1.1 Scope of Work

- .1 Work covered in this section as described herein and on the Contract drawings includes, but is not limited to, all work required to repair or modify the timber cover structure over the Lac Philippe Covered Bridge.
- .2 Payment for the above mentioned and associated incidental work shall be for all labour, materials and equipment required to perform the work including fabrication and delivery for the items covered by this section.

1.2 Standards

- .1 CAN / CSA-S6-06, Canadian Highway Bridge Design Code 2006.
- .2 CSA-B111-1974 (R1998), Wire Nails, Spikes and Staples.
- .3 CAN/CSA-O141-91 (R1999), Softwood Lumber.
- .4 CAN/CSA-G164-M92 (R1998), Hot Dip Galvanizing of Irregularly Shaped Objects.
- .5 National Lumber Grades Authority (NLGA), Standard Grading Rules for Canadian Lumber.

1.3 Quality Assurance

- .1 Approved lumber shall be identified by a grade stamp from an agency certified by the Canadian Lumber Standards Accreditation Board.

1.4 Submittals

- .1 Metal clip and bracket manufacturer's information for review by the Contract Administrator.

PART 2 - PRODUCTS

2.1 Lumber Material

- .1 All lumber shall be S-P-F, No. 1 / 2 or Structural Select as noted on the contract drawings.

2.2 Fasteners

- .1 Nails, bolts and threaded rods shall be of length and sizes per the contract drawings and CAN / CSA-S6-06. Grade of Bolts and threaded rods shall be ASTM A307.
- .2 Only spiral nails shall be used on this project.
- .3 Any other fasteners required shall be as specified elsewhere in the contract or as directed on Site by the Contract Administrator.
- .4 Rafters shall be anchored to the structure using Simpson H2.5A ties, or an approved equivalent, on both sides of each end of each rafter).
- .5 Use galvanized fasteners only (nails, bolts, threaded rods, clips, brackets).

PART 3 EXECUTION

3.1 Construction

- .1 Comply with requirements of the CAN / CSA-S6-06.
- .2 Install all timber, fasteners and clips / brackets as indicated on the contract drawings.
- .3 Countersink bolts as indicated and where necessary to provide clearance for other work.

END OF SECTION

PART 1 - GENERAL

- 1.1 Related Sections
- .1 Section 01 33 00 - Submittal Procedures.
 - .2 Section 02 41 17 - Structure Demolition.
 - .3 Section 01 61 00 - Common Product Requirements.
 - .4 Section 01 74 21 - Construction and Demolition Waste Management and Disposal.
- 1.2 References
- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM C836, "Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Water-proofing Membrane for Use with Separate Wearing Course".
 - .2 Office des normes générales du Canada (CGSB)
 - .1 ONGC 37-GP-56, « Membrane bitumineuse modifiée, préfabriquée et renforcée, pour le revêtement des toitures ».
 - .3 Cahier des charges et devis généraux (CCDG)
 - .1 Article 15.10.3
 - .4 Normes ouvrages routier, Tome VII du MTQ
 - .1 Norme 3701
- 1.3 Submittals
- .1 Submit proof of manufacturer's CCMC Listing and listing number to Engineer.
 - .2 Submit proof of manufacturer's ISO 9002 registration and compliance to Engineer.
 - .3 Submit proof of manufacturer's ISO 14001 registration and compliance to Engineer.
 - .4 Submit proof of manufacturer's

participation certificate for
Environmental Choice Program to Engineer.

- .5 Manufacturer's Instructions: Provide to indicate special handling criteria, installation sequence, cleaning procedures.

1.4 Product Data

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit product data sheets for membrane and flashing. Include:
 - .1 Product characteristics.
 - .2 Performance criteria.
 - .3 Limitations.

1.5 Shop Drawings

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Indicate flashing, field fabricated seams details.

1.6 Delivery,
Storage and
Handling

- .1 Deliver, handle, store and protect materials of this section in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Provide and maintain dry, off-ground weatherproof storage.
- .3 Stand roll materials on end.
- .4 Remove only in quantities required for same day use.
- .5 Store materials in there original packaging and in accordance with manufacturer' s written instructions.

1.7 Waste
Management and
Disposal

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction and Demolition Waste

Management and Disposal, and with Waste Reduction Workplan.

- .2 Place materials defined as hazardous or toxic waste in designated containers.
- .3 Ensure emptied containers are sealed and stored safely for disposal away from children.
- .4 Collect and separate plastic, paper packaging and corrugated cardboard in accordance with Waste Management Plan.
- .5 Collect and separate plastic and/or paper packaging for recycling.
- .6 Use the least toxic sealants, and adhesives necessary to comply with requirements of this section.
- .7 Close and seal, tightly, all partly used sealant and adhesive containers and store protected in well ventilated, fire-safe area at moderate temperature.
- .8 Place used hazardous sealant tubes and adhesive containers in areas designated for hazardous materials.
- .9 Collect, package and store part, unused containers of asphalt, sealing compounds and primers and their contents for recycling and return to recycler in accordance with Waste Management Plan.

1.8 Project/Site
Environmental
Requirements

- .1 The installation of the waterproofing membrane must comply with 15.10.3.1.3 CCDG article as to time constraints, authorized period and climatic conditions.

1.9 Warranty

- .1 Contractor hereby warrants that Hot Applied Rubberized Asphalt and Waterproofing will stay in place and remain leakproof in accordance with GC24, but for 24 months.

PART 2 - PRODUCTS

- 2.1 Waterproofing membrane .1 The waterproofing membrane must meet the requirements of MTQ Volume VII, 3701 standard.
- 2.2 Tack coat .1 A tack coat must be applied at a rate of 0,15l/m² on surfaces to be covered with a waterproofing membrane. The tack coat shall be specified by the manufacturer of the waterproofing membrane and in the case of existing deck surfaces and new decks that have been covered with a temporary coating, the tack coat should be waterborne.
- 2.3 Flashing .1 The flashing is made of cement-based plastic polymer modified bitumen SBS must be fabricated by Soprema (brand Antirock Sealer).

PART 3 - EXECUTION

- 3.1 Surface cleaning .1 Cleaning of surfaces must comply with CCDG article 15.10.3.1.1.
- 3.2 Correction of surfaces .1 The correction of surfaces must comply with CCDG article 15.10.3.1.2.
- 3.3 Installation of waterproofing membrane .1 The installation of the waterproofing membrane must comply with CCDG article 15.10.3.1.3.

END OF SECTION

PART 1 - GENERAL

- 1.1 Related Sections
- .1 Section 01 11 01 - Pay Item Description
 - .2 Section 01 35 43 - Environmental Procedures
- 1.2 References
- .1 CGSB 1-GP-12c-68, Standard Paint Colors.
 - .2 Steel Structures Painting Council (SSPC) Specifications and Commentaries, 5th Edition.
- 1.3 Samples
- .1 Upon request, Engineer to furnish qualified products list of paints.
 - .2 Submit Product Data for to the Engineer.
- 1.4 Painted Components
- .1 The surfaces to be painted in accordance with this section include, but are not limited to, the following:
 - .1 Structural steel at the ends of the bridge

PART 2 - PRODUCTS

- 2.1 Materials
- .1 Paint for steel surfaces shall A 3 coat system of be zinc rich epoxy primer and polyurethane intermediate and top coats. Material shall be in accordance with the Ministry of Transportation of Québec homologation lists, for zinc based paints. Confirm paint system with Engineer before ordering.
 - .2 Confirm all colours with Engineer before ordering. Structural Steel to be colour Grey
 - .3 Paint formulated for application at high or low temperatures shall not be accepted under any circumstances.

PART 3 - EXECUTION

3.1 Surface
preparation

- .1 Clean surfaces of steel by abrasive blast cleaning to near white metal to remove rust oil, dirt, grease, and other foreign substances. Surface preparation should be to type SSPC-SP 10/ NACE No. 2.
- .2 Remove all surface irregularities such as fins, laminations, sharp edges, and weld spatter. Repair perforations by grinding as directed by the Engineer. Surface repairs to be completed before application of epoxy.
- .3 Do not apply paint until prepared surfaces have been accepted by Engineer.
- .4 Compressed air must be free of oil and water before reaching nozzle.
- .5 Protection of surfaces:
 - .1 Protect surfaces not to be painted and if damaged, clean and restore such surfaces as directed by Engineer.
 - .2 Apply primer and paint or reactive primer as soon as possible after surface has been cleaned and before deterioration of surface occurs.
 - .3 Clean surfaces again if rusting occurs after completion of surface preparation. Maintain cleaned surfaces of non-galvanized steel in a Near White condition.
 - .4 Prevent contamination of cleaned surfaces by salts, acids, alkalis, other corrosive chemicals, grease, oil and solvents before prime coat is applied and between applications of remaining coats of paint.

- .6 Mixing paint:
 - .1 Do not dilute or thin paint for brush application; use as received from manufacturer.
 - .2 Mix ingredients in accordance with manufacturer's directions.
 - .3 Do not mix or keep paint in suspension by means of air bubbling through paint.
 - .4 Thin paint for spraying according to manufacturer's instructions. If directions are not on container, obtain instructions in writing from manufacturer and provide copy of instructions to Engineer.
- .7 Thickness of Coatings:
 - .1 Steel Surfaces;
 - .1 epoxy and urethane paint dry film thicknesses of 0.085mm and 0.075mm respectively;
 - .2 and in accordance with the manufacturer's recommended dry film thickness.

3.2 Application

- .1 Apply primer and paint by spraying, brushing, or combination of both. Use sheepskins or daubers only when no other method is practical in places of difficult access.
- .2 Do not use dipping or roller coating method of application.
- .3 Stripe primer and paint all connections and edges prior to spraying.
- .4 Do not apply primer and paint when:
 - .1 Air temperature is below 10 degrees C or when temperature is expected to drop to 0 degrees C before paint has dried.
 - .2 Temperature of surface is over 30 degrees C.
 - .3 Fog or mist occur at site; it is raining or snowing; there is

-
- danger of rain or snow; relative humidity is above 85%.
- .4 Surface to be painted is wet, damp or frosted.
 - .5 Previous coat is not dry.
 - .6 Steel temperature is within 3 degrees C of the dew point.
- .5 Provide cover when primer and paint must be applied in damp or cold weather. Protect, shelter, or heat surface and surrounding air to comply with temperature and humidity conditions specified in 3.2.4. Protect until primer and paint is dry or until weather conditions are suitable.
- .6 Remove primer and paint from areas that have been damaged. Prepare surface again and repaint.
- .7 Apply each coat of primer and paint as continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of primer and paint is applied.
- .8 Brush application:
- .1 All rivets, bolts, nuts and washers shall be prime coated by brush prior to spraying.
 - .2 Work primer and paint into cracks, crevices and corners and paint surfaces not accessible by spray, with brushes.
 - .3 Brush out runs and sags.
 - .4 Remove runs, sags and brush marks from finished work and repaint.
 - .5 Application of primer and paint by spraying shall not commence until brush work has been approved by the Engineer.
- .9 Spray application:
- .1 Provide and maintain equipment that is suitable for intended purpose, capable of properly atomizing paint to be applied, and equipped

-
- with suitable pressure regulators and gauges.
- .2 Provide traps or separators to remove oil and water from compressed air and drain periodically during operations.
 - .3 Keep primer and paint ingredients properly mixed in spray pots or containers during primer and paint application either by continuous mechanical agitation or by intermittent agitation as frequently as necessary.
 - .4 Apply primer and paint in uniform layer, with overlapping at edges of spray pattern.
 - .5 Brush out immediately all runs and sags.
 - .6 Use brushes to work primer and paint into cracks, crevices and places which are not adequately painted by spray.
 - .7 Remove runs, sags and brush marks from finished work and repaint.
- .10 Shop painting:
- .1 Do shop priming and painting after fabrication and before any damage to surface occurs from weather or other exposure.
 - .2 Do not prime or paint metal surfaces which are to be embedded in concrete.
 - .3 Do not prime or paint metal within 50 mm of edge to be welded. Give unprotected steel one coat of approved primer after shop fabrication is completed.
 - .4 Remove weld spatter before priming and painting.
 - .5 Protect machine finished or similar surfaces that are not to be painted but that do require protection, with coating of rust inhibitive petroleum, molybdenum disulphide, or other coating approved by Engineer.

- .11 Field painting:
 - .1 Prime and paint steel structures as soon as practical after erection.
 - .2 Touch-up metal which has been shop coated with same type of primer or paint and to same thickness as shop coat. This touch-up to include cleaning and painting of field connections, welds, rivets, nuts, washers, bolts, and damaged or defective paint and rusted areas.
 - .3 Field prime and paint surfaces (other than joint contact surfaces) that are accessible before erection but which are not to be accessible after erection.
 - .4 Do not apply final coat of paint until concrete work is completed, except as directed by Engineer. If concreting or other operations damage any paint, clean and repaint damaged area. Remove concrete spatter and droppings before paint is applied.
 - .5 Where painting does not meet with requirements of specifications, and when so directed by Engineer remove all defective paint, thoroughly clean affected surfaces and repaint in accordance with these specifications.

- .12 Handling painted metal:
 - .1 Do not handle painted metal until paint has dried, except for necessary handling for painting or stacking for drying.
 - .2 Scrape off and touch up paint that is damaged in handling, with same number of coats and kinds of paint as were previously applied to metal.

- .13 Clean and touch-up all areas in which falsework or enclosures have been attached to the structure. Access to

these areas must be maintained until the work has been inspected and approved by the Engineer.

- .14 Do not apply successive coat until previous coat is dry hard. Allow sufficient time between coats for visual and dry film thickness checks by Engineer.

3.3 Existing Fixtures

- .1 Protect all existing fixtures from damage due to painting activities. Disassemble if necessary and then reassemble after painting is finished.

3.4 Night Work

- .1 Do not undertake surface preparations and painting operations at night without the written approval of the Engineer.
- .2 If night work is approved, provide illumination for the work area during surface preparation, coating applications and inspection procedures.
- .3 The minimum luminosity is to be 400 Lux at any point within the work area.

END OF SECTION

PART 1 - GENERAL

1.1 Related
Sections

- .1 Section 01 11 01 - Pay Item Descriptions
- .2 Section 01 35 14 - Special Procedure:
Traffic Control
- .3 Section 01 35 43 - Environmental
Procedures
- .4 Section 02 41 13 - Selective Site
Demolition

1.2 Measurement
Procedures

- .1 Work performed under this Section will
be incidental to work in other Sections.

1.3 References

- .1 ASTM C117-90, Test Method for Material
Finer Than 0.075 mm No. 200 Sieve in
Mineral Aggregates by Washing.
- .2 ASTM C136-92, Method for Sieve Analysis
of Fine and Coarse Aggregates.
- .3 ASTM D422-63 1990, Method for Particle-
Size Analysis of Soils.
- .4 ASTM D698-91, Test Method for Laboratory
Compaction Characteristics of soil Using
Standard Effort (12,400 ft-lbf/ft) (600
kN-m/m).
- .5 ASTM D1557-91, Test Method for
Laboratory Compaction Characteristics of
Soil Using Modified Effort (56,000 ft-
lbf/ft) (2,700 kN-m/m).
- .6 ASTM D4318-84, Test Method for Liquid
Limit, Plastic Limit, and Plasticity
Index of Soils.
- .7 CAN/CGSB-8.1-88, Sieves, Testing, Woven
Wire, Inch Series.
- .8 CAN/CGSB-8.2-M88, Sieves, Testing, Woven

Wire, Metric.

- .9 CAN/CSA-A23.1-M94, Concrete Materials and Methods of Concrete Construction.

1.4 Definitions

- .1 Excavation classes: two classes of excavation will be recognized; common excavation and rock excavation.
 - .1 Rock excavation: excavation of material from solid masses of igneous, sedimentary or metamorphic rock which, prior to its removal, was integral with its parent mass, and boulders or rock fragments having individual volume in excess of 1 m.
 - .2 Common excavation: excavation of materials of whatever nature, which are not included under definitions of rock excavation.

1.5 Existing Conditions

- .1 Examine the sub-surface investigations reports available at the offices of the National Capital Commission.

1.6 Protection of Existing Features

- .1 Existing buried utilities and structures:
 - .1 Size, depth and location of existing utilities and structures as indicated are for guidance only. Completeness and accuracy are not guaranteed.
 - .2 Prior to commencing excavation work, notify applicable owner or authorities having jurisdiction, establish location and state of use of buried utilities and structures. Owners or authorities having jurisdiction to clearly mark such locations to prevent disturbance during work.
 - .3 Confirm locations of buried utilities by careful test excavations.
 - .4 Maintain and protect from damage,

water, sewer, gas, electric,
telephone and other utilities and
structures encountered.

- .5 Where utility lines or structures exist in area of excavation, obtain direction of Engineer before re-routing. Costs for such work to be paid by Owner.
- .6 Record location of maintained, re-routed and abandoned underground lines.

.2 Existing surface features:

- .1 Conduct, with Engineer, condition survey of trees and other plants, lawns, fencing, service poles, wires, pavement, survey bench marks and monuments which may be affected by work.
- .2 Where required for excavation, cut roots or branches as approved by Engineer in accordance with Section Section 01 35 43 - Environmental Procedures.

1.7 Shoring,
Bracing and
Underpinning

- .1 Protect existing features in accordance with applicable local regulations.
- .2 Where required, engage services of qualified professional engineer who is registered or licensed in province of Québec, Canada in which work is to be carried out to design and inspect shoring, bracing and underpinning required for work.
- .3 Submit design and supporting data at least 2 weeks prior to commencing work.
- .4 Design and supporting data submitted to bear stamp and signature of qualified professional engineer registered or licensed in province of Ontario, Canada.

PART 2 - PRODUCTS

2.1 Materials

- .1 Type 1 and Type 2 fill: properties to section 02701 - Aggregates: General and the following requirements:
- .1 Crushed, pit run or screened stone, gravel or sand.
 - .2 Gradations to be within limits specified when tested to ASTM C136 and ASTM C117. Sieve sizes to CAN/CGSB-8.1.

Sieve Designation		% Passing	
		Type 1	Type 2
75	mm	-	100
50	mm	-	-
37.5	mm	-	-
25	mm	100	-
19	mm	75-100	-
12.5	mm	-	-
9.5	mm	50-100	-
4.75	mm	30-70	22-85
2.00	mm	20-45	-
0.425	mm	10-25	5-30
0.180	mm	-	-
0.075	mm	3-8	0-10

- .2 Type 3 fill: selected material from excavation or other sources, approved by Engineer for use intended, unfrozen and free from rocks larger than 75 mm, cinders, ashes, sods, refuse or other deleterious materials.
- .3 Unshrinkable fill: proportioned and mixed to provide:
- .1 Maximum compressive strength of 0.4 MPa at 28 days.
 - .2 Maximum Portland cement content of 25 kg/m.
 - .3 Minimum strength of 0.07 MPa at 24 h.
 - .4 Concrete aggregates: to CAN/CSA-A23.1.
 - .5 Portland cement: Type 10.

.6 Slump: 160 to 200 mm.

PART 3 - EXECUTION

3.1 Site
Preparation

- .1 Remove obstructions, ice and snow, from surfaces to be excavated within limits indicated.
- .2 Cut pavement or sidewalk neatly along limits of proposed excavation in order that surface may break evenly and cleanly in accordance with Section 02 41 13 - Selective Site Demolition.

3.2 Stripping of
Topsoil

- .1 Strip topsoil to depths as directed by Engineer. Do not mix topsoil with subsoil.
- .2 Stockpile in locations as directed by Engineer. Stockpile height not to exceed 2 m.
- .3 Dispose of unused topsoil off site.

3.3 Stockpiling

- .1 Stockpile fill materials in areas designated by Engineer. Stockpile granular materials in manner to prevent segregation.
- .2 Protect fill materials from contamination.

3.4 Shoring, Bracing
and Underpinning

- .1 Construct temporary works to depths, heights and locations as required.
- .2 During backfill operation:
 - .1 Unless otherwise as indicated or as directed by Engineer, remove sheeting and shoring from excavations.
 - .2 Do not remove bracing until backfilling has reached respective levels of such bracing.

- .3 Pull sheeting in increments that will ensure compacted backfill is maintained at an elevation at least 500 mm above toe of sheeting.

3.5 Dewatering and Heave Prevention

- .1 Keep excavations free of water while work is in progress.
- .2 Submit for Engineer's review details of proposed dewatering or heave prevention methods, such as dikes, well points, and sheet pile cut-offs.
- .3 Avoid excavation below groundwater table if quick condition or heave is likely to occur. Prevent piping or bottom heave of excavations by groundwater lowering, sheet pile cut-offs, or other means.
- .4 Protect open excavations against flooding and damage due to surface runoff.
- .5 Dispose of water in accordance with Section 01 35 43 - Environmental Procedures and in manner not detrimental to public and private property, or any portion of work completed or under construction.
- .6 Provide flocculation tanks, settling basins, or other treatment facilities to remove suspended solids or other materials before discharging to storm sewers, water courses or drainage areas.

3.6 Excavation

- .1 Excavate to lines, grades, elevations and dimensions as indicated by Engineer or drawings.
- .2 Remove concrete, paving, walks, and other obstructions encountered during excavation in accordance with Section Section 02 41 13 - Selective Site Demolition.

- .3 Excavation must not interfere with normal 45° splay of bearing from bottom of any footing.
- .4 Do not disturb soil within branch spread of trees or shrubs that are to remain. If excavating through roots, excavate by hand and cut roots with sharp axe or saw.
- .5 For trench excavation, unless otherwise authorized by Engineer in writing, do not excavate more than 30 m of trench in advance of installation operations and do not leave open more than 15 m at end of day's operation.
- .6 Dispose of surplus and unsuitable excavated material off site.
- .7 Do not obstruct flow of surface drainage or natural watercourses.
- .8 Earth bottoms of excavations to be undisturbed soil, level, free from loose, soft or organic matter.
- .9 Notify Engineer when bottom of excavation is reached.
- .10 Obtain Engineer approval of completed excavation.
- .11 Remove unsuitable material from trench bottom to extent and depth as directed by Engineer.
- .12 Correct unauthorized over-excavation as follows:
 - .1 Fill under bearing surfaces and footings with concrete specified for footings.
 - .2 Fill under other areas with Type 2 fill compacted to not less than 95% of corrected maximum dry density.

- .13 Hand trim, make firm and remove loose material and debris from excavations. Where material at bottom of excavation is disturbed, compact foundation soil to density at least equal to undisturbed soil. Clean out rock seams and fill with concrete mortar or grout to approval of Engineer.

3.7 Fill Types and
Compaction

- .1 Use fill of types as indicated on drawings. Compaction densities are percentages of maximum densities obtained from ASTM D698 ASTM D1557 corrected maximum dry density.

3.8 Bedding and
Surround of
Underground
Services

- .1 Place bedding and surround material in unfrozen condition.

3.9 Backfilling

- .1 Do not proceed with backfilling operations until Engineer has inspected and approved installations.
- .2 Areas to be backfilled to be free from debris, snow, ice, water and frozen ground.
- .3 Do not use backfill material which is frozen or contains ice, snow or debris.
- .4 Place backfill material in uniform layers not exceeding 150 mm compacted thickness up to grades indicated. Compact each layer before placing succeeding layer.
- .5 Backfill around installations.
- .6 Place bedding and surround material as specified elsewhere.
- .7 Do not backfill around or over cast-in-place concrete within 24 hours after

placing of concrete.

3.10 Restoration

- .1 Upon completion of work, remove waste materials and debris, trim slopes, and correct defects as directed by Engineer.
- .2 Use temporary plating to support traffic loads over unshrinkable fill for initial 24 hours.

END OF SECTION

PART 1 GENERAL

1.1 Related Sections

- .1 Section 01 35 43 - Environmental Procedures
- .2 Section 31 23 10 - Excavating, Trenching and Backfilling

1.2 References

- .1 ASTM A313-87, Specification for Chromium-Nickel Stainless and Heat-Resisting Steel Spring Wire.
- .2 ASTM A764-79, Specification for Steel Wire, Carbon, Drawn, Galvanized and Galvanized at Size for Mechanical Springs.
- .3 CAN/CSA-G164-M92, Hot Dip Galvanizing of Irregularly Shaped Articles.

1.3 Submissions

- .1 Submit gabion basket manufacturer's information to Contract Administrator for review prior to starting the work.

PART 2 PRODUCTS

2.1 Materials

- .1 Gabion baskets:
 - .1 Factory fabricated so that sides, ends, lid and internal diaphragms readily assemble at site into rectangular baskets of sizes as indicated on Contract Drawings
 - .2 Joints between gabions shall have the strength and flexibility equal to that of the gabion basket mesh.
 - .3 When length exceeds horizontal width, provide diaphragms of same mesh as gabion walls to divide basket into equal cells of length not in excess of horizontal width.
 - .4 Wire mesh gabions:
 - .1 Wire mesh to be uniform hexagonal pattern wire woven in double twist pattern with openings of approximately 80 x 100 mm and fabricated to be

non-ravelling. Perimeter edges of mesh to be securely selvedged so that joints formed by connecting selvedges are as strong as body of mesh.

- .2 Wire to have following dimensions:
 - .1 Mesh: 3.0 mm diameter.
 - .2 Selvedges: 3.8 mm diameter.
 - .3 Binding: 2.0 mm diameter.
 - .4 Interlocking Fasteners: 3.0 mm diameter.
- .3 Wire: hot dip galvanized with minimum coverage of 260 g/m² to CSA G164.
- .4 Interlocking wire fasteners: galvanized steel to ASTM A764, finish 1, class 1, type 3.

- .2 Stone fill:
 - .1 Hard, durable, abrasion resistant stone such that it will not disintegrate from action of wetting and drying, and freezing and thawing cycles.
 - .2 Minimum 100 mm to maximum 200 mm dimension for individual stones in gabions.

PART 3 EXECUTION

3.1 Installation

- .1 Install gabions and geotextiles to lines and grades as indicated on Contract Drawings. Follow manufacturer's instructions in assembling baskets.
- .2 Excavate for and backfill around gabions in accordance with Section 31 23 10 - Excavating, Trenching and Backfilling.

3.2 Placing Gabions

- .1 Place baskets in position prior to filling with stone.
- .2 Join adjacent baskets together at corners as recommended by manufacturer so that joints are as strong as mesh.

3.3 Filling Baskets

- .1 For wire mesh gabions, fill gabion cells in lifts not exceeding 300 mm and connect opposite walls with 2 tie wires after each lift.

- .2 Gabion baskets to be filled following manufacturer's recommendations.

END OF SECTION

PART 1 GENERAL

- 1.1 Related Sections .1 Section 01 35 43 - Environmental Procedures
- .2 Section 31 23 10 - Excavating, Trenching and Backfilling
- 1.3 Submissions .1 Submit gradation of rip-rap to the Contract Administrator for review prior to starting the work.
- .2 Submit geotextile manufacturer's information to Contract Administrator for review prior to starting work.

PART 2 PRODUCTS

- 2.1 Materials .1 Rip-Rap: Gradation conforming to the contract requirements with a maximum stone size of 300 mm, minimum stone size of 200 mm and an average stone size of 250mm.
- .2 Geotextile: Conforming to the requirements of the Bureau de Normalisation du Québec, BNQ 7009-910, Geotextiles - Quality of Geotextiles used in Road Engineering - Certification Protocol. Geotextile shall be non-woven geotextile with a filter opening size of 75-150µm

PART 3 EXECUTION

- 3.1 Installation .1 Install geotextile and rip-rap as indicated on the Contract Drawings after all site clean-up and restoration has been completed.

END OF SECTION

PART 1 - GENERAL

1.1 Related
Sections

- .1 Section 01 11 01 - Pay Item Descriptions
- .2 Section 32 12 17 - Asphalt Paving

1.2 References

- .1 CCDG article 13.2 - Liant d'imprégnation ou d'accrochage.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-16.2-M89, Emulsified Asphalts, Anionic Type, for Road Purposes.
- .3 American Society for Testing and Materials
 - .1 ASTM D 140-93, Practice for Sampling Bituminous Materials.

1.3 Samples

- .1 Provide access on tank truck for Engineer to sample asphalt material to be incorporated into work, in accordance with ASTM D 140.

1.4 Quality
Assurance

- .1 Upon request by Engineer Owner, submit manufacturer's test data and certification that asphalt tack coat material meets requirements of this section.

PART 2 - PRODUCTS

2.1 Materials

- .1 Bitumen emulsion complying with the standard 4105 MTQ.

PART 3 - EXECUTION

3.1 Equipment

- .1 Pressure distributor to be:
 - .1 Designed, equipped, maintained and operated so that asphalt material can be:

- .1 Maintained at even temperature.
- .2 Applied uniformly on variable widths of surface up to 5 m.
- .3 Applied at readily determined and controlled rates from 0.2 to 5.4 L/m with uniform pressure, and with an allowable variation from any specified rate not exceeding 0.1 L/m.
- .4 Distributed in uniform spray without atomization at temperature required.
- .2 Equipped with meter, registering metres of travel per minute, visibly located to enable truck driver to maintain constant speed required for application at specified rate.
- .3 Equipped with pump having flow meter graduated in units of 5 L or less per minute passing through nozzles and readily visible to operator. Pump power unit to be independent of truck power unit.
- .4 Equipped with an easily read, accurate and sensitive device which registers temperature of liquid in reservoir.
- .5 Equipped with accurate volume measuring device or calibrated tank.
- .6 Equipped with nozzles of same make and dimensions, adjustable for fan width and orientation.
- .7 Cleaned if previously used with incompatible asphalt material.

3.2 Application

- .1 Apply asphalt tack coat only on clean and dry surface. Obtain Engineer's approval of surface before applying asphalt tack coat.
- .2 Dilute asphalt emulsion with water at 1:1 ratio for application. Mix thoroughly by pumping or other method approved by Engineer.

- .3 Apply asphalt tack coat evenly to pavement surface at rate as directed by Engineer, but do not exceed 0.7 L/m.
- .4 Paint contact surfaces of curbs, gutters, headers, manholes and like structures with thin, uniform coat of asphalt tack coat material.
- .5 Do not apply asphalt tack coat when air temperature is less than 10 or when rain is forecast within 2 h of application.
- .6 Apply asphalt tack coat only to surfaces that are expected to be overlaid on same day.
- .7 Evenly distribute localized excessive deposits of tack coat by brooming as directed by Engineer.
- .8 Where traffic is to be maintained, treat no more than one half of width of surface in one application.
- .9 Keep traffic off tacked areas until asphalt tack coat has set.
- .10 Re-tack contaminated or disturbed areas as directed by Engineer.
- .11 Permit asphalt tack coat to set before placing asphalt pavement.

END OF SECTION

PART 1 - GENERAL

1.1 Related
Sections

- .1 Section 01 11 01 - Pay Item Descriptions
- .2 Section 02 41 13 - Selective Site Demolition
- .3 Section 32 12 15 - Asphalt Tack Coat
- .4 Section 01 35 14 - Special Procedures: Traffic Control

1.2 References

- .1 CCDG section 13 - Revêtement de chaussée en enrobé
- .2 CCDG article 15.11 - Revêtement en enrobé
- .3 CAN/CGSB-1.5-M91, Low Flash Petroleum Spirits Thinner.
- .4 CGSB 1-GP-12c-93, Standard Paint Colours.
- .5 CGSB 1-GP-71-83, Method, of Testing Paints and Pigments.
- .6 CGSB 1-GP-74M-79, Paint, Traffic, Alkyd

1.3 Product Data

- .1 Submit asphalt concrete mix design and trial mix test results to Engineer for approval at least 1 week prior to commencing work.

1.4 Samples

- .1 Inform Engineer of proposed source of aggregates and provide access for sampling at least 1 week prior to commencing work.

PART 2 - PRODUCTS

2.1 Materials

- .1 Materials shall conform to NQ 2560-114 " Travaux de genie civil - Granulats" norm.
- .2 The aggregates used in the composition of the mix shall conform to the standard 4202 MTQ.
- .3 The bitumen used in the composition of the asphalt shall conform to the requirements of the standard 4101 MTQ.
- .4 The tack coat and hot mix asphalt must meet the requirements of CCDG section 13 but stated that:
 - .1 The use of blended bitumen is prohibited;
 - .2 The use of steel slag as aggregates is prohibited;
 - .3 The asphalt shall be manufactured from virgin materials only.
- .5 Paint:
 - .1 To CGSB 1-GP-74M, alkyd traffic paint.
 - .2 Colour: to CGSB 1-GP-12C, yellow 505-308 black 512-301 white 513-301.
 - .3 Upon request, Engineer will supply a qualified product list of paints applicable to work. Qualified paints may be used but Engineer reserves right to perform further tests.
- .6 Thinner: to CAN/CGSB-1.5.
- .7 Refer to details indicated on plans for sealant material

2.2 Mix Design

- .1 The aggregates and bitumen in the composition of the asphalt mix are:
 - coarse aggregates with intrinsic

characteristics of category 3 and with fabrication characteristics of category c;

- fine aggregates with intrinsic characteristics of category 2;
- bitumen with performance class of PG 58-34.

PART 3 - EXECUTION

3.1 Equipment

- .1 Pavers: mechanical grade controlled self-powered pavers capable of spreading mix within specified tolerances, true to line, grade and crown indicated.
- .2 Rollers: minimum of three per paver of type and weight to obtain specified density of compacted mix.
- .3 Vibratory rollers:
 - .1 Minimum drum diameter: 1200 mm.
 - .2 Maximum amplitude of vibration (machine setting): 0.5 mm for lifts less than 40 mm thick.
- .4 Haul trucks: sufficient number and of adequate size, speed and condition to ensure orderly and continuous operation and as follows:
 - .1 Boxes with tight metal bottoms.
 - .2 Covers of sufficient size and weight to completely cover and protect asphalt mix when truck fully loaded.
 - .3 In cool weather or for long hauls, insulate entire contact area of each truck box.
 - .4 Use only trucks which can be weighed in single operation on scales supplied.
- .5 Hand tools:
 - .1 Lutes or rakes with covered teeth for spreading and finishing

operations.

- .2 Tamping irons having mass not less than 12 kg and bearing area not exceeding 310 cm for compacting material along curbs, gutters and other structures inaccessible to roller. Mechanical compaction equipment, when approved by Engineer, may be used instead of tamping irons.
- .3 Straight edges, 4.5 m in length, to test finished surface.

- .6 Paint applicator to be an approved pressure type mobile distributor capable of applying paint in single, double and dashed lines. Applicator to be capable of applying marking components uniformly, at rates specified, and to dimensions as indicated, and to have positive shut-off.

3.2 Preparation

- .1 When paving over existing asphalt surface, clean pavement surface. When levelling course is not required, patch and correct depressions and other irregularities to approval of Engineer before beginning paving operations.
- .2 Apply tack coat in accordance with Section 32 12 15 - Asphalt Tack Coat prior to paving.
- .3 Prior to laying mix, clean surfaces of loose and foreign material.

3.3 Transportation of Mix

- .1 Transport mix to job site in vehicles cleaned of foreign material.
- .2 Paint or spray truck beds with limewater, soap or detergent solution, or non-petroleum based commercial product, at least daily or as required. Elevate truck bed and thoroughly drain. No excess solution to remain in truck bed.

- .3 Schedule delivery of material for placing in daylight, unless Engineer approves artificial light.
- .4 Deposit mix from surge or storage silo to trucks in multiple drops to reduce segregation. Do not dribble mix into trucks.
- .5 Deliver material to paver at uniform rate and in an amount within capacity of paving and compacting equipment.
- .6 Deliver loads continuously in covered vehicles and immediately spread and compact. Deliver and place mixes at temperature within range as directed by Engineer, but not less than 135°C.

3.4 Placing

- .1 Obtain Engineer's approval of base prior to placing asphalt.
- .2 Place asphalt concrete to thicknesses, grades and lines as indicated.
- .3 Placing conditions:
 - .1 Place asphalt mixtures only when air temperature is above 5°C.
 - .2 When temperature of surface on which material is to be placed falls below 10°C, provide extra rollers as necessary to obtain required compaction before cooling.
 - .3 Do not place hot-mix asphalt when pools of standing water exist on surface to be paved, during rain, or when surface is damp.
- .4 Place asphalt concrete in compacted lifts of thickness as follows:
 - .1 Superpave 19.0 upper and lower binder course in layers of minimum 50 mm each.
 - .2 Superpave 12.5 surface binder course in layers of maximum 60 mm each.

- .5 Where possible do tapering and levelling where required in lower lifts. Overlap joints by not less than 300 mm.
- .6 Place individual strips no longer than 500 m.
- .7 Spread and strike off mixture with self propelled mechanical finisher.
 - .1 Construct longitudinal joints and edges true to line markings. Establish lines for paver to follow parallel to centerline of proposed pavement. Position and operate paver to follow established line closely.
 - .2 When using pavers in echelon, have first paver follow marks or lines, and second paver follow edge of material placed by first paver. Work pavers as close together as possible and in no case permit them to be more than 30 m apart.
 - .3 Maintain constant head of mix in auger chamber of paver during placing.
 - .4 If segregation occurs, immediately suspend spreading operation until cause is determined and corrected.
 - .5 Correct irregularities in alignment left by paver by trimming directly behind machine.
 - .6 Correct irregularities in surface of pavement course directly behind paver. Remove by shovel or lute excess material forming high spots. Fill and smooth indented areas with hot mix. Do not broadcast material over such areas.
 - .7 Do not throw surplus material on freshly screeded surfaces.
- .8 When hand spreading is used:
 - .1 Use approved wood or steel forms, rigidly supported to assure correct grade and cross section. Use measuring blocks and intermediate

-
- strips to aid in obtaining required cross-section.
 - .2 Distribute material uniformly. Do not broadcast material.
 - .3 During spreading operation, thoroughly loosen and uniformly distribute material by lutes or covered rakes. Reject material that has formed into lumps and does not break down readily.
 - .4 After placing and before rolling, check surface with templates and straightedges and correct irregularities.
 - .5 Provide heating equipment to keep hand tools free from asphalt. Control temperature to avoid burning material. Do not use tools at higher temperature than temperature of mix being placed.

3.5 Compacting

.1 General:

- .1 Provide at least two rollers and as many additional rollers as necessary to achieve specified pavement density. When more than two rollers are required, one roller must be pneumatic tired type.
- .2 Start rolling operations as soon as placed mix can bear weight of roller without excess displacement of material or cracking of surface.
- .3 Operate roller slowly initially to avoid displacement of material. Do not exceed 5 km/h for breakdown and intermediate rolling for static steel-wheeled and pneumatic tired rollers. Do not exceed 9 km/h for finish rolling.
- .4 Use static compaction for levelling coarse less than 25 mm thick.
- .5 For lifts 50 mm thick and greater, adjust speed and vibration frequency of vibratory rollers to produce minimum of 25 impacts per metre of travel. For lifts less than 50 mm thick, impact spacing

-
- not to exceed compacted lift thickness.
- .6 Overlap successive passes of roller by minimum of 200 mm and vary pass lengths.
 - .7 Keep wheels of roller slightly moistened with water to prevent pick-up of material but do not over-water.
 - .8 Do not stop vibratory rollers on pavement that is being compacted with vibratory mechanism operating.
 - .9 Do not permit heavy equipment or rollers to stand on finished surface before it has been compacted and has thoroughly cooled.
 - .10 After traverse and longitudinal joints and outside edge have been compacted, start rolling longitudinally at low side and progress to high side. Ensure that all points across width of pavement receive essentially equal numbers of passes of compactors.
 - .11 When paving in echelon, leave unrolled 50 to 75 mm of edge which second paver is following and roll when joint between lanes is rolled.
 - .12 Where rolling causes displacement of material, loosen affected areas at once with lutes or shovels and restore to original grade of loose material before re-rolling.
 - .13 Extreme care should be taken to ensure that vibratory roller vibratory mechanisms are not operated over bridge decks. Contractor shall ensure that bridge deck ends are accurately tied down and that all operators are advised of bridge deck limits.
- .2 Breakdown rolling:
- .1 Commence breakdown rolling with static steel wheeled roller immediately following rolling of transverse and longitudinal joint

-
- and edges.
 - .2 Operate rollers as close to paver as necessary to obtain adequate density without causing undue displacement.
 - .3 Operate breakdown roller with drive roll or wheel nearest finishing machine. When working on steep slopes or super-elevated sections use operation approved by Engineer.
 - .4 Use only experienced roller operators.
 - .3 Intermediate rolling:
 - .1 Use pneumatic-tired, steel wheel or vibratory rollers and follow breakdown rolling as closely as possible and while paving mix temperature allows maximum density from this operation.
 - .2 Rolling to be continuous after initial rolling until mix placed has been thoroughly compacted.
 - .4 Finish rolling:
 - .1 Accomplish finish rolling with two-axle or three-axle tandem steel wheeled rollers while material is still warm enough for removal of roller marks. If necessary to obtain desired surface finish, use pneumatic-tired rollers as directed by Engineer.
 - .2 Conduct rolling operations in close sequence.
 - .5 Dust entire area of sheet asphalt pavements with hydrated lime immediately after rolling to eliminate tendency to pick-up under traffic.

3.6 Joints

- .1 General:
 - .1 Remove surplus material from surface of previously laid strip. Do not deposit on surface of freshly laid strip.
 - .2 Construct joints between asphalt concrete pavement and Portland

-
- cement concrete pavement as indicated.
- .3 Paint contact surfaces of existing structures such as manholes, curbs or gutters with bituminous material prior to placing adjacent pavement.
- .2 Transverse joints:
- .1 Offset transverse joint in succeeding lifts by at least 600 mm.
 - .2 Cut back to full depth vertical face and tack face with thin coat of hot asphalt prior to continuing paving.
 - .3 Compact transverse joints to provide smooth riding surface. Use methods to prevent rounding of compacted surface at joints.
- .3 Longitudinal joints:
- .1 Offset longitudinal joints in succeeding lifts by at least 150 mm.
 - .2 Cold joint is defined as joint where asphalt mix is placed, compacted and left to cool below 100°C prior to paving of adjacent lane.
 - .1 If cold joint can not be avoided, cut back by saw cutting previously laid lane, by at least 150 mm, to full depth vertical face, and tack face with thin coat of hot asphalt of adjacent lane.
 - .3 Overlap previously laid strip with spreader by 25 to 50 mm.
 - .4 Before rolling, carefully remove and discard coarse aggregate in material overlapping joint with lute or rake.
 - .5 Roll longitudinal joints directly behind paving operation.
 - .6 When rolling with static or vibratory rollers, have most of drum width ride on newly placed

lane with remaining 150 mm
extending onto previously placed
and compacted lane.

- .4 Construct butt joints as indicated.
- .5 Sawcut the asphalt at the ends of the bridge as indicated on the contract drawings and fill grooves with hot rubberized asphalt sealant.

3.7 Finish
Tolerances

- .1 Finished asphalt surface to be within 5 mm of design elevation but not uniformly high or low.
- .2 Finished asphalt surface not to have irregularities exceeding 5 mm when checked with 4.5 m straight edge placed in any direction.

3.8 Defective Work

- .1 Correct irregularities that develop before completion of rolling by loosening surface mix and removing or adding material as required. If irregularities or defects remain after final compaction, remove surface course promptly and lay new material to form true and even surface and compact immediately to specified density.
- .2 Repair areas showing checking, rippling, or segregation.
- .3 Adjust roller operation and screed settings on paver to prevent further defects such as rippling and checking of pavement.

3.9 Pavement Markings

- .1 Pavement surface to be dry, free from ponded water, frost, ice, dust, oil, grease and other foreign materials.
- .2 Pavement markings to be laid out by Contractor.

- .3 Unless otherwise approved by Engineer, apply paint only when air temperature is above 10°C, wind speed is less than 60 km/h and no rain is forecast within next 4 h.
- .4 Apply traffic paint evenly.
- .5 Do not thin paint unless approved by Engineer.
- .6 Symbols and letters to conform to dimensions indicated.
- .7 Paint lines to be of uniform colour and density with sharp edges.
- .8 Thoroughly clean distributor tank before refilling with paint of different colour.
- .9 Paint markings to be within plus or minus 12 mm of dimensions indicated.
- .10 Protect pavement markings until dry.

END OF SECTION

PART 1 - GENERAL

Not Used

PART 2 - PRODUCTS

2.1 Topsoil

- .1 Topsoil: mixture of particulates, micro organisms and organic matter which provides suitable medium for supporting intended plant growth.
 - .1 Soil texture based on The Canadian System of Soil Classification, to consist of 60 to 70 % sand, minimum 8 % clay, and to contain 2 to 10 % organic matter by weight.
 - .2 Contain no toxic elements or growth inhibiting materials.
 - .3 Finished surface free from:
 - .1 Debris and stones over 50 mm diameter.
 - .2 Coarse vegetative material, 10 mm diameter and 100 mm length, occupying more than 2% of soil volume.
 - .4 Consistence: friable when moist.

2.2 Soil Amendments

- .1 Fertilizer:
 - .1 Fertility: major soil nutrients present in following amounts:
 - .2 Nitrogen (N): 20 to 40 micrograms of available N per gram of topsoil.
 - .3 Phosphorus (P): 40 to 50 micrograms of phosphate per gram of topsoil.
 - .4 Potassium (K): 75 to 110 micrograms of potassium per gram of topsoil.
 - .5 Calcium, magnesium, sulfur and micro-nutrients present in balanced ratios to support germination and/or establishment of intended vegetation.
 - .6 Ph value: 6.5 to 7.5
- .2 Sand: washed coarse silica sand,

medium to course textured.

- .3 Organic matter: composted organic matter, such as rotted manure, hay, straw, bark residue or sawdust, meeting the organic matter, stability and contaminant requirements. Salt content shall not exceed 1.0 ms/cm (millisiemens / cubic centimetre) and material shall be such as to support healthy plant development. Provide analysis and sample for Engineer's approval before delivery to site.
- .4 Limestone:
 - .1 Ground agricultural limestone.
 - .2 Gradation requirements: percentage passing by weight, 90% passing 1.0 mm sieve, 50% passing 0.125 mm sieve.
- .5 Fertilizer: industry accepted standard medium containing nitrogen, phosphorous, potassium and any other micro-nutrients suitable to the specific plant species or application or defined by the soil test.

2.3 Source Quality Control

- .1 Advise Engineer of sources of topsoil to be utilized with sufficient lead time for testing.
- .2 Contractor is responsible for amendments to supply topsoil as specified and as indicated by soil test.
- .3 Soil testing by recognized testing facility for PH, P and K, and organic matter.
- .4 Testing of topsoil will be carried out by testing laboratory designated by Engineer. Soil sampling, testing and analysis to be in accordance with Provincial standards. Engineer will pay for cost of testing.

- 2.4 Hydraulic Seeding .1 Seed mixture and mulch shall conform to MTQ standards for highway seeding.

PART 3 - EXECUTION

- 3.1 Preparation of Existing Grade .1 Verify that grades are correct. If discrepancies occur, notify Engineer and do not commence work until instructed by Engineer.
- .2 Grade soil, eliminating uneven areas and low spots, ensuring positive drainage.
- .3 Remove debris, roots, branches, stones in excess of 50 mm diameter and other deleterious materials. Remove soil contaminated with calcium chloride, toxic materials and petroleum products. Remove debris which protrudes more than 75 mm above surface. Dispose of removed material off site.
- .4 Cultivate entire area which is to receive topsoil to minimum depth of 200 mm.
- 3.2 Placing and Spreading of Topsoil/Hydraulic Seeding .1 Place topsoil after Engineer has accepted subgrade.
- .2 Spread topsoil in uniform layers not exceeding 150 mm.
- .3 Spread topsoil to depth indicated on drawings.
- .4 Hydraulic seeding and mulch shall be placed on top of topsoil for all disturbed vegetated areas.
- 3.3 Soil Amendments .1 Apply and thoroughly mix soil amendments into full specified depth

of topsoil at rates indicated by soil
test.

- 3.4 Finish Grading .1 Grade to eliminate rough spots and low areas and ensure positive drainage. Prepare loose friable bed by means of cultivation and subsequent raking.
- .2 Consolidate topsoil to required bulk density using equipment approved by Engineer. Leave surfaces smooth, uniform and firm against deep footprinting.
- 3.5 Acceptance .1 Engineer will inspect and test topsoil in place and determine acceptance of material, depth of topsoil and finish grading.
- 3.6 Surplus Material .1 Dispose of surplus materials where directed by Engineer.

END OF SECTION

PART 1 - GENERAL

1.1 Related Work .1 Section 01 11 01 - Pay Item Descriptions

1.2 References .1 OPSD standards and drawings.

PART 2 - PRODUCTS

2.1 Materials .1 The following end treatment is accepted:
.1 Extruder end treatment (OPSD
922.532

PART 3 - EXECUTION

3.1 End devices .1 The end devices must be installed
according to installation instructions
of the manufacturer.

END OF SECTION

PART 1 - GENERAL

1.1 Description

- .1 Dewatering systems and cofferdams shall be built to dry up the excavation and all work areas at the abutment and retaining walls. The work includes all site preparation for the dewatering and cofferdams and the supply of all necessary documents. It includes all excavations required to construct the dewatering system (including cofferdams), all equipment and materials required for its construction and for its removal at the end of the work. It also includes the implementation of all environmental protections, turbidity curtains and incidental works. Contractor shall use the method of his choice; cofferdams built with sand bags and waterproof membrane, steel sheetpiles or other equivalent dewatering system to be approved by NCC. Contractor shall refer to General Condition GC3.4.5 stipulating that temporary structures are of the sole responsibility of Contractor, dewatering systems or cofferdams being considered as temporary structures. Avoid dispersion of any materials in the waterways.
- .2 The work includes but is not limited to:
 - .1 The design, construction and maintenance of cofferdams considered temporary structures as required to facilitate demolition and reconstruction of the Canal wall as indicated on the drawings.
 - .2 Design, provision and maintenance of a dewatering systems for removal of water from the work spaces and to maintain these spaces in the dry state.
 - .3 Removal of water from the work spaces and the continued

maintenance of these spaces in the dry state for the duration of the work to meet work requirements and environmental regulations.

.4 Supply of standby equipment to replace dewatering equipment which malfunctions.

.3 This work is part of NCC General Condition GC3.4.5 stipulating sole responsibility of contractors for temporary structures.

1.2 Related Sections

.1 Section 01 35 43 – Environmental Procedures

.2 Section 31 23 10 – Excavation, Trenching and Backfilling

1.3 Regulatory Requirements

.1 Adhere to local, provincial & federal requirements relating to:

.1 Protection of environment;

.2 Safety of construction;

.3 Protection of workers.

.2 Installation of cofferdams must be approved by Department of Fisheries and Oceans in accordance with Fisheries Act.

.3 Pumping water out of cofferdam enclosure: to Section 01 35 43 – Environmental Procedures.

.4 Obtain and pay costs of, all required permits.

1.4 Documents Required

.1 Shop drawings of water-tight cofferdam and other dewatering systems.

.1 Shop drawings must be signed and sealed by an Engineer member of the Order of Engineers of Quebec (OIQ).

.2 Submit design calculations of stability of cofferdam & dewatering systems used.

.2 Submit detail drawings to Regulatory Agencies, as required to satisfy conditions for granting of permits.

1.5 Qualifications of Designer

.1 The Designer of the cofferdams and other related dewatering structures must be a Professional Engineer with considerable expertise and experience in design of similar structures and systems.

.2 Designer must: make, check and sign all calculations; check, seal and sign all drawings; inspect dewatering structures and systems on site and verify their adequacy and safety.

1.6 Design Criteria

.1 Design cofferdams to ensure maintenance of work spaces in a dry state for duration of work.

.2 Plan and design dewatering systems considering:

.1 Access to cofferdams and access to reach any portion of Work.

.2 Space required for crews to work in dewatered areas.

.3 Sequence of Work.

.4 Water levels.

.5 Environmental regulations and requirements.

- .3 Ensure at all times, maintain environmental quality of water to Section 01 35 43 – Environmental Procedures.
- .4 Ensure that no phase of Work threatens safe performance of cofferdam.
- .5 The cofferdams are not to obstruct more than two-thirds of the watercourse width when simultaneously present on each side of the watercourse.
- .6 Water cumulating in the cofferdams shall be pumped and diverted in a vegetated area located at least 20 meters from watercourse.

1.7 Water Levels

- .1 A water level is indicated on the plans. The Contractor must confirm the actual water level on site.

1.8 Environmental Requirements

- .1 Dispose of water so that it does not create a safety or health hazard; or cause damage to the environment, to adjacent property or to any portion of Work.
- .2 Do not release any silt or other materials into watercourse during construction or removal of cofferdams.

1.9 Protection

- .1 Protect cofferdam and dewatered work spaces from damage due to floods, rain, ice, snow or other adverse climatic conditions.

PART 2 - PRODUCTS

2.1 Materials

- .1 In good condition, approved by Departmental Representative and suitable for their use in Work.
- .2 Do not use materials which may cause environmental damage to waterway or to

land at or near site.

- .3 Materials & methods proposed for use in cofferdams must be approved by Engineer.
- .4 Earth or granular materials with sand and fines is not acceptable.
- .5 If using sandbags, sand must be washed of fines before placing in water.
- .6 Note that Fisheries & Oceans prefers gravel/rock fill with rubber membrane, caissons, rubber dams, sheet piling, bolted pre-engineered frame-type structures, or other types of cofferdams which do not generate turbidity.
- .7 Materials used to build earth fill cofferdams shall not have more than 10% of fine material screening through 80 microns sieve, as fine particles stay in suspension in water.

PART 3 - EXECUTION

3.1 General

- .1 Evaluate, plan and execute Work in an expert & prudent manner giving due consideration to:
 - .1 Climatic conditions which may occur at work location during period of doing work in its entirety.
 - .2 Safety of personnel and of general public.
 - .3 Safety of Work and of adjacent property.
 - .4 Safety of removals.
 - .5 Environmental requirements
 - .6 Clearance requirements for Work.
 - .7 Changes in water levels

3.2 Dewatering

- .1 Dewater work spaces and maintain them in a fully dewatered state until Work is finished.
- .2 Continue dewatering operations, to enable Work to proceed in the dry, for duration of Work.
- .3 Repeat entire dewatering procedure as often as may be necessary if flooding or other damage occurs before completion of Work.

3.3 Measurement for Payment

- .1 General:
 - .1 Provide equipment in safe operating condition & maintain it in a safe operating condition for entire period of use and/or standby for use on Work.
 - .2 Provide skilled operators for equipment.
- .2 Performance and standards:
 - .1 Provide equipment of such quality and in such quantity as to provide sufficient capability to perform essential functions of Work.
 - .2 Provide standby replacement for pumps and other essential dewatering equipment which may break down during Work.
 - .3 Keep this replacement equipment available on Site for immediate use.

3.4 Cofferdam Removal

- .1 At approved stages in Work remove all cofferdam, temporary structures, and

dewatering systems to original bottom level.

.2 Do not dispose of any materials in canal.

.3 Turbidity curtain is to be removed once cofferdam is removed.

END OF SECTION