

NCC Tender File #	AL1603
Project Description	LeBreton Flats Interim Improvements Ottawa, Ontario
Site Visit	A NON MANDATORY site visit will be held on Monday August 10, 2015 at 10am Ottawa time on site. 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. To confirm your attendance at this site visit with Tony Fares at 613-239-5678 ext. 5573
Closing date and time	Thursday, August 20, 2015 at 3pm Ottawa time

INVITATION TO TENDER & ACCEPTANCE FORM

RETURN TENDERS TO: National Capital Commission 40 Elgin Street, 3rd Floor, Service Centre Ottawa, ON K1P 1C7	NCC Tender Number AL1603
	NCC Contract Number
TENDER CLOSING DATE AND TIME: August 20, 2015 at 3:00 p.m., Ottawa time	

DESCRIPTION OF WORK: LeBreton Flats Interim Improvements as per the attached plans specifications.
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1. BUSINESS NAME AND ADDRESS OF BIDDER

Name: _____
Address: _____

Telephone number: _____ **Fax number:** _____
E-mail address: _____

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	\$	_____
OHST – 13%	\$	_____
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The tender shall not be withdrawn for a period of 60 days following the date and time of tender closing.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:

- Invitation to Tender & Acceptance Form when signed by the NCC;
- Duly completed Invitation to Tender & Acceptance Form and any Appendices attached thereto;
- Drawings and Specifications;
- General Conditions (GC1 to GC10);
- Supplementary Conditions, if any;
- Insurance Terms;
- Occupational Health and Safety Requirements;
- Addenda
- Any amendments issued or any allowable tender revision received before the date and time set for tender closing;
- Any amendment incorporated by mutual agreement between the NCC and the Contractor before acceptance of the tender; and
- Any amendment or variation of the contract documents that is made in accordance with the General Conditions;
- Security Requirements.

2. The language of the contract documents shall be the language of the Invitation to Tender & Acceptance Form submitted.

INVITATION TO TENDER & ACCEPTANCE FORM

NCC Tender Number AL1603

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 as indicated in Section 011000 – General Instructions, Part 1, 1.1-Time of Completion and the date of notification of acceptance of the offer.

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: Transfer the Total Estimated Amount from the Unit Price Table to item 2 – THE OFFER of this Invitation to Tender & Acceptance Form

Item	Description	Unit	Qty	Unit Price	Total
1	GENERAL				\$ -
1.1	Mobilization & General Requirement	lump sum	1		\$ -
2	SITE WORKS				\$ -
2.1	Removals and Salvage	lump sum	1		\$ -
2.2	Rough Grading site, excluding landforms	lump sum	1		\$ -
2.3	Landform Shaping	lump sum	1		\$ -
2.4	Perforated Dry Well	each	8		\$ -
2.5	Fencing Installation (Re-Use Mesh & Top rail)	lm	320		\$ -

3	HARD SURFACING				\$
3.1	Concrete Pavement, including bases	m2	259		\$ -
3.2	Custom imprinting on concrete pavement	Allowance	1		\$ 8,500.00
3.3	Stonedust Pavement, including bases	m2	1395		\$ -
3.4	Granite Pavers - Pink Granite slabs, including bases. Supplied by NCC	m2	1136		\$ -
3.5	Granite Cobble 1 - Diamond Brown Granite Setts, including bases. Supplied by NCC	m2	69		\$ -
3.6	Granite Cobble 2 - Sandstone Granite Setts, including bases. Supplied by NCC	m2	31		\$ -
3.7	Granite Cobble Edging - Sandstone Granite Setts, including bases. Supplied by NCC	lm	340		\$ -
3.8	Boardwalk, including bases	m2	85		\$ -
4	SOFT LANDSCAPE				\$ -
4.1	Topsoil and Fine Grading, excluding landforms	m2	4855		\$ -
4.2	Topsoil and Fine Grading of landforms	m2	840		\$ -
4.3	Seed Mix 1 - Clover/Trefoil	m2	4445		\$ -
4.4	Seed Mix 2 - Meadow Grasses	m2	4595		\$ -
4.5	Seed Mix 3 - Landform Fescue	m2	4015		\$ -
4.6	Seed Mix 4 - Standard Grass Seed	m2	840		\$ -
4.7	Trees - 45mm cal.	each	116		\$ -
4.8	Shrubs - 60cm ht.	each	489		\$ -
4.9	Perennials - 15cm pot	each	252		\$ -
4.10	Perennials - 9cm pot	each	2752		\$ -
4.11	Perennials - plugs	each	3373		
4.12	supply and install Bulbs	each	3518		\$ -
4.13	Plant Maintenance and Warranty - Year 1. Amount equals 7.5% of total plant value (items 4.3 - 4.12)	Fixed Lump	7.5%		\$ -
4.14	Plant Maintenance and Warranty - Year 2. Amount equals 7.5% of total plant value (items 4.3 - 4.12)	Fixed Lump	7.5%		\$ -
5	FURNISHINGS				\$
5.1	Terraced Seating, including base. Seating boulders supplied by NCC.	lm	17		\$ -

INVITATION TO TENDER & ACCEPTANCE FORM

5.2	Standard Bench (supplied by NCC) plus anchorage	each	12		\$ -
5.3	Stone Bench 1 (granite steps supplied by NCC, 2/bench)	each	5		\$ -
5.4	Stone Bench 2 (stacked granite curbs supplied by NCC, 4/bench)	each	12		\$ -
5.5	Bicycle Rack (supplied by NCC) plus anchorage	each	5		\$ -
5.6	Waste Receptacles (supplied by NCC), plus anchorage	each	6		\$ -
5.7	Landscape Boulder 1 (supplied by NCC), including base	each	2		\$ -
5.8	Landscape Boulders, including base	each	58		\$ -
5.9	Arch Frames including footings	lump sum	1		\$ -
5.10	Light bollards (supplied by NCC)	each	11		\$ -
5.11	Installation of Historic Fountain. (Supplied by NCC), including base and custom elements.	lump sum	1		\$ -
5.12	Interpretive Elements Installation and Footings	Allowance	1		\$ 16,500.00

SUB-TOTAL \$ _____

9. The basis of award is low total cost to the NCC 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).

INVITATION TO TENDER & ACCEPTANCE FORM

NCC Tender Number AL1603

NCC Contract Number

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.

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

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 Purchase Order number.

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 sub-contractors:

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) **XXXX**

Sub-contractor: _____

Address: _____

(b) **XXXX**

Sub-contractor: _____

Address: _____

(c) **XXXX**

Sub-contractor: _____

Address: _____

(d) **XXXX**

Sub-contractor: _____

Address: _____

NON-MANDATORY REQUIREMENT:

(a) Any other work not listed above

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: _____

☐ New supplier / Nouveau fournisseur ☐ Update / Mise à jour **Appendice 11**

Supplier No. / N° du fournisseur

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

**SUPPLIER-DIRECT DEPOSIT PAYMENT AND TAX INFORMATION FORM
FOURNISSEUR-FORMULAIRE DE PAIEMENT PAR DÉPÔT DIRECT ET RENSEIGNEMENTS AUX FINS DE L'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, où les entités dans lesquelles ils détiennent le contrôle ou un intérêt majoritaire.		<input type="checkbox"/> Yes / Oui	<input type="checkbox"/> No / Non
Address / Adresse		Telephone No. / N° de téléphone :	Fax No. / N° de télécopieur :
Postal code / Code postal		()	()

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

(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) / N° de l'entreprise (NE)	
GST/HST / TPS et 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 or a letter from your bank with this form / Veuillez, s.v.p., envoyer un spécimen de chèque ou une lettre de votre banque avec ce formulaire

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

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

E-mail address / Adresse courriel :

PART 'E' - 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 » or a letter from your bank (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 » ou une lettre de votre banque (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 DEPOSIT PAYMENT AND TAX
INFORMATION FORM**

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

Supplier Tax Information

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

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

Questions: Sylvie Monette, Accounts Payable and Receivable Officer – (613) 239-5678, ext. 5156 or sylvie.monette@ncc-ccn.ca

Direct deposit payment information

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

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

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

The advantages of direct deposit payment

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

Funds made by direct deposit payment will be available in your bank account within two (2) days after receiving the NCC payment advice notice.

Renseignements sur les fournisseurs aux fins de l'impôt

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

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

Questions : Sylvie Monette, Agent aux comptes fournisseurs et comptes clients – (613) 239-5678, poste 5156 ou sylvie.monette@ncc-ccn.ca

Renseignements sur le paiement par dépôt direct

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

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

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

Avantages du paiement par dépôt direct

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

Les paiements effectués par dépôt direct seront disponible dans votre compte bancaire dans un délai de deux (2) jours après que la CCN envoie l'avis paiement.

- SI01 Tender Documents
- SI02 Enquiries during the Solicitation Period
- SI03 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 seven (7) 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 SITE VISIT

- 1) A **NON MANDATORY** site visit will be held on **Wednesday, August 12, 2015 at 10am Ottawa Time on site**. 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 confirm your attendance at the site visit with Tony Fares at **613-239-5678 x 5573** at least 24 hours prior to the site visit.

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 Lapensee, 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.
- 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:

SPECIAL INSTRUCTIONS TO BIDDERS

- (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 Thursday, August 20, 2015 at 3:00pm 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 co-operative 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.

CONTRACTOR PERFORMANCE EVALUATION REPORT FORM **FORMULAIRE - RAPPORT D'ÉVALUATION DU RENDEMENT DE L'ENTREPRENEUR**

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 ^o . 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: 40px; margin: 0 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: 40px; margin: 0 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: 40px; margin: 0 auto;"></div>
	Not satisfactory / Non-satisfaisant	6 – 10	
	Satisfactory / Satisfaisant	11 – 16	
	Superior / Supérieur	17 – 20	
Criteria not applicable / Critère non-applicable		<input type="checkbox"/> N/A / S/O	
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: 40px; margin: 0 auto;"></div>
	Not satisfactory / Non-satisfaisant	6 – 10	
	Satisfactory / Satisfaisant	11 – 16	
	Superior / Satisfaisant	17 – 20	
Criteria not applicable / Critère non-applicable		<input type="checkbox"/> N/A / S/O	
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: 40px; margin: 0 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)

- | | |
|---|---|
| <ul style="list-style-type: none">- 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 | <ul style="list-style-type: none">- 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 (CPEPF)
- 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
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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
- 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

- 1) 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

**GC3 EXECUTION AND CONTROL
OF THE WORK**

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
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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

GC10 INSURANCE

- 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.

CERTIFICAT OF INSURANCE ATTESTATION D'ASSURANCE

- 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>		
Name of Insurer's Office or Authorized Employee / Nom du cadre ou de la personne autorisée		Telephone number / Numéro de téléphone		
Signature		Date		

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 personnel submit to a personal security screening process (Security Clearance Form TBS/SCT 330-60E). The NCC may also perform a credit check when the duties or tasks to be performed require it or in the event of a criminal record containing a charge/offence of a financial nature.

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

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

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

Additional information

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

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

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

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

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

Company Security Representative

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

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

- They must be employees of the contractor's firm;
- They must have a security clearance (the NCC will process the clearances once the individuals have been identified).

Responsibilities of the Company Security Representative

The CSR's responsibilities are the following:

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

Access to site

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

References

[Security of Information Act](#)

[Access to Information Act](#)

[Privacy Act](#)

[Policy on Government Security](#)

LeBreton Flats Interim Improvements
DC 4125-07

CONSTRUCTION SPECIFICATIONS

July 2015

NATIONAL CAPITAL COMMISSION
CAPITAL PLANNING BRANCH

LeBreton Flats Interim Improvements

DC 4125-07

Date: July 10 2015

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END OF SECTION

PART 1 - GENERAL

1.1 Basis of Payment

- .1 Payment at the price per item listed in the Tender Form shall be full compensation for all labour, services and equipment as well as the supply, delivery and installation of all materials required for the proper execution of this contract.

PART 2 – PRODUCTS

1.0 Pay Item – General

Pay Item No. 1.1 - Mobilization And General Requirements

- .1 This item includes all general requirements to complete the project including general instructions, shop drawings, safety measures, environmental protection, construction facilities and temporary services, traffic control, maintenance of access roads where required including water for dust control as directed, cleaning, and reinstatement at completion of the project.
- .2 Included in this lump sum price are all the general requirements identified on the drawings and specifications and all those required to complete the work of this contract not covered under specific items.
- .3 **Included in this lump sum price are the completion of record drawings at the end of the Contract for provision to the NCC Representative.**
- .4 This item will not be measured but will be paid on a lump sum basis upon the following schedule.
 - .1 70% for substantial completion of this item
 - .2 30% for completion and supply of Contract record drawings

2.0 Pay Item – Site Works

Pay Item No. 2.1 - Removals and Salvage

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to remove and salvage items shown on the contract documents.
- .2 This item will not be measured and will be paid on a lump sum basis.

Pay Item No. 2.2 – Rough Grading

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required for the placement, shaping, and compaction of the subgrade material (excluding the landforms).
- .2 This item will not be measured and will be paid on a lump sum basis.

Pay Item No. 2.3 – Landform Shaping

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to shape landforms to rough grade elevations as shown in the contract documents.
- .2 This item will not be measured and will be paid on a lump sum basis.

Pay Item No. 2.4 – Perforated Dry Well

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install the drywells and drain covers, plus installation and maintenance of erosion control measures until establishment. Disturbed areas to be sodded upon removal of erosion control measures.
- .2 This item will be field measured and paid for on a per item basis.

Pay Item No. 2.5 – Fence Installation

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install the chain link fence, including re-use of salvaged chain link fabric and top rails as shown in the contract documents.
- .2 This item will be plan measured in linear metres and paid for on an installed linear metre basis.

3.0 Pay Item – Hard Surfacing

Pay Item No. 3.1 – Concrete Pavement

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install the concrete pavement, including bases as shown in the contract documents.
- .2 This item will be field measured in square metres and paid for on an installed square metre basis.

Pay Item No. 3.2 – Custom Imprinting on Concrete Pavement

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install the custom imprinting on concrete pavement as shown in the contract documents.

Imprint moulds and detailed layout (such as animal footprints and lettering) will be specified during the contract phase.

- .2 This item will be paid for under a cash allowance. Contractor will be asked to submit a detailed quotation for the work once final drawings and specifications are completed and submitted to the contractor.

Pay Item No. 3.3 – Stonedust Pavement

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install the stonedust pavement, including bases as shown in the contract documents.
- .2 This item will be field measured in square metres and paid for on an installed square metre basis.

Pay Item No. 3.4 – Granite pavers – Pink Granite Slabs

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install the Pink Granite slabs, including bases as shown in the contract documents. Pink Granite slabs to be obtained from the NCC storage yards. Contractor is responsible to load items at the storage yard and deliver to site.
- .2 This item will be field measured in square metres and paid for on an installed square metre basis.

Pay Item No. 3.5 – Granite Cobble 1 – Diamond Brown Granite Setts

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install the Diamond Brown granite setts, including bases as shown in the contract documents. Diamond Brown granite setts to be obtained from the NCC storage yards. Contractor is responsible to load items at the storage yard and deliver to site.
- .2 This item will be field measured in square metres and paid for on an installed square metre basis.

Pay Item No. 3.6 – Granite Cobble 2 – Sandstone Granite Setts

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install the Sandstone granite setts, including bases as shown in the contract documents. Sandstone granite setts to be obtained from the NCC storage yards. Contractor is responsible to load items at the storage yard and deliver to site.
- .2 This item will be field measured in square metres and paid for on an installed square metre basis.

Pay Item No. 3.7 – Granite Cobble Edging– Sandstone Granite Setts

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install the Sandstone granite setts, including bases as shown in the contract documents. Sandstone granite setts to be obtained from the NCC storage yards. Contractor is responsible to load items at the storage yard and deliver to site.
- .2 This item will be field measured in linear metres and paid for on an installed linear metre basis.

Pay Item No. 3.8 – Boardwalk

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install the boardwalk, including bases as shown in the contract documents.
- .2 This item will be field measured in square metres and paid for on an installed square metre basis.

4.0 Pay Item – Soft Landscape

Pay Item No. 4.1 – Topsoil and Fine Grading, excluding landforms

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply, spread and fine grade imported topsoil for all soft landscape areas excluding planting beds and landforms to the depth specified, as shown in the contract documents.
- .2 This item will be plan measured in square metres and paid for on a square metre basis. Topsoil installed the depths greater than depth specified, will not be paid.

Pay Item No. 4.2 – Topsoil and Fine Grading of Landforms

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply, spread and fine grade imported topsoil for all landforms to the depth specified, as shown in the contract documents.
- .2 This item will be plan measured in square metres and paid for on a square metre basis to the depth specified. Topsoil installed the depths greater than depth specified, will not be paid.

Pay Item No. 4.3 – Seed Mix 1 – Clover/Trefoil

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install Seed Mix 1, as shown in the contract documents. The contractor is responsible to ensure coverage and apply adequate erosion control measures.
- .2 This item will be plan measured in square metres and paid for on a square metre basis.

Pay Item No. 4.4 – Seed Mix 2 – Meadow Grasses

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install Seed Mix 2, as shown in the contract documents. The contractor is responsible to ensure coverage and apply adequate erosion control measures.
- .2 This item will be plan measured in square metres and paid for on a square metre basis.

Pay Item No. 4.5 – Seed Mix 3 – Fescue Landforms

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install Seed Mix 3, as shown in the contract documents. The contractor is responsible to ensure coverage and apply adequate erosion control measures.
- .2 This item will be plan measured in square metres and paid for on a square metre basis.

Pay Item No. 4.6 – Seed Mix 4 – Standard Grass Seed

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install Seed Mix 4, as shown in the contract documents. The contractor is responsible to ensure coverage and apply adequate erosion control measures.
- .2 This item will be plan measured in square metres and paid for on a square metre basis.

Pay Item No. 4.7 – Trees – 45mm cal.

- .1 This item includes all labour, equipment, and all associated

miscellaneous materials required to supply and install 45mm calliper trees as shown in the contract documents. Topsoil and plant bed preparation for tree items are included and considered incidental to this item.

- .2 This item will be field measured and paid for on a per item basis.

Pay Item No. 4.8 – Shrubs – 60cm ht/wd.

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install 60cm height/width shrubs as shown in the contract documents. Topsoil and plant bed preparation for shrub items are included and considered incidental to this item.
- .2 This item will be field measured and paid for on a per item basis.

Pay Item No. 4.9 – Perennials – 15cm Pot

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install 15cm potted perennials as shown in the contract documents. Topsoil and plant bed preparation for perennial items are included and considered incidental to this item.
- .2 This item will be plan measured (verified by shipment slips) and paid for on a per item basis.

Pay Item No. 4.10 – Perennials – 9cm pot

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install perennial 9cm pots or trays as shown in the contract documents. Topsoil and plant bed preparation for perennial items are included and considered incidental to this item.
- .2 This item will be plan measured (verified by shipment slips) and paid for on a per item basis.

Pay Item No. 4.11 – Perennials – plugs – 36/tray

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install perennial plugs as shown in the contract documents. Topsoil and plant bed preparation for perennial items are included and considered incidental to this item.
- .2 This item will be plan measured (verified by shipment slips) and paid for on a per item basis.

Pay Item No. 4.12 – Supply and install bulb

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install bulbs as shown in the contract documents. Topsoil and plant bed preparation for bulb items are included and considered incidental to this item.
- .2 This item will be plan measured (verified by shipment slips) and paid for on a per item basis.

Pay Item No. 4.13 – Plant Maintenance and Warranty Year 1

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required for the maintenance of trees, and shrubs, perennials and planting beds as specified.
- .2 Payment for two year maintenance program to be 7.5% of the total value of trees and shrubs, perennials and seed mixes planted (Sum of Items 4.3 to 4.12).
- .3 This Item will be paid in 1 (one) payment at the end of year 1 maintenance period as specified in section 33 93 12 – Plant Maintenance and Warranty.

Pay Item No. 4.14 – Plant Maintenance and Warranty Year 2

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required for the maintenance of trees, and shrubs, perennials and planting beds as specified.
- .2 Payment for two year maintenance program to be 7.5% of the total value of trees and shrubs, perennials and seed mixes (Sum of Items 4.3 to 4.12).
- .3 This Item will be paid in 1 (one) payment at the end of year 2 maintenance period as specified in section 33 93 12 – Plant Maintenance and Warranty.

5.0 Pay Item – Furnishings

Pay Item No. 5.1 – Terraced Seating

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to obtain, deliver and install the terraced seating, including bases as shown in the contract documents. Limestone Boulders to be used for the terraced seating to be obtained from the NCC storage yards. Contractor is responsible to load items at the storage yard and deliver to site. Stonedust pavement between seating rows to be paid under Item 3.3, Stonedust Pavement.
- .2 This item will be field measured in linear metres and paid for on an installed linear metre basis.

Pay Item No. 5.2 – Standard Bench

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to obtain, deliver and install the Standard Benches including anchorage as shown in the contract documents. Standard Benches to be obtained from the NCC storage yards. Contractor is responsible to load items at the storage yard and deliver to site.
- .2 This item will be field measured and paid for on a per item basis.

Pay Item No. 5.3 – Stone Bench 1

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to obtain, deliver and install the Stone Benches 1 as shown in the contract documents. Stone Benches 1 to be obtained from the NCC storage yards. Contractor is responsible to load items at the storage yard and deliver to site. Each Stone Bench 1 consists of 2 Granite Step Slabs (~300-400mm wedge X 600mm X 1200mm).
- .2 This item will be field measured and paid for on a per item basis.

Pay Item No. 5.4 – Stone Bench 2

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to obtain, deliver and install the Stone Benches 2 as shown in the contract documents. Stone Benches 2 to be obtained from the NCC storage yards. Contractor is responsible to load items at the storage yard and deliver to site. Each Stone Bench 2 consists of 4 pinned Granite Curbs (~250-300mm wedge X 400mm X 1000-1500mm lengths).
- .2 This item will field measured and paid for on a per item basis.

Pay Item No. 5.5 – Landscape Boulder 1

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to obtain, deliver and install Landscape

Boulders 1 as shown in the contract documents. Stone Benches 2 to be obtained from the NCC storage yards. Contractor is responsible to load items at the storage yard and deliver to site.

- .2 This item will field measured and paid for on a per item basis.

Pay Item No. 5.6 – Bicycle Rack

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to obtain, deliver and install the Bicycle Rack as shown in the contract documents. Bicycle Racks to be obtained from the NCC storage yards. Contractor is responsible to load items at the storage yard and deliver to site.
- .2 This item will field measured and paid for on a per item basis.

Pay Item No. 5.7 – Waste Receptacles

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to obtain, deliver and install the Waste Receptacles, including anchorage as shown in the contract documents. Waste Receptacles to be obtained from the NCC storage yards. Contractor is responsible to load items at the storage yard and deliver to site.
- .2 This item will field measured and paid for on a per item basis.

Pay Item No. 5.8 – Landscape Boulders

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install the Decorative Boulders, including base as shown in the contract documents.
- .2 This item will field measured and paid for on a per item basis.

Pay Item No. 5.9 – Arch Frames

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to supply and install the Arch Frames, including footings as shown in the contract documents. Engineered shop drawings and any detail adjustments is included and considered incidental to this item.
- .2 This item will not be measured and will be paid on a lump sum basis.

Pay Item No. 5.10 – Solar Light Bollards

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to obtain, deliver and install the Solar Light Bollards, including footings as shown in the contract documents. Engineered shop drawings and any detail adjustments is included and considered incidental to this item. Solar Light Bollards to be obtained

from the NCC storage yards. Contractor is responsible to load items at the storage yard and deliver to site.

- .2 This item will field measured and paid for on a per item basis.

Pay Item No. 5.11 – Installation of Historic Fountain

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to install the historic fountain as shown in the contract documents. Engineered shop drawings and any detail adjustments is included and considered incidental to this item.
- .2 This item includes handling and protection against damages of the historic fountain.
- .3 This item includes all metal work as required to manufacture custom elements as shown in contract documents.
- .4 This item will not be measured and will be paid on a lump sum basis.

Pay Item No. 5.12 – Installation of Interpretive Elements and Footings

- .1 This item includes all labour, equipment, and all associated miscellaneous materials required to install custom interpretive elements fabricated, supplied by others. These elements will include sculptural art elements and interpretation panels. Detailed layout and installation methods will be specified during the contract phase.
- .2 This item includes mobilization in spring 2016, handling and installation of interpretive content on site including but not limited to installation of helical piles, coring and grouting of anchors into landscape boulders, surface mounting to concrete pavement and reinstatement of disturbed planting and surfaces.
- .3 Interpretive elements will be delivered to site by others.
- .4 This item will be paid for under a cash allowance. Contractor will be asked to submit a detailed quotation for the work once final drawings and specifications are completed and submitted to the contractor.

PART 3 – EXECUTION

NOT APPLICABLE

END OF SECTION

PART 1 - GENERAL

1.1 TIME OF COMPLETION

- .1 The work of this Contract shall start after immediately following award of contract and shall be substantially completed by **December 15, 2015**.
- .2 On-site work shall be limited from Monday to Friday, unless approved by the NCC Representative.

1.2 SCOPE OF WORK

- .1 Provide all materials, labour, equipment, and services necessary to complete all work described in the plans and specifications including, but not limited to:
 - .1 Excavation, backfilling and grading require for the work indicated in the contract document;
 - .2 Supply and placement of imported fill material as required by contract documents;
 - .3 Sculptural finished grading of landscape berms as detailed in contract drawings and to the approval of the NCC Representative;
 - .4 Supply and installation of new concrete surfaces and decorative stamping as indicated in contract documents;
 - .5 Transportation and installation of salvaged materials supplied by the NCC as indicated in the contract documents;
 - .6 Supply and installation of concrete unit paver (including granular base, layering course, edge restraints, and jointing sand) as indicated in contract documents;
 - .7 Relocation of existing chain link fence around Booth West Lands, and removal of fence around Booth East Lands.
 - .8 Supply and installation of new wood decking surface (including granular base and sub-structure) as indicated in contract documents;
 - .9 Manufacture and installation of metal arches;
 - .10 Supply and installation of top soil, seeding and all plant material as shown in drawings and directed by NCC Landscape Architect (including placement of mulch where specified);
 - .11 Ongoing maintenance of landscaped areas and plant material, including weeding, watering, and sound horticultural maintenance under the direction of a certified horticulturalist for a period of two years following substantial completion;
 - .12 Rehabilitation of all disturbed areas resulting from the work of this contract.

1.3 SPECIAL CONSTRUCTION REQUIREMENTS

- .1 The Contractor will be responsible to protect the subgrade at all times during construction and in particular following moderate to heavy rainfall. Construction traffic on exposed subgrade should be prohibited or limited to equipment which will not damage subgrade.
- .2 The Contractor will be responsible to ensure that the equipment utilized in the site preparation, excavation and construction minimizes any damage or disturbance to the site and surrounding lands.
- .3 Any damaged areas caused as a result of construction traffic or construction techniques must be repaired to the original or better condition by the Contractor as part of this contract and at no additional cost to the National Capital Commission.
- .4 The Contractor shall be responsible as part of the tender price for the removal from the site of all excavated non reusable or excess material as well as the supply and placement of all required imported fill material required to execute the work of this contract.
- .5 The Contractor will not be compensated for any additional excavation and/or additional earth or granular backfill materials required as a result of over-excavations not approved and authorized by the NCC Representative prior to undertaking work.

1.4 CODES, PERMITS AND STANDARDS

- .1 Standards referred to in this Specification (CGSB, CSA, ASTM, OPSD, CHBDC etc.) may be examined at the following location:

Public Works and Government Services Canada
Standards and Specifications Branch
Place du Portage - Phase 3, 11 Laurier Street
Gatineau, Quebec
K1A 0S5

- .2 Perform work in accordance with the National Building Code of Canada 1995 and any other code of provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.
- .3 Work to meet or exceed requirements of:
 - .1 contract documents
 - .2 specified standards, codes and referenced documents
- .4 Contractor is to obtain an entry permit from the National Capital Commission prior to commencing the Work, Contact: Michael Muir, Land Manager (613) 239-5678 x.5172

1.5 DEFINITIONS

- .1 Wherever the term "NCC Representative" appears throughout this specification, it shall be construed to mean an Inspector representing the National Capital Commission and including a duly named consultant on their behalf.
- .2 Wherever the terms "or equal", "or approved equal" appear after specific types of materials and items throughout this specification, they shall be construed to mean as being equal in the opinion of the NCC Representative, in material content, workmanship and quality to that designated as being the minimum acceptable standard, and that the NCC Representative's written approval must be obtained prior to submitting an alternative, 7 days before close of tender.

1.6 TAXES

- .1 Include in the tender amount, all sales 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 the Contractor.

1.7 PROTECTION

- .1 The Contractor will be held fully responsible by the Owner for any damage to utilities, services, properties, buildings, or structures adjacent to or in the general area of the work, through settlement of ground, vibration or shock resulting from any cause relating to the work carried out under this Contract. Make good and repair all such damage at his own expense.
- .2 The contractor shall supply and install the support system at his own judgment and at his own cost to protect the existing utilities, services, buildings and structures from damage for the duration of the construction. The cost for this item shall be included in the tender price and the contractor shall not make any claim against the Owner for extra work on this item.
- .3 Provide and maintain guardrails, fences, barricades, lights and other devices required for protection of workmen and public in accordance with the requirements of Provincial and Local by-laws and the Canadian Construction Safety Code.
- .4 Protect existing structures against damage until completion of work.
- .5 Take all precautions to protect vegetated areas and specimen trees from any damage.

1.8 DAMAGES

- .1 Damages caused to existing plant material, landscaping, lawns, roadways, pathways, structures, finishes and public utilities due to work of this contract, will be restored to their original condition, replaced or adequate compensation made to affected parties by the Contractor at his own expense.
- .2 It is understood that restored or replaced work includes labour, equipment and material costs.
- .3 The restored or replaced work shall be completed within 7 days of notification by the NCC Representative.

1.9 CUTTING, FITTING AND PATCHING

- .1 Execute cutting, fitting and patching of work that may be a requirement to make work fit properly together, to receive or be received by other work.
- .2 Where new work connects with existing and where existing work is altered, cut, patch and make

- good to match existing work.
- .3 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.

1.10 SITE VISIT

- .1 Parties intending to submit tenders on the work must visit the site and obtain for themselves all information pertaining to existing conditions affecting the proper execution and completion of the work. The submission of a tender shall be deemed as proof that the tenderer and his sub-trades have complied with this requirement. After claims for additional compensation will not be entertained for any items of labour, equipment or materials required to complete the work that could have been reasonably ascertained by a Site Examination.

1.11 WORKMANSHIP

- .1 It is a requirement of this contract that qualified tradesmen execute each type of work specified.
- .2 Example: Landscape contractor for landscape work, mason for stonework, carpenter for carpentry work, etc.
- .3 Work unsatisfactorily completed by unqualified tradesmen will be redone and paid for by the Contractor.

1.12 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy each of following:
 - .1 Contract drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change orders.
 - .5 Other modifications to Contract.
 - .6 Field test reports.
 - .7 Manufacturer's installation and application instructions.
- .2 Copy of current and approved work schedule.
- .3 Copy of Site Health and Safety Plan approved by NCC Representative

1.13 WORK SCHEDULE

- .1 Provide within 10 working days after Contract award, in form acceptable to NCC Representative, detailed schedule showing anticipated progress stages and final completion of work within time period specified in Contract documents.
- .2 Interim reviews of work progress based on work schedule will be conducted as decided by NCC Representative and schedule updated by Contractor in conjunction with and to approval of NCC Representative.

1.14 CONTRACTOR'S USE OF SITE

- .1 Limited to area immediately surrounding work and areas designated by the NCC Representative for material stockpiling and work equipment parking.
- .2 Do not unreasonably encumber site with materials or equipment during construction.
- .3 Move stored products or equipment interfering with operations of NCC other contractors or agencies and the general public.
- .4 Obtain and pay for use of additional storage or work areas needed for operations.
- .5 Where security is reduced by work, provide temporary means to maintain security of area at all times.

1.15 SETTING-OUT OF WORK

- .1 Contractor shall assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.
- .2 Provide devices needed to lay out and construct work. Supply such devices as required to facilitate NCC Representative's inspection of work.
- .3 Supply stakes and other survey markers required for laying out work.
- .4 Contractor must obtain NCC Representative's approval of planting beds limits, specimen tree location, and layout of pavements and structures prior to commencing work.

1.16 PROJECT MEETINGS

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

1.17 EXISTING SERVICES

- .1 Before commencing work, establish location and extent of service lines in area of work and notify NCC Representative of findings.
- .2 Where unknown services are encountered, immediately advise NCC Representative and confirm findings in writing.
- .3 Where work involves adjusting of existing services, carry out work as directed by the NCC Representative.
- .4 Make good and pay for damage to existing utility lines resulting from work.

1.18 TRAFFIC CONTROL

- .1 Do not infringe on adjacent roads, sidewalks, ramps, loading zones or interfere with normal traffic flow in carrying out the work. If it is necessary to disrupt traffic or occupy those thoroughfares for purposes of unloading materials, etc., obtain permission from the NCC Representative and abide by his instructions regarding the manner, time and delays necessary to carry out these operations. Incidental costs (e.g. for permits, signage, public notification of lane closures, etc) conforming to these requirements will be paid by Contractor.
- .2 Provide a suitable system of protective barricades, lane markings, signs, lights and other such devices to warn and channel traffic and wherever necessary, the services of a flagman to direct and control traffic. Carry out protection in accordance with the requirements of the Provincial and Local by-laws having jurisdiction over this type of work.
- .3 Printed signage must be provided in both English and French
- .4 Install "CLOSED | FERMÉ" signage on pathways/sidewalks as required.
- .5 The proposed methods and systems of traffic control and maintenance provisions together with supporting sketches must be submitted to the NCC Representative upon request following tender closing.

1.19 DUST CONTROL

- .1 Throughout duration of project manage dust resulting from construction activities and site condition as directed by and to the approval of the NCC Representative.

1.20 ADDENDA

- .1 Answers to questions directed to the NCC Representative, 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.

1.21 ADDITIONAL DRAWINGS

- .1 The Commission may furnish additional drawings to the Contractor to assist in the proper execution of the work. These additional drawings will be issued for clarification purposes only. Such drawings shall have the same meaning and intent as if they were included with the plans referred to in Contract Documents.

1.22 CONTRACT DOCUMENTS

- .1 Drawings and specifications are complementary. Items shown or mentioned in one and not in the other are deemed to be included in the contract work.
- .2 If the drawings and specifications differ, the NCC Representative shall give preference to the Contract document thereof, that best insures the attainment of this contract's objectives.

1.23 PAYMENT

- .1 This is a unit price contract. Any minor or miscellaneous items indicated on the drawings as being part of the work of this contract must be included by the Contractor in his overhead and indirect charges and incorporated into the unit price bid.
- .2 No separate payment will be made for work performed in respect to any of the special provisions where there is no specific pay item on the schedule of prices. The cost of these works must be

appropriated among, and included in, the lump sum bid price.

1.24 ADVERTISING

- .1 No advertising will be permitted on this project.

1.25 COMPACTION AND TESTING OF MATERIALS AND CONCRETE

- .1 The thickness of fill materials and concrete such as granular, select fill and topsoil, shown on the drawings shall be the real thickness after the materials have been compacted as specified.
- .2 Compaction and testing of material and concrete will be carefully monitored by NCC Representative throughout contract.

1.26 TEMPORARY UTILITIES

- .1 The Contractor shall make an arrangement for power and water connections and shall bear the costs of all electricity, fuel, water and sanitary facilities required for, or at the site of, the works up to the date of substantial performance as established by the Certificate of Substantial Performance.

1.27 RECORD DRAWINGS

- .1 As work progresses, maintain accurate record to show deviations from contract documents.
- .2 Just prior to NCC Representative's inspection for issuance of final certificate of completion, supply one (1) set of white prints with all major and minor deviations neatly inked in. The NCC Representative will provide two (2) sets of clean white prints for this purpose.

1.28 GUARANTEES AND WARRANTIES

- .1 Before completion of work, collect all manufacturer's guarantees and warranties, and deposit to NCC Representative.

PART 2 - PRODUCTS

2.1 MATERIALS SUPPLIED BY THE NCC

- .1 The NCC shall supply to the contractor the following materials identified in the bid table and contract drawings:
 - .1 Granite Pavers – Pink Granite Slabs (1136 sq. m.)
 - .2 Granite Cobble 1 – Diamond Brown (69 sq.m.)
 - .3 Granite Cobble 2 – Sandstone (110 sq. m.)
 - .4 Terraced Seating – Limestone boulders (24 units)
 - .5 Landscape boulders – Granite field boulders (2 units)
 - .6 Standard Bench (12 units)
 - .6 Stone bench 1 – Granite steps (10 units*)
 - .7 Stone bench 2 – Granite curbs (24 units*)
 - .8 Bicycle Rack (5 units)
 - .9 Waste Receptacles (6 units)
 - .10 Solar Light Bollards (11 units)
 - .11 Historic Fountain (8 pieces)

* Quantities listed reflect material quantity to be supplied to the contractor in order to execute the detail and may not reflect the quantities listed in the bid table for payment.

- .2 For materials where cutting waste is expected, such as granite paving, contractor shall determine an appropriate amount of surplus material required to execute the work as specified in this contract and shall request the adjusted quantity from the NCC Contract Administrator.
- .3 The contractor shall be responsible for the pick-up and transportation of said material from the NCC Storage Yard at 1740 Woodroffe Ave. Contact Steven Clermont, Asset and Warehouse Officer at 613-239-5678, extension 5065 to coordinate pick-up.
- .4 Ensure safe handling and protection against damage from time of pick-up until final acceptance of work.
- .5 Contractor will return any unused or surplus material to the NCC storage yard and at no additional cost.

PART 3 - EXECUTION

- 3.1 Not used

END OF SECTION

PART 1 - GENERAL

1.1 Related Requirements Specified Elsewhere

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

1.2 Appointment and Payment

- .1 NCC Representative will appoint and pay for services of testing laboratory except for the following:
 - .1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
 - .2 Inspection and testing performed exclusively for Contractor's convenience.
 - .3 Mill tests and certificates of compliance.
 - .4 Tests specified to be carried out by Contractor under the supervision of NCC Representative.
 - .5 Additional tests specified in paragraph 1.2.2.
- .2 Where tests or inspections by designated testing laboratory reveal work not in accordance with contract requirements, Contractor shall pay costs for additional tests or inspections as NCC Representative may require to verify acceptability of corrected work.

1.3 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 for laboratories exclusive use to store equipment and cure test samples.
- .2 Notify NCC Representative 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 quantities 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 NCC Representative.
- .5 Contractor will provide grain size testing result of each material type to demonstrate compliance with the requirements outlined in section 31 05 16 Aggregate and Soil Fill Material.

1.4 Soil Fill Quality:

- .1 A sample and set of analytical results will be provided for every 1000 cubic meters of imported Fill material or at a frequency determined by the NCC Representative to pre-approve the material source, provided the source of said material does not change. Testing will include metals (to include the following elements Ba, Be, B, Cd, Cr, CrVI, Co, Cu, Pb, Mo, Na, Ni, Ag, V, Zn, As, Se, Sb, Hg, U, petroleum, hydrocarbons (fractions F1-F4), polycyclic aromatic hydrocarbons and volatile organic compounds, or as approved by the NCC Representative.

PART 2 – PRODUCTS Not Applicable.

PART 3 – EXECUTION

3.1 Imported Fill Material:

- .1 Inform NCC Representative at least 2 weeks prior to commencing work, of the proposed source of any imported fill materials.
- .2 Provide all supervision, labour, material, and equipment necessary to supply 5kg samples as directed by NCC Representative. Supply samples in closed containers to prevent contamination.
- .3 Obtain Approval of the NCC Representative for proposed imported fill materials prior to bringing them on site.

END OF SECTION

PART 1 GENERAL

1.1 Definitions

- .1 Activity: element of Work performed during course of Project. Activity normally has expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart (GANTT Chart): graphic display of schedule-related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top, and activity durations are shown as date-placed horizontal bars. Generally Bar Chart should be derived from commercially available computerized project management system.
- .3 Baseline: original approved plan (for project, work package, or activity), plus or minus approved scope changes.
- .4 Construction Work Week: Monday to Friday, inclusive, will provide five day work week and define schedule calendar working days as part of Bar (GANTT) Chart submission.
- .5 Duration: number of work periods (not including holidays or other nonworking periods) required to complete activity or other project element. Usually expressed as workdays or workweeks.
- .6 Master Plan: summary-level schedule that identifies major activities and key milestones.
- .7 Milestone: significant event in project, usually completion of major deliverable.
- .8 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones. Dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.
- .9 Project Planning, Monitoring and Control System: overall system operated by NCC Representative enable monitoring of project work in relation to established milestones.

1.2 Requirements

- .1 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.
- .2 Plan to complete Work in accordance with prescribed milestones and time frame.
- .3 Limit activity durations to maximum of approximately 10 working days, to allow for progress reporting.
- .4 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.

1.3 Submittals

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures
- .2 Submit to NCC Representative within 10 working days of Award of Contract Bar (GANTT) Chart as Master Plan for planning, monitoring and reporting of project progress.
- .3 Submit Project Schedule to NCC Representative within 5 working days of receipt of acceptance of Master Plan.

1.4 Project Milestones

- .1 Project milestones form interim targets for Project Schedule.
 - .1 Mobilization date immediately following acceptance of project schedule, health and safety, and staging plans.
 - .2 Rough grade and landforming completed within 10 working days of Mobilization date.
 - .3 Bases and topsoil placement completed within 15 working days of Mobilization date.
 - .4 Hard surfaces completed within 25 working days of Mobilization date.
 - .5 Seeding and planting within 35 working days of Mobilization date.
 - .6 Site furnishings completed within 50 working days of Mobilization date.
 - .7 Interim Certificate (Substantial Completion) within 50 working days of Mobilization date.
 - .8 End of warranty period (2 years from substantial completion date).

1.5 Master Plan

- .1 Structure schedule to allow orderly planning, organizing and execution of Work as Bar Chart (GANTT).
- .2 NCC Representative will review and return revised schedules within 5 working days.
- .3 Revise impractical schedule and resubmit within 3 working days.
- .4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

1.6 Project Schedule

- .1 Develop detailed Project Schedule derived from Master Plan.
- .2 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows:
 - .1 Award.
 - .2 Shop Drawings, Samples.
 - .3 Permits.
 - .4 Mobilization.
 - .5 Removals, salvage, silt fence.
 - .6 Excavation.
 - .7 Rough Grade / Landforming.
 - .8 Dry Wells.
 - .9 Granular bases.
 - .10 Pavements.
 - .11 Topsoil Placement.
 - .12 Seeding.
 - .13 Planting.
 - .14 Site Furnishings.
 - .15 Interpretive Arches.
 - .16 Installation of historic Fountain.
 - .17 Installation of Interpretive Elements and Footings.
 - .18 Maintenance and Warranty Operations.

1.7 Project Schedule Reporting

- .1 Update Project Schedule on a weekly basis reflecting activity changes and completions, as well as activities in progress.
- .2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

1.8 Project Meetings

- .1 Discuss Project Schedule at regular site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.
- .2 Weather related delays with their remedial measures will be discussed and negotiated.

PART 2 - PRODUCTS

2.1 Not Used

- .1 .1 Not used.

PART 3 - EXECUTION

3.1 Not Used

- .1 .1 Not used.

END OF SECTION

PART 1 - GENERAL

1.1 ADMINISTRATIVE

- .1 Submit to NCC Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Do not proceed with Work affected by submittal 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 NCC Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated 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 considered rejected.
- .6 Notify NCC Representative, 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 NCC Representative's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by NCC Representative's review.
- .10 Keep one reviewed copy of each submission on site.

1.2 SHOP DRAWINGS AND PRODUCT DATA

- .1 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.
- .2 Submit shop drawings bearing stamp and signature of qualified professional engineer registered or licensed in Province of Ontario, Canada.
- .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 of 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.
- .4 Allow 5 days for NCC Representative's review of each submission.
- .5 Adjustments made on shop drawings by NCC Representative are not intended to change Contract Price. If adjustments affect value of work, state such in writing to NCC Representative prior to proceeding with work.
- .6 Make changes in shop drawings as NCC Representative may require, consistent with Contract Documents. When resubmitting, notify NCC Representative in writing of revisions other than those requested.
- .7 Accompany submissions with transmittal letter, in duplicate, containing:
 - .1 Date
 - .2 Project Title and Number
 - .3 Contractors name and Address
 - .4 Identification and quantity of each shop drawing, product data and sample.

- .8 Submissions 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 weights
 - .8 Wiring diagrams
 - .9 Single line and schematic diagrams
 - .10 Relationship to adjacent work
- .9 Submit electronic PDF copy of shop drawings, product data sheets, manufacturer's instructions, test reports, field reports, and operation and maintenance data for each requirement requested in specification sections and as NCC Representative may reasonably request.
 - .1 Delete information not particular to project.
 - .2 Supplement standard information to provide details applicable to project.
- .10 The review of shop drawings by the NCC Representative is for sole purpose of ascertaining conformance with general concept.
 - .1 This review shall not mean that the NCC Representative approves detail design inherent in shop drawings, responsibility for which shall remain with contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.
 - .2 Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication process or to techniques of construction and installation and for coordination of Work for sub-trades.
- .11 After NCC Representative's review, distribute copies for execution of work.

1.3 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 NCC Representative's business address.
- .3 Notify NCC Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is a criterion, submit full range of samples.
- .5 Adjustments made on samples by NCC Representative are not intended to change

- Contract Price. If adjustments affect value of Work, state such in writing to NCC Representative prior to proceeding with Work.
- .6 Make changes in samples which NCC Representative 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.

PART 2 - PRODUCTS

2.1 SUBMIT FOR REVIEW

- .1 Submit to the NCC representative, with 10 days of award of contract and in the manner specified, the following:
 - .1 Traffic Control Plan as per **section 01 35 00.06**
 - .2 Health and Safety Plan as per **section 01 35 30**
 - .3 Staging Plan as per **section 01 52 00**
 - .4 **Gantt Chart as per section 01 32 16.07**
 - .5 Credentials of Certified Horticulturalist as per **section 32 93 12**
- .2 Submit to the NCC representative for approval, a minimum 5 days prior to the execution of associated work:
 - .1 Record drawings at close of contract as per **section 01 72 00**
 - .2 Metal Fabrication of Steel Arches (Shop drawings including footings) **as per 05 50 00**
 - .3 Metal Fabrication of Fountain elements (Shop Drawings including footings & Templates) **as per 05 50 00**
 - .4 Non-Shrinking Grout (Manufacturers Data) **as per section 05 50 00**
 - .5 Wood Decking (shop Drawings) **as per 06 15 00**
 - .6 Wood Decking and Toe Rail (samples) **as per 06 15 00**
 - .7 Granite Paving pattern (mock-up) **as per 32 13 99**
 - .8 Chain Link Fences and Gates (shop drawings) **as per 32 31 13**
 - .9 Topsoil (Test reports/product sample) **as per 32 91 21**
 - .10 Seed Fertilizer and Mulch (Supplier and product data) **as per 32 92.13 and 32 92 19.16**
 - .11 Mulch (sample) **as per section 32 93 10**
 - .12 Fertilizer recommendations if required **as per section 32 93 12**
 - .13 Weekly planting maintenance reports as per **section 32 93 12**
 - .14 Product data for any proposed material/product substitutions,
 - .15 All other documentation specified and as requested by the NCC Representative.

PART 3 – EXECUTION

NOT APPLICABLE

END OF SECTION

PART 1 - GENERAL

1.1 References

- .1 Uniform Traffic Control Devices for Canada, (UTCD) 1998 (distributed by Transportation Association of Canada).

1.2 General Requirements

- .1 Do not infringe on adjacent roads, sidewalks, ramps, loading zones or interfere with normal traffic flow in carrying out the work. If it is necessary to disrupt traffic or occupy those thoroughfares for purposes of unloading materials, etc., obtain permission from the NCC Representative and abide by his instructions regarding the manner, time and delays necessary to carry out these operations. Incidental costs (e.g. for permits, signage, public notification of lane closures, etc.) conforming to these requirements will be paid by Contractor.
- .2 Provide a suitable system of protective barricades, lane markings, signs, lights and other such devices to warn and channel traffic and wherever necessary, the services of a flagman to direct and control traffic. Carry out protection in accordance with the requirements of the Provincial and Local by-laws having jurisdiction over this type of work.
- .3 Where appropriate, provide sidewalk closure, and traffic detour signage.
- .4 Printed signage must be provided in both English and French
- .5 The proposed methods and systems of traffic control and maintenance provisions together with supporting sketches must be submitted to the NCC Representative upon request following tender closing.

1.3 Submittals

- .1 Two weeks prior to commencing any work affecting traffic, the Contractor shall submit to the NCC Representative for review and approval, a Traffic Control Plan identifying the signing, staging, and delineation work proposed for traffic control and construction operations including a proposed schedule.
- .2 The Traffic Control Plan shall include the Contractor's proposed traffic control and traffic staging plans for construction of the specified works designated on the contract drawings. The Contractor shall also be responsible for all submissions and approvals required by the Ontario Ministry of Labour.

1.4 Protection of Public Traffic

- .1 Comply with requirements of Ontario Traffic Book 7 – Temporary Conditions, March 2001 (Book 7) 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 a travelled way:
 - .1 Place equipment in position to present minimum of interference and hazard to travelling public.
 - .2 Keep equipment units as close together as working conditions permit and preferably on same side of travelled way.
 - .3 Do not leave equipment on travelled way overnight.
- .3 Provide detour plans that have been stamped by a qualified engineer, for approval by the NCC Representative prior to closing traffic lanes. Before re-routing traffic erect suitable signs and devices in accordance with instructions contained in Book

7, specifically for a long-term duration, and include concrete New Jersey Barriers to separate work areas from traffic lanes.

- .4 Keep travelled way graded, free of pot holes and of sufficient width for required number of lanes of traffic.

- .1 Provide minimum 3.0 m wide traffic lanes plus clearance offsets.

- .5 As indicated, provide paved detours to facilitate passage of traffic around restricted construction area.

- .6 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 NCC Representative.

1.5 Information and Warning Devices

- .1 Provide and maintain signs, temporary traffic signals and other devices required to indicate construction activities or other temporary and unusual conditions resulting from project work which requires road user response.

- .2 When working on a travelled way Supply and erect signs, delineators, barricades and miscellaneous warning devices as specified in Ontario Traffic Manual – Book 7 – Temporary Conditions.

- .3 Before re-routing traffic erect suitable signs and devices in accordance with instruction contained in Book 7 specifically for long-term duration, and include concrete New Jersey Barriers to separate work areas from traffic lanes.

- .4 Keep travelled way graded, free of pot holes and of sufficient width for required number of lanes of traffic.

- .1 Provide minimum 3 m wide traffic lanes plus clearance offsets.

- .5 Meet with NCC Representative 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 NCC Representative.

- .6 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.

1.6 Control of Public Traffic

- .1 Provide flag persons, trained in accordance with, and properly equipped as specified in Ontario Traffic Manual - Book 7 in following situations:

- .1 When public traffic is required to pass working vehicles or equipment which block all or part of travelled 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 travelled 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 operations:
 - 6:30 am to 9:00 am No Delays
 - 3:30 pm to 6:00 pm No Delays
 - all other times Maximum 10 minutes delay

1.7 Operational Requirements

- .1 Maintain traffic conditions as shown on construction staging drawings throughout.
- .2 Pedestrian facilities such as sidewalks, access to buildings and street crossings shall remain in operation until immediate construction operations dictate their closure. The Contractor shall inform the NCC Representative two weeks in advance of any such closures; provide and install all necessary signing for alternate routes for pedestrians; and ensure the pedestrians have a safe and smooth surface acceptable for use by physically challenged individuals. Erection of temporary fencing and/or hoarding shall be required to separate pedestrians from construction operations or hazards and is subject to the approval of the NCC Representative.

1.8 Coordination with City Road Closures

- .1 Booth Street is closed to traffic between Sir John A. MacDonald Parkway and Albert Street as a result of contracts already underway by the City of Ottawa. An access egress will be provided crossing the at the extremity of Lett Street as shown in the contract drawings.
- .2 If any other temporary site access points are require throughout the completion of this project, notify the NCC Representative in writing minimum 48 hours prior and receive approval before executing works.

PART 2 – PRODUCTS NOT USED

PART 3 – EXECUTION NOT USED

END OF SECTION

PART 1 - GENERAL

1.1 REFERENCES

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations.
- .2 Province of Ontario Occupational Health and Safety Act and Regulations for Construction Projects, R.S.O. 1990 as amended 213/91.

1.2 SUBMITTALS

- .1 Submit site-specific Health and Safety Plan prior to award of contract. 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 found in the scope of work.
- .2 Submit copies of reports or directions issued by Federal and Provincial health and safety inspectors.
- .3 Submit copies of incident and accident reports.
- .4 Submit Material Safety Data Sheets (MSDS) to NCC Representative.
- .5 Names of personnel and alternates responsible for site safety and health, hazards present on site, and use of personal protective equipment.

1.3 SAFETY ASSESSMENT

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

1.4 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 NCC Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

1.5 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.

1.6 COMPLIANCE REQUIREMENTS

- .1 Occupational Health and Safety Act, R.S.O. [1990 Updated 2005].
- .2 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.

1.7 UNFORESEEN HAZARDS

- .1 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province of Ontario having jurisdiction. Advise NCC Representative verbally and in writing.

1.8 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 of Ontario having jurisdiction, and in consultation with NCC Representative.

1.9 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by NCC Representative.
- .2 Provide NCC Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Representative may stop Work if non-compliance of health and safety regulations is not corrected.

1.10 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.

PART 2 – PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END OF SECTION

PART 1 - GENERAL

1.1 RELATED SECTION

- .1 Section 31 05 17 – Aggregate Material

1.2 REFERENCES

- .1 Ontario Regulation 153/4, Environmental Protection Act. Last amendment: O.Reg 333/13

1.3 EXISTING CONDITIONS

- .1 Prior soil decontamination work at this site has resulted in a Record of Site Condition under Brownfields Ontario (Ministry of Municipal Affairs and Housing).
- .2 Any fill material imported to the site must meet Table 7 of Ontario Regulation 153.

1.4 FIRES

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

1.5 DISPOSAL OF WASTES

- .1 Burying of rubbish and waste materials on site not permitted.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner, or excess concrete into waterways, storm or sanitary sewers.
- .3 Waste will be managed in accordance with Ontario standards.

1.6 SITE CLEARING AND PLANT PROTECTION

- .1 Minimize stripping of soil.
- .2 Where heavy equipment is used around trees, protect trees with temporary fencing.
- .3 Restrict tree removals to areas indicated or designated by NCC Representative.

1.7 DEWATERING

- .1 Provide temporary drainage and pumping as necessary to keep excavation and site free from water.
- .2 Do not pump water containing suspended materials into adjacent waterway.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with the requirements of applicable authorities.

1.8 WORK ADJACENT TO WATERWAYS

- .1 Do not operate construction equipment in watercourses.
- .2 Do not dump excavated fill, waste material or debris in watercourses.
- .3 Do not skid logs or construction materials across watercourses.

1.9 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 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

1.10 REVIEW AGENCIES

- .1 Various concerned Government agencies may be on site during construction and the Contractor shall provide easy access and meet the requirements of those agencies without delay.

1.11 PROTECTION OF BIRD NESTING SITES

- .1 No clearing or close cut clearing shall take place during the avoidance time period for nesting habitat removal from May 1 to July 23.
- .2 In the event such clearing is unavoidable during this time period, vegetation to be removed shall be inspected by an avian biologist to determine whether there are any active nesting sites. If clearance is received from the avian biologist, clearing may proceed.
- .3 The NCC will be responsible for retaining the avian biologist. The Contractor shall provide at least 1 week advanced notice of the need for such an inspection.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

Not applicable

END OF SECTION

PART 1 - GENERAL

1.1 Installation and Removal

- .1 Prepare site plan indicating proposed location and dimensions of area to be fenced and used by contractor, avenues of ingress/egress to fenced area and detail of fence/gate installation, haul-roads, temporary construction signage both regulatory and safety, number and location of trailers to be used for site offices, and location and number of sanitary facilities.
- .2 Identify areas which have to be graveled to prevent tracking of mud.
- .3 Indicate use of supplemental or other staging area.
- .4 Provide construction facilities in order to execute work expeditiously.
- .5 Remove from site all such facilities after use.

1.2 Site Fencing

- .1 Ensure that site is enclosed and separated from public spaces at all times.
- .2 Existing 1.8m chain link fencing may be used when it is in appropriate location to provide secure site enclosure around work.
- .3 Make modifications to existing fencing to provide gated access at ingress/egress locations.
- .4 Where required, erect temporary 1.8m construction fencing or snow fencing to secure site as instructed by NCC representative.
- .5 Maintain all fences in good repair.
- .6 All fencing to be identified on contractor's Staging Plan specified under section 01 10 00 – General Conditions.

1.3 Site Storage/Loading

- .1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
- .2 Do not load or permit to load any part of Work with weight or force that will endanger Work.

1.4 Construction Parking

- .1 Parking will be permitted on site provided it does not disrupt performance of Work.
- .2 Provide and maintain adequate access to project site.
- .3 Clean adjacent roadways and sidewalks where used by contractor's equipment.

1.5 Security

- .1 Provide and pay for responsible security personnel to guard site and contents of site after working hours and during holiday as directed by NCC representative.

1.6 Offices

- .1 **If deemed necessary for the execution of the work**, provide office heated to 22° C, lighted 750lx and ventilated, sufficient size to accommodate site meetings and furnished with drawing laydown table.
- .2 Provide marked and fully stocked first-aid case in a readily available location.
- .3 Maintain site office(s) in clean condition.

1.7 Equipment, Tools and Materials Storage

- .1 Provide and maintain, in clean orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .2 Locate materials not required to be stored in weather proof sheds on site in manner to cause least interference with work activities.

1.8 Sanitary Facilities

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take precautions as required by local health authorities. Keep area

and premises in sanitary condition.

1.9 Construction Signage

- .1 Provide and erect project sign, within three weeks of signing contract, in a location designated by NCC representative.
- .2 No other signs or advertisements, other than warning signs, are permitted on site.
- .3 Signs and notices for safety and instruction in both official languages Graphic symbols to CAN/CSA-Z321.
- .4 Maintain approved signs and notices in good condition for duration of project, and dispose of off-site on completion of project or earlier if directed by NCC representative.

1.10 Protection and Maintenance of Traffic

- .1 Provide access and temporary relocated roads as necessary to maintain traffic.
- .2 Maintain and protect traffic on affected roads during construction period except as otherwise specifically directed by NCC representative.
- .3 Provide measures for protection and diversion of traffic, including provisions for watch-persons and flag-persons, erection of barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger and direction signs.
- .4 Protect travelling public from damage to person and property.
- .5 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.
- .6 Verify adequacy of existing roads and allowable load limit on these roads. Contractor responsible for repair of damage to roads caused by construction operations.
- .7 Construct access and haul roads necessary.
- .8 Haul-roads: location, grade, width, and alignment subject to approval by NCC representative.
- .9 Lighting: to assure full and clear visibility for full width of haul road and work areas during night work operations.
- .10 Dust Control: adequate to ensure safe operation at all times.
- .11 Provide snow removal during period of work.
- .12 Remove, upon completion of work, haul roads as directed by NCC representative.

1.11 Power

- .1 Arrange for payment and maintenance of temporary electrical power supply in accordance with governing regulations and ordinances.
- .2 Install temporary facilities for power such as pole lines and underground cables to approval of local power supply authority.
- .3 Connect to existing power supply in accordance with Canadian Electrical Code.

1.12 Heating and Ventilating

- .1 Pay for costs of temporary heat and ventilation used during construction, including costs of installation, fuel, operation, maintenance and removal of equipment. Use of direct-fired heaters discharging waste products into work areas will not be permitted unless prior approval is given by NCC Representative.
- .2 Provide temporary heat and ventilation in enclosed areas as required to:
 - .1 Facilitate progress of work.
 - .2 Protect work and products against dampness and cold.
 - .3 Prevent moisture condensation on surfaces.
 - .4 Provide ambient temperatures and humidity levels for storage, installation and curing of materials.

- .5 Provide adequate ventilation to meet health regulations for safe working environment.
- .6 Reduce noise due to construction activities.
- .3 Ventilating:
 - .1 Prevent accumulation of dust, fumes, mists, vapors or gases in areas occupied during construction.
 - .2 Provide local exhaust ventilation to prevent harmful accumulation of hazardous substances into atmosphere of occupied areas.
 - .3 Dispose of exhaust materials in manner that will not result in harmful exposure to persons.
 - .4 Ventilate storage spaces containing hazardous or volatile materials.
 - .5 Ventilate temporary sanitary facilities.
 - .6 Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful contaminants.
- .4 Maintain strict supervision of operation of temporary heating and ventilating equipment to:
 - .1 Conform with applicable codes and standards.
 - .2 Enforce safe practices.
 - .3 Prevent abuse of services.
 - .4 Prevent damage to finishes.
 - .5 Vent direct-fired combustion units to outside.
- .5 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

PART 2 - PRODUCTS Not Used

PART 3 – EXECUTION Not Used

END OF SECTION

PART 1 - GENERAL

1.1 GENERAL CONDITIONS

- .1 The requirements of this specification take precedence over the requirements of any other specification for the management and disposal of excess material.

1.2 DEFINITIONS

- .1 Concrete: concrete mixtures produced with Portland cement, which may include blended hydraulic cement, supplementary cement materials, spent debris and silica sand abrasive blasting media from abrasive cleaning of concrete and reinforcing steel, concrete brick, block and associated mortar. Can include embedded steel, and excludes asbestos modified Portland cement concrete mixtures.
- .2 Disposable fill: excess material, other than that disposed of at a certified disposal site that is managed in berms and mounds, and as fill, other than in road embankments.
- .3 Earth: all soils except those defined as rock, and excludes stone masonry, concrete and other manufactured materials.
- .4 Excess material: Material removed as a result of Work outlined in the Contract, for which management is not specified. Includes surplus and unsuitable materials.
- .5 Fabricated metal and plastic products: metal and plastic products such as culverts, fence materials, and guide rails. Does not include containers, other packing materials, storage tanks, septic tanks, and ancillary equipment associated with sanitary sewage systems, septic systems, and fuel/lubricant dispensing and storage systems.
- .6 Groundwater: subsurface water and water that occurs beneath the water table in soils and rock formations that are fully saturated.
- .7 Natural wood: stumps, trunks, branches, and debris, from tree and shrub removal, and wood products that are not treated, coated or glued.
- .8 Re-use: utilization, processing, re-processing or recycling of excess material into a construction material or other useful product, and management by these means for the Contract and other work.
- .9 Rock: natural beds or massive fragments, of the hard, stable, cemented part of the earth's crust, igneous, metamorphic, or sedimentary in origin, which may or may not be weathered, and includes boulders having a volume of 1 m or greater.
- .10 Waste: excess material managed by re-use or as disposable fill.
- .11 Waterbody: any body of water or watercourse or wetland, or a portion thereof, and excludes ditches other than those functioning as natural watercourses.

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

3.1 CONSTRUCTION

- .1 Management of excess material shall be as described below:
 - .1 Earth, aggregate, swamp material, rock and natural wood: Manage by re-use or disposal off-site.
 - .2 Bituminous pavement: Manage by disposal off-site.
 - .3 Concrete, masonry, fabricated metal and plastic products: Manage by disposal off site.
 - .4 Where excess materials are suspected of being contaminated or if types of materials are encountered which are not addressed in this specification, direction on management shall be obtained from NCC Representative.

- .5 Excess material that is a mixture of materials shall be disposed of according to most stringent conditions associated with any one of individual constituents.
- .6 Excess materials shall be managed using methods which prevent their entry into waterbodies and other sensitive areas. These may be identified in Contract. Exceptions may be made when materials are re-used in accordance with requirements specified elsewhere in Contract.
- .7 Notification requirements shall be complied with and approvals, releases, and agreements shall be obtained that are necessary for management of excess material.
- .2 Management of disposable fill, within Commission's property and on other property designated in Contract, shall be as specified.
- .3 Management by open burning is not permitted.

END OF SECTION

PART 1 - GENERAL

1.1 Record Drawings

- .1 NCC Representative 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 NCC Representative.
- .4 Record following information:
 - .1 Depths of various elements of foundation in relation to survey datum.
 - .2 Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvement.
 - .3 Location of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure.
 - .4 Field changes of dimension and detail.
 - .5 Changes made by Change Order or Field Order.

END OF SECTION

PART 1 - GENERAL

1.1 WASTE CONTROL

- .1 Conduct cleaning and disposal operations to comply with local ordinances and anti pollution laws.
- .2 Disposal of mineral spirits, oil or paint and varnish solvents in storm or sanitary drainage systems is prohibited.
- .3 Prevent accumulations of waste which create hazardous conditions.

1.2 CLEANING DURING CONSTRUCTION

- .1 Maintain project grounds and public properties free from accumulations of waste material and rubbish on a daily basis.
- .2 Remove waste materials and rubbish from site and haul to an approved dump site.
- .3 Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not interfere with operation of roads and pathways.

1.3 FINAL CLEANING

- .1 Clean project site in preparation for substantial completion inspection and final inspection.

PART 2 - PRODUCTS

NOT APPLICABLE

PART 3 - EXECUTION

NOT APPLICABLE

END OF SECTION

PART 1 - GENERAL

1.1 References

- .1 Canadian Council of Ministers of the Environment (CCME)
- .2 Department of Justice Canada (Jus).
 - .1 Canadian Environmental Assessment Act (CEAA), 1997, c.37
 - .2 Canadian Environmental Protection Act (CEPA), 1999, c. 33
- .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS).
 - .1 Material Safety Data Sheets (MSDS).
- .4 Transport Canada (TC).
 - .1 Transportation of Dangerous Goods Act (TDGA), 1992, c.34

1.2 Submittals:

- .1 Waste Reduction Workplan: Prior to beginning of work on site, submit detailed Waste Reduction workplan and indicate:
 - .1 Descriptions of and anticipated quantities in metric units of materials to be salvaged reused, recycled and landfilled.
 - .2 Schedule of selective demolition
 - .3 Number and location of dumpsters
 - .4 Anticipated frequency of tipping.
 - .5 Name and address of haulers, waste facilities, and/or waste receiving organizations.
- .2 Certificates: Submit copies of certified weigh bills, bills of landing, and receipts from authorized disposal sites and reuse and recycling facilities for material removed from site upon request from NCC Representative.
 - .1 Written authorization from NCC Representative is required to deviate from haulers, facilities, receiving organizations listed in Waste Reduction Workplan.

1.3 Quality Assurance:

- .1 Regulatory Requirements: ensure Work is performed in compliance with CEPA, CEAA, TDGA, and applicable Provincial/ Municipal regulations.
- .2 Site Meetings.
 - .1 The NCC Representative will convene a pre-installation meeting one week prior to beginning on-site installations to:
 - .1 Verify Project Requirements
 - .2 Review Installation conditions
 - .2 Arrange for site visit with NCC Representative to examine existing site conditions adjacent to demolition work, prior to start of work.
 - .3 Hold project meetings on site periodically as requested by NCC Representative.

- .4 Ensure key personnel including site supervisor, project manager, and subcontractor representatives attend.
- .3 Health and Safety: do construction occupational health and safety in accordance with Section 01 35 29.06 – Health and Safety Requirements.

1.4 Delivery Storage and Handling

- .1 Storage and Protection.
 - .1 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 NCC Representative and at no additional cost.
 - .2 Remove and store materials to be salvaged, in manner to prevent damage.
 - .3 Store and protect in accordance with requirements for maximum preservation of materials.
 - .4 Handle salvaged materials as new materials.
- .2 Waste Management and Disposal
 - .1 Separate waste materials for reuse and recycling.
 - .2 Divert excess materials from landfill to site approved by NCC Representative.
 - .3 Place materials defined as hazardous or toxic in designated containers. Handle and dispose of hazardous materials in accordance with CEPA, TDGA, and municipal regulations.
 - .4 Store salvaged materials on site. Provide protection, barriers and security devices as required.
 - .5 Ensure emptied containers are sealed and stored safely.
 - .6 Source separate for recycling materials that cannot be salvaged for reuse including wood, metal, concrete and asphalt.
 - .7 Remove materials that cannot be salvaged for reuse or recycling and dispose of in accordance with applicable codes at licensed facilities.

1.5 Site Conditions

- .1 Site Environmental Requirements.
 - .1 Ensure that selective demolition work does not adversely affect adjacent watercourses, groundwater, and wildlife or contribute to excess air and noise pollution.
 - .2 Do not dispose of waste or volatile materials including but not limited to mineral spirits, oil, petroleum based lubricants, or toxic cleaning solutions into watercourses, storm or sanitary sewers.
 - .1 Ensure proper disposal procedures are maintained throughout the project.
 - .3 Do not pump water containing suspended materials into watercourses, storm or sanitary sewers or onto adjacent properties.

- .4 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authorities.
- .5 Protect trees, plants and foliage on site and adjacent properties where indicated.

1.6 Scheduling

- .1 Employ necessary means to meet project time lines without deviation from Waste Reduction Workplan.
 - .1 Notify NCC Representative in writing when unforeseen delays occur.

1.7 Measurement Procedures

- .1 Refer to Section 01 05 05 – Pay Item Description for Removals and Salvage.

PART 2 – PRODUCTS

2.1 Equipment

- .1 Leave machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.

PART 3 – EXECUTION

3.1 Preparation

- .1 Inspect site with NCC Representative 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 Removal Operations

- .1 Remove items as indicated on plans.
- .2 Do not disturb items designated to remain in place.
- .3 Remove designated trees during demolition.
- .4 Salvage:
 - .1 Items to be salvaged: chain link fence fabric and top rails.
 - .2 Carefully dismantle items for salvage, and stockpile salvaged materials on site for future re-use.

- .5 Disposal of Material.
 - .1 Dispose of materials not designated for salvage or reuse on site, at authorized facilities approved in Waste Reduction Workplan.
- .6 Backfill.
 - .1 Backfill in areas as indicated and in accordance with section 31 23 33.01 –Excavating, Trenching and Backfilling.
 - .2 Re-use excavated subsoils for backfill material as approved by NCC Representative. Concrete and asphalt materials will not be accepted.

3.3 Stockpiling

- .1 Label Stockpiles, indicating material type and quantity.
- .2 Designate appropriate security resources/measures to prevent vandalism, damage and theft.
- .3 Locate stockpiled materials convenient for use in new construction to eliminate double handling wherever possible.
- .4 Stockpile materials designated for disposal in locations which facilitates removal from site, and which does not impede disassembly, processing, or hauling procedures.

3.4 Removal from Site

- .1 Remove stockpiled material as directed by NCC Representative when it interferes with operations of project.
- .2 Remove stockpiles of like material to appropriate disposal facility once collection of materials is complete.
- .3 Transport material designated for disposal using approved haulers, facilities and receiving organizations listed in Waste Reduction Workplan and in accordance with applicable regulations.
 - .1 Written authorization from NCC Representative is required to deviate from haulers, facilities, receiving organizations listed in Waste Reduction Workplan.

3.5 Restoration

- .1 Restore areas and existing works outside areas of demolition to match condition of adjacent undisturbed areas.
- .2 Use soil treatments and procedures which are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent water courses or ground water.

3.6 Cleaning

- .1 Remove debris, trim surfaces and leave work site clean, upon completion of Work.
- .2 Use Cleaning solutions and procedures which are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent to water courses and ground water.

END OF SECTION

PART 1 - GENERAL

1.1 Related Work

- .1 Section 01 33 00 – Submittal Procedures
- .2 Section 01 35 29.06 - Health and Safety Requirements
- .3 Section 01 35 43 - Environmental Procedures
- .4 Section 01 61 00 - Waste Management
- .5 Section 01 74 11 - Cleaning

1.2 References

- .1 Unless specified otherwise, all welding must be done in compliance with the latest edition of CSA W59.
- .2 ASTM International
 - .1 ASTM A276/A276M-15 – Standard Specification for Stainless Steel Bars and Shapes.
 - .2 ASTM F593-13a – Standard Specification for Stainless Steel Bolts, Hexcap Screws, and Studs.
 - .3 ASTM A53/A53M-07, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
 - .4 ASTM A269-08, Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
 - .5 ASTM A307-07b, Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
 - .6 ASTM B117, Standard Test Method for Film Hardness by Pencil Test
 - .7 ASTM D2247, Standard Practice for Testing Water Resistance of Coatings
 - .8 ASTM D522, Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings
 - .9 ASTM D2794, Standard Test Method for Resistance of Organic Coatings to impacts
 - .10 ASTM D3359, Standard Test Methods for Measuring Adhesion
 - .11 ASTM B210M-05, Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes Metric.
- .3 CSA International
 - .1 CSA G40.20/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 CSA S16-09, Design of Steel Structures.
 - .4 CSA W48-06, Filler Metals and Allied Materials for Metal Arc Welding (Developed in co-operation with the Canadian Welding

- Bureau).
- .5 CSA W59-M03(R2008), Welded Steel Construction (Metal Arc Welding) Metric.
- .6 CAN/CSA-S157/S157.1 Strength design in aluminum
- .7 CSA W47.2 Certification of Companies for Fusion Welding of Aluminum
- .8 CSA W59.2 welded aluminium
- .4 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 .1 Material Safety Data Sheets (MSDS).

1.3 Shop Drawings and Product Data

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for sections, pipe, tubing, bolts and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit two (2) copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements and 01 35 43 - Environmental Procedures.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Province of Ontario, Canada.
 - .2 Indicate materials, core thicknesses, finishes, connections, joints, method of anchorage, number of anchors, supports, reinforcement, details, and accessories.

1.4 Measurement Procedures

- .1 Refer to Section 01 05 05 – Pay Item Description.

PART 2 - PRODUCTS

2.1 Materials

- .1 Steel sections and plates as per CAN3-G40.21-M81, Grade 300 W.
- .2 Hollow steel sections as per CAN3-G40.21-M81, Grade 350W, Class H.
- .3 Stainless steel
 - .1 Type: 316 plate and bar as shown.
 - .2 Orientation: vertical grain.
 - .3 Welds: grind smooth.
 - .4 Finish: to 400 Grit, ease and debur cut edges.
- .4 Welding material as per CSA W59-1982.

- .5 Bolts and anchor bolts as per ASTM A325 and ASTM A307-82A.
- .6 Hardware: all hardware (bolts, washers, nuts etc.) must be hot-galvanized or stainless steel, as indicated..
- .7 Non-Shrinking Grout: submit for approval.

2.2 Forming

- .1 Examine site and take on-site measurements of all previously executed and adjacent work that may affect the work of this section. Only field measurements must appear on shop drawings. Report any discrepancies between the field measurements and dimensions on drawings.
- .2 Build work square, true, straight and accurate to required dimensions, with joints closely fitted and properly secured.
- .3 Where possible, fit and shop-assemble work, ready for erection.
- .4 Ensure exposed welds are continuous over the full length of each joint. File or grind exposed welds smooth and flush.
- .5 Before galvanization, have metal items approved.
- .6 Have all metal elements galvanized following fabrication.

PART 3 - EXECUTION

3.1 Installation

- .1 Install metal work square, plumb, straight, true, and accurately and tightly fitted together and to surrounding work. Verify site dimensions before proceeding with shop fabrication.
- .2 Supply and install appropriate anchors approved by the NCC Representative.
- .3 Care must be taken not to damage steel galvanization during installation. Prevent nicks, dents or scratches. If galvanization is damaged, apply zinc-rich coat to bare metal.
- .4 Once erection is complete, touch up rivets, on-site welds, bolts and burnt or scratched surfaces using primer.

END OF SECTION

PART 1 - GENERAL

1.1 References

- .1 American Society for Testing and Materials (ASTM International)
 - .1 ASTM D 5116-97, Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor/Materials Products.
- .2 American Wood Preserver's Association (AWPA)
 - .1 AWPA A2-98, Standard Methods for determining Penetration of Preservatives and Fire Retardants.
- .3 Canadian Standards Association (CSA International)
 - .1 CSA B111 – 1974, Wire Nails, spikes and staples
 - .2 CSA 080 Series -97, Wood Preservation
 - .3 CSA 080.20-97, Fire-Retardant Treatment of Lumber by Pressure Process
 - .4 CSA 086-01, Engineering Design in Wood.
- .4 National Lumber Grades Authority
 - .1 NLGA Standard Grading Rules for Canadian Lumber 2000.

1.2 Submittals and Product Data

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit WHMIS MSDS - Material Safety Data Sheets.
- .3 Shop Drawings to indicate: all hardware components.
- .4 Submit sample of wood decking and toe rail.

1.3 Quality Assurance

- .1 Lumber identification: By grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board P2.

1.4 Waste Management And Disposal

- .1 Separate and recycle waste materials in accordance with section 01 74 19 –Construction/ Demolition Waste Management and Disposal.
- .2 Wood cut-offs are to be diverted from landfill by disposal at nearest wood recycling facility as approved by NCC Representative.
- .3 Reusable materials are to be diverted for reuse at nearest used building materials facility or similar type facility.
- .4 Unused preservatives and fire retardant materials are to be diverted from landfill through disposal at a special waste depot.

1.5 Source

- .1 Cedar Lumber to be locally sourced. Maximum 500km shipping distance.
- .2 Source must meet FSC certification standards.
- .3 Submit name and location of wood source for approval by NCC Representative.

1.6 Measurement Procedures

- .1 Refer to Section 01 05 05 – Pay Item Description.

PART 2 - PRODUCTS

2.1 Materials

- .1 Wood Decking & Boardwalk: to NLGA standard Grading Rules for Canadian Lumber Select grade Eastern White Cedar (rough sawn) 50 x 150mm stock (decking and frames) 50 x 100mm stock (toe rail).
 - .1 Single span, 3m lengths.
 - .2 Kiln dry to 15% maximum moisture content.
 - .3 Fasteners: 3" square drive stainless steel screws, 2 per joist location. Install fasteners aligned and at consistent spacing as shown on drawings.
- .2 Nails and Brackets: to CSA B111, hot dipped galvanized finish; sizes as recommended in CSA 086. Supply 200mm spiral spikes for lateral nailing.

PART 3 - EXECUTION

3.1 Installation

- .1 Excavate and install decking frames on granular base and levelling course as indicated on drawings and specified in Section 31 05 17 – Granular Material.
 - .1 Provide shimming where required for levelling of frames.
- .2 Do wood deck work in accordance with CSA 086 except where specified otherwise.
- .3 Install decking in accordance with CSA 086, simple span. Install boards with cupped face up.

3.2 Field Quality Control

- .1 Testing moisture content of delivered material will be performed by testing laboratory designated by NCC Representative.
- .2 NCC Representative will pay for costs of testing in accordance with Section 01 29 83 – Testing Procedures.
- .3 Testing moisture content of delivered material will be by moisture meter with adjustment for species and temperature.

3.3 Cleaning

- .1 Remove tool marks, bruises, and scratches.

END OF SECTION

PART 1 - GENERAL

1.1 Related Sections

- .1 Section 01 35 43 – Environmental Procedures
- .2 Section 31 23 33.01 – Excavating, Trenching and Backfilling

1.2 References

- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM D 698 – 91 (2007), Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (600 kN-m/m3).

1.3 Existing Conditions

- .1 No known underground and surface utility lines exist within project work area.
- .2 Refer to dewatering paragraph in Section 01 35 43 – Environmental Procedures.

1.4 Protection

- .1 Protect existing fencing, benchmarks, pavement and surfaces, and surface or underground utilities which are to remain as directed by NCC Representative. If damaged, restore to original or better condition unless directed otherwise.
- .2 Maintain access roads to prevent accumulation of construction related debris on roads.

PART 2 - PRODUCTS

2.1 Materials

- .1 Stockpiled Fill Material:
 - .1 Material stockpiled on-site to be used for earthworks. Refer to Drawings for locations and quantities.
 - .2 The intent of this contract is to use all stockpiled fill material to achieve landforming and rough grade elevations. No additional fill material is expected to be required.
 - .3 Advise NCC Representative of any discrepancies.

2.2 Compaction Of Materials

- .1 Fill material: compaction to 85% maximum dry density under soft landscaped areas, 95% under all hard surfacing.
- .2

PART 3 - EXECUTION

3.1 Preparation

- .1 Clear and grub all existing plant material in accordance with section 02 41 13 - Selective Site Demolition, prior to placement of fill material.
- .2 Dewater any low points prior to the placement of fill material.
- .3 Dispose of unused overburden not suitable as fill material to off site.

3.2 Fill Material

- .1 Do not place fill while in frozen condition.

3.3 Placement, Grading And Compaction

- .1 Areas to be filled are to be free from debris, snow, ice and water.
- .2 Filling not to extend beyond the area shown on drawings.
- .3 Rough grade to levels, profiles, and contours as indicated.
 - .1 Landforms to have clean, smooth sculpted profiles to approval of the NCC's Representative.
 - .2 Rough grade to following depths below finish grades:
 - .1 200mm below final grade for seeded areas (except landforms and planting beds).
 - .2 250mm below final grade on landforms.
 - .3 Refer to details for depth below finished grade for planting beds.
 - .4 250mm below finished grade for hard surfacing.
- .4 Prior to placing fill over existing ground, scarify non-bedrock surfaces to a depth of 150mm. Maintain fill and existing surface at approximately the same moisture content to facilitate bonding.
- .5 Subject to achieving acceptable compaction, place backfill in maximum lifts of 400mm.
- .6 Compact fill materials to 85% or 95% maximum dry density, refer to 2.2 above.
- .7 Ensure each layer is compacted to the approval of the NCC Representative before placing succeeding lifts.

3.4 Surplus

- .1 Remove surplus material and material unsuitable for fill/grading off site.

END OF SECTION

PART 1 - GENERAL

1.1 Related Work

- .1 Section 01 10 00 - General Instructions
- .2 Section 32 11 23 - Granular Materials

1.2 References

- .1 Ontario Provincial Standard Specification (OPSS)
 - .1 OPSS 0212 Construction Specification for Borrow.
 - .2 OPSS 1010, Material Specification for Aggregates – Base, Subbase, Select Subgrade and Backfill Material.

1.3 Utility Lines

- .1 Before commencing work, establish location and extent of underground utility lines in area of excavation. Notify NCC Representative NCC Representative of findings.
- .2 Advise NCC Representative to re-route existing lines in area of excavation. Costs for such work will be paid by Owner.
- .3 Record locations of maintained and re-routed underground utility lines.
- .4 Make good and pay for damage to existing utility lines resulting from work.

1.4 Protection

- .1 Protect bottoms of excavations from softening. Should softening occur, remove softened soil and replace with material as directed by NCC Representative.
- .2 Protect bottoms of excavations from freezing.
- .3 Provide adequate protection around bench markers, layout markers, survey markers, and geodetic monuments.
- .4 Provide protection to ensure no damage to existing facilities and equipment situated on site.
- .5 Effect approved measures to minimize dust as a result of this work.
- .6 Do not stockpile excavated material to interfere with site operation or drainage.

1.5 Compaction Densities

- .1 Compaction densities are percentages of maximum densities obtainable from ASTM D698-70.

PART 2 - PRODUCTS

2.1 Materials

- .1 Granular: refer to Section 32 11 23 - Granular Materials.
- .2 Earth Borrow conforming to OPSS 0212 and Select Subgrade Material (SSM) conforming to OPSS 1010, free from roots, rocks larger than 75mm and building debris. If Contractor proposes to use excavated material NCC Representative's approval will be required before it is used as fill. Contractor to supply imported fill (Earth Borrow and/or SSM) as required to execute the work of this contract and include such requirements and associated cost in the unit price bid.

2.2 Stockpiling

- .1 Stockpile fill materials in areas designated by NCC Representative. Stockpile granular materials in a manner to prevent segregation. Protect stockpiled fill material from freezing.
- .2 Protect fill materials from contamination.

PART 3 - EXECUTION

3.1 Excavating

- .1 Excavate to elevations and dimensions indicated for installation, construction and inspection of work specified.
- .2 Excavate all vegetation and surficial organic material (topsoil, rootmat, peat, etc.)
- .3 Excavate to well defined lines to minimize quantity of fill material required.
- .4 Earth bottoms of excavations to be dry undisturbed soil, level, free from loose or organic matter.
- .5 Notify NCC Representative when bottom of excavation is reached
- .6 Obtain NCC Representative's approval of completed excavation.
- .7 Keep excavation free of water while work is in progress.
- .8 Protect open excavations against flooding and damage due to surface run off.
- .9 Provide sediment control measures in accordance with Section 01560.
- .10 Excavation must not interfere with normal 45 degree splay of bearing from bottom of any footing.
- .11 When complete, have NCC Representative inspect excavations to verify

soil bearing capacity, depths and dimensions.

- .12 Correct unauthorized excavation at no extra cost as follows:
 - .1 Fill under bearing surfaces with Granular "B", Type II, and/ or SSM compacted to 95% maximum dry density as directed by NCC Representative;
 - .2 Fill under other areas with approved earth fill compacted to 85% maximum dry density.
- .13 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 saw.
- .14 Compact bottom of excavated sub-grade with 2 to 3 tonne smooth Roller without vibration and pass over the completed sub-grade 3 to 4 times to obtain desired compaction.
- .15 Dispose of all excavated non re-usable material off site.
- .16 Do not obstruct flow of surface drainage or natural watercourses.

3.2 Backfilling

- .1 Do not commence backfilling until areas of work to be backfilled have been inspected and approved by NCC Representative.
- .2 Areas to be backfilled and backfill material must be free from debris, snow, ice, water or frozen ground.
- .3 Prior to installation of granular materials, compact existing subgrade to obtain required bearing capacity. Remove "soft", unstable or weak subgrade materials and fill with approved material.
- .4 Place and compact fill materials in continuous horizontal layers not exceeding 150 mm compacted depth. Use methods to prevent disturbing or damaging buried services. Make good any damage.

3.3 Inspection and Testing

- .1 Testing of materials and compaction will be carried out by testing laboratory designated by NCC Representative.
- .2 NCC Representative will pay costs for inspection and testing.

3.4 Surplus Material

- .1 Dispose of surplus material not required for backfill, grading or landscaping, off site.
- .2 Dispose of material unsuitable for fill, grading or landscaping off site.

END OF SECTION

PART 1 GENERAL

1.1 Extent Of Work

- .1 This section pertains to the specifications regarding the supply and installation of compacted gravel for granular foundations, following the placements, grade levels and profiles designated in the plans.
- .2 Ontario Provincial Standard Specification (OPSS):
 - .1 OPSS 1010, Material Specification for Aggregates – Base, Subbase, Select Subgrade and Backfill Material. Material Specification for Aggregates- Granular A, B, M, and Select Subgrade Material.

1.2 Measurement Procedures

- .1 Excavating, trenching and backfilling is included in other items and considered incidental to the work in this contract. No separate pay item is provided.

PART 2 PRODUCTS

2.1 General Requirements

- .1 Any granular materials specified for the various works, on the drawings or in other sections of the specifications or by direction of the NCC Representative, shall conform to this material specification for the class of granular material required.
- .2 The materials shall be selected or produced from pits or quarries to conform to the requirements specified herein for each class of granular materials.
- .3 Material retained on the number 4 sieve shall consist of hard durable particles of fragments of stone or gravel.
- .4 Materials that break up when alternatively frozen and thawed or wetted and dried shall not be permitted.
- .5 Fine aggregate passing the Number 4 sieve shall consist of natural or crushed sand, and, materials passing the Number 200 sieve shall consist of fine mineral particles.
- .6 The material shall be free from vegetable matter and lumps or balls of clay.
- .7 The material shall be non-plastic and non-frost susceptible.
- .8 Blending to obtain the correct gradation will be permitted when the Contractor demonstrates that he can produce a correct gradation and has a plant capable of producing to the satisfaction of the NCC

Representative.

- .9 The Contractor shall advise the NCC Representative two weeks in advance of the intent use of any of the specified materials to allow sufficient time for sampling and testing. The Contractor shall submit samples of granular materials to be used in the works if so requested by the NCC Representative.
- .10 Approval of a sample does not mean acceptance of the whole source. Each load of material received at the job site shall be subject to all the requirements of that material.
- .11 All gradation requirements are shown as percentage by weight passing U.S. Standards Sieves, A.A.S.H.O. M-92-65.

2.2 Specific Requirements

- .1 Granular "A"
 - .1 This material shall conform to OPSS 1010.

PART 3 EXECUTION

3.1 Placing Granular Material

- .1 Place granular base after sub-grade is inspected and approved by NCC Representative.
- .2 Construct granular base to required depth and grade in areas indicated.
- .3 Ensure no frozen material is used.
- .4 Place material only on clean unfrozen surface, free from snow or ice.
- .5 Begin by spreading base material on crown line or high side of one-way slopes.
- .6 Place granular base materials using methods which do not lead to segregation or degradation.
- .7 Spread material to full surface width in uniform layers not exceeding 150 mm compacted thickness. The NCC Representative may authorize thicker layers if specified compaction can be achieved.
- .8 Shape each layer into smooth contours and compact to specified density before adding the next layer.
- .9 Remove and replace portion of layer where materials has become segregated during spreading.

3.2 Compaction

- .1 Compaction equipment must be capable of obtaining the required material densities.

- .2 Compact to density of not less than 95% maximum dry density adjusted in accordance with ASTM D698-78.
- .3 Shape and roll alternately to obtain a smooth, even and uniformly compacted base.
- .4 Add water as necessary during compaction to obtain specified density.
- .5 In areas inaccessible to rolling equipment compact to specified density with mechanical tampers approved by NCC Representative.
- .6 Correct surface irregularities by loosening and adding or removing materials until surface is within specified tolerance.

3.3 Site Tolerances

- .1 Finished base surface to be within 10 mm higher or lower than indicated elevation but cannot be uniform over all the surface of the foundation.

3.4 Testing

- .1 If the testing indicates imperfections in the foundation or the sub-grade, remove imperfect materials to the depth and area indicated. Replace with new materials; this shall be done at no additional costs to the Owner.

3.5 Protection

- .1 Maintain finished base in compliance with this section's specifications until the succeeding layer is constructed, or until granular base is accepted by NCC Representative.

END OF SECTION

PART 1 - GENERAL

1.1 SCOPE OF WORK

- .1 Work in this section includes the materials and installations to do all work described herein for granite slabs, cobblestone and cobble edging. Refer to 1.3 for Supply of granite materials.

1.2 Related Sections

- .1 Section 01 33 00 – Submittals
- .2 Section 31 23 10 – Excavation and Backfill
- .3 Section 32 11 23 – Granular Material
- .4 Section 321 5 40 – Crushed Stone Paving

1.3 Supply of Materials

- .1 Granite slabs and granite cobblestone pavers are to be supplied by the Client. Contractor is to be responsible for collection at Woodroffe depot.
- .2 Inspect all granite with the NCC Representative to verify suitability for use.
- .3 Supply all other materials and equipment required to complete the installation.

1.4 Quality Assurance

- .1 Contractor or paving subcontractor to provide only skilled stone masons, supervised by foreman experienced in type of work specified.
- .2 The contractor or paving subcontractor, shall be known to have carried out satisfactory installations, similar to the specified work, within the last five years.
- .3 Provide adequate, acceptable equipment and labour forces to carry out the work expeditiously.
- .4 Only granite installations matching approved sample will be acceptable for the project.

1.5 Mock-Up

- .1 Mock-up: a mock-up area shall be provided on site at the time of paver installation. This mock-up will be the on-site reference for installation and workmanship. The mock-up area will be one square metre. Only paver installations matching the approved final mock-up will be acceptable. The mock-up location to be determined by the NCC

Representative.

1.6 Storage

- .1 Ensure that granite pavers and cobblestones are stored in location(s) where they will not be subject to accidental shock, to staining or other damage.
- .2 Protect granite pavers and cobblestones in storage to prevent staining or damage by system approved by NCC Representative.

1.7 Measurement Procedures

- .1 Refer to Section 01 05 05 – Pay Item Description.

PART 2 - PRODUCTS

2.1 Materials

- .1 To ASTM C615-85.
- .2 Granite type to be the following: See 1.3 - Supply of Materials for source.
 - .1 Granite Slabs (pink): 50mm thick by various sizes.
 - .2 Granite Squares (pink): 50mm thick by 100 x 100mm.
 - .3 Granite cobblestone: Diamond Brown, split sides, sawn top and bottom, approximately 110 x 200 x 100mm thick.
 - .4 Granite cobblestone: Old Sandstone, split all sides, approximately 110 x 230 x 100mm thick.
- .3 Setting Bed:
 - .1 For Granite Cobblestones: clean sand to meet CSA Standard A23-1-94, Section 5.3.2.
 - .2 For Granite Slabs and Squares: 7mm (1/4") clear limestone angular chips, to OPSS 1010.
- .4 Joint sand for granite cobblestones: Joint Sand Stabilizer: High performance acrylic polymer sand specifically designed for wide joints.
 - .1 Polymeric Sand EV by Sable Marco as distributed by Central Precast Ltd., Ottawa, Ontario or Unilock.
 - .2 Contact NCC Representative for approval of equivalent.
- .5 Joint sand for granite slabs: to CSA A179, hard, durable, angular particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials. F.M. - fineness modulus- ~2.55.

- .1 Gradations: within limits specified when tested to CSA A82.56M.

Sieve Designation	% Passing
5mm 100	
2.5mm	95 - 100
1.25mm	90 - 100
0.600mm	35 - 80
0.300mm	15 - 50
0.150mm	2 - 15

- .6 Granular Base: Granular "A" to Section 32 11 23 – Granular Material.

PART 3 - EXECUTION

3.1 Allowable Tolerances

- .1 Finish paving surfaces within 6 mm of established elevations, cross-sections and locations; within 1.5 mm of other surfaces at joints between granite pavers and junctions with granite curbs, within 3 mm of other surfaces at joints between, other paving types, manholes and other features within paved areas, and within 3 mm less than a 3 m long straightedge.

3.2 Granular Base

- .1 Granular Base: Granular "A", compacted to 95% Standard Proctor Density to depth as noted on detail drawings.
- .2 Spread and compact crushed stone or gravel in uniform layers not exceeding 100 mm compacted thicknesses.
- .3 Shape and roll alternately to obtain a smooth, even and uniformly compacted granular base and ensure conformity of grades with finish surface.
- .4 Water should be applied as necessary during compaction, to obtain specified density. If granular base is excessively moist, aerate by scarifying with suitable equipment until moisture content is corrected.
- .5 In areas not acceptable to rolling equipment, (i.e., within a tree protection zone), compact to specified density, with a vibrator plate only or with other previously authorized mechanical tampers.
- .6 Ensure the top of granular base does not exceed plus or minus 10 mm of finished grade less combined thickness of granular laying course plus surface course.

3.3 Setting Bed

- .1 Cobblestone: place sand to depths to accommodate varied paver dimensions and to provide a nominal depth of 40mm following compaction. Do not compact sand setting bed prior to placement of

pavers.

- .2 Granite pavers: Place angular chips to depths indicated. Setting bed cannot be used to fill in unevenness of base course.

3.4 Site Conditions

- .1 Carry out section work only when surfaces are at least two degrees centigrade and the temperature is rising.
- .2 Suspend paving operation when temperature falls below specified minimum.

3.5 Granite Cutting On Site

- .1 Provide suitable equipment to cut granite pavers to fit site conditions and specified paving patterns accurately.
- .2 Carry out all required cutting for site adjustments, within or adjacent to paved areas.
- .3 Granite pavers cut on site shall, when set in position, not reveal a gap between adjacent surfaces of more than 6 mm.
- .4 Clean all sawn faces of rust stains and iron particles.
- .5 Cut only where specified/required to fit existing features. Unnecessary cuts will not be permitted.

3.6 Installation of Dry Laid Cobblestone and Joint Filling

- .1 Lay pavers in accordance with the paver layouts on the drawings.
- .2 Resolve layout inconsistencies with NCC Representative before cutting and installation.
- .3 Fill joints by sweeping joint sand into joints.
- .4 Tamp or vibrate pavers into bed ensuring full contact on bottom surfaces. Use only rubber hammers or vibration equipment with rubber plates. This will require at least two or three passes with the vibrator.
- .5 Continue joint filling by sweeping joint sand into joints.
- .6 Add material as necessary until joints are filled to top edge of granite pavers.
- .7 Clean surfaces of granite paver and maintain free of abrasive and staining substances.
- .8 All work within 1 m of the laying face, must be left fully compacted with sand-filled joints, at the completion of each day.

3.7 Replacement Stone

- .1 Maintain in stock, for duration of warranty period, a supply of stone for replacement.

3.8 Cleaning

- .1 Remove cracked, shipped, broken, or otherwise damaged materials from site immediately.
- .2 On completion, clean the material furnished under this section, using only materials and methods approved by NCC Representative and leave granite ready for general cleaning.

END OF SECTION

PART 1 - GENERAL

1.1 Related Work

- .1 Section 01 10 00 - General Instructions.
- .2 Section 31 22 13 – Earthwork and Rough Grading.

1.2 Measurement Procedures

- .1 Refer to Section 01 05 05 – Pay Item Description.

1.3 References

- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM C 136-[96a], Method for Sieve Analysis of Fine and Coarse Aggregates.
 - .2 ASTM C 117-[95], Test Method for Material Finer Than 0.075 mm (No. 200) Sieve in Mineral Aggregates by Washing.
 - .3 ASTM E 11-[95], Specification for Wire - Cloth Sieves for Testing Purposes.
 - .4 ASTM D 4318-[98], Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils.
 - .5 ASTM D 698-[91], Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb. (2.49-kg) Rammer and 12-in (304.8-mm) Drop.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-8.1-[88], Sieves, Testing, Woven Wire, Inch Series.
 - .2 CAN/CGSB-8.2-[M88], Sieves, Testing, Woven Wire, Metric.

1.4 Protection

- .1 Prevent damage to adjacent site elements. Make good any damage.

1.5 Delivery, Storage and Handling

- .1 Deliver, store and handle materials in accordance with Section 01 10 00 - General Instructions.

1.6 Waste Management and Disposal

- .1 Separate and recycle waste materials in accordance with Section 01 61 00 Waste Management, and with 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.

PART 2 - PRODUCTS

2.1 Materials

- .1 Granular base:
 - .1 Granulars as per Section 32 11 23 – Granular Materials.
- .2 Granular topping:
 - .1 Screenings: hard, durable, crushed limestone particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials.
 - .2 Gradations: within limits specified when tested to ASTM C 136 and ASTM C 117.

<u>Sieve Designation</u>	<u>% Passing</u>
9.5 mm	[100]
4.75 mm	[50-100]
2.00 mm	[30-65]
0.425 mm	[10-30]
0.075 mm	[5-10]

- .3 Edging: refer to Section 32 13 99 – Granite Paving/Cobblestone.

PART 3 - EXECUTION

3.1 Subgrade

- .1 Ensure that subgrade preparation conforms to levels and compaction required to allow for installation of granular base.

3.2 Granular Base

- .1 Granular base material minimum thickness: as indicated.
- .2 Spread and compact granular base material in uniform layers not exceeding 100 mm compacted thickness.
- .3 Compact to a density of not less than 95% maximum dry density in accordance with ASTM D 698.

3.3 Edging

- .1 Install edging true to grade, in location, and layout as indicated.

3.4 Granular Topping

- .1 Place granular topping to compacted thickness as indicated.
- .2 Compact layer to [95]% maximum dry density in accordance with ASTM D 698.

3.5 Field Quality Control

- .1 Inspection and testing of crushed stone paving will be carried out by designated testing laboratory.
- .2 Costs of tests will be paid by Owner.

END OF SECTION

PART 1 - GENERAL

1.1 Related Sections

- .1 Section 31 23 33.01 – Excavating, trenching and Backfilling
- .2 Section 32 11 23 – Granular Material
- .3 Section 32 13 99 – Granite Paving / Cobblestone

1.2 References

- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM C 117-04 Standard Test Method for Materials Finer than 0.075 mm (No. 200) Sieve in Mineral Aggregates by Washing.
 - .2 ASTM C 136-[-05]-, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - .3 ASTM D 260-86(2001), Standard Specification for Boiled Linseed Oil.
 - .4 ASTM D 698-00ae1, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400ft-lbf/ft³) (600 kN-m/m³).
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-3.3-99(March 2004), Kerosene, Amend. No. 1, National Standard of Canada.
 - .2 CAN/CGSB-8.1-88, Sieves, Testing, Woven Wire, Inch Series.
- .3 Canadian Standards Association (CSA International)
 - .1 CSA-A23.1-04/A23.2-04, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.

1.3 Measurement Procedures

- .1 Refer to Section 01 05 05 – Pay Item Description.

1.4 Submittals

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data: submit WHMIS MSDS in accordance with Section 01 35 29.06 – Health and Safety Requirements and 01 33 00 – Submittal Procedures.
- .3 Inform NCC Representative of proposed source of materials and provide access for sampling at least 4weeks prior to commencing work.
- .4 If materials have been tested by accredited testing laboratory within previous 2months and have passed tests equal to requirements of this specification, submit test certificates from testing laboratory showing

suitability of materials for this project.

1.5 Delivery, Storage and Handling

- .1 Separate and recycle waste materials.
- .2 Place materials defined as hazardous or toxic waste in designated containers.
- .3 Ensure emptied containers are sealed and stored safely.

PART 2 - PRODUCTS

2.1 Materials

- .1 Concrete mixes and materials
 - .1 Cement: to CAN/CSA-A5, Type 10.
- .2 Premoulded joint filler: impregnated fibreboard to ASTM D1751.
- .3 Joint sealer/filler: pourable type, grey in colour.
- .4 Granular base: material to Section 32 11 23- Granular Materials
- .5 Non-staining mineral type form release agent: chemically active release agents containing compounds that react with free lime to provide water-soluble soap.
- .6 Boiled linseed oil: to ASTM D 260.
- .7 Kerosene: to CAN/CGSB-3.3.

2.2 Mix Proportions

- .1 Method: Alternative (1) of CAN/CSA-A23.1.
- .2 Cement type: as specified under 2.1.
- .3 Minimum 28 day compressive strengths and exposure classifications:
 - .1 Pavements, walks, curbs and exposed site concrete: 32 MPa; C-2.
- .4 Nominal size of coarse aggregate: Clause 14 of CAN/CSA-A23.1.
- .5 Slump: to Table 6 of CAN/CSA-A23.1.
- .6 Air content: all concrete to contain purposely entrained air in accordance with Table 10 of CAN/CSA-A23.1.
- .7 Admixtures: to Clause 6 of CAN/CSA-A23.1.

PART 3 - EXECUTION

3.1 Grade Preparation

- .1 Do grade preparation work in accordance with Section 31 23 33.01 -

Excavating, Trenching and Backfilling .

3.2 Granular Base

- .1 Obtain NCC Representative's approval of subgrade before placing granular base.
- .2 Place granular base material to lines, widths, and depths as indicated.
- .3 Compact granular base in maximum 150 mm layers to at least 95 % of maximum dry density to ASTM D 698.

3.3 Concrete

- .1 Obtain NCC Representative's approval of granular base prior to placing concrete.
- .2 Do concrete work as specified herein.
- .3 Immediately after floating, give sidewalk surface uniform smooth trowel finish.
 - .1 Sample to be approved by NCC Representative.
- .4 Provide round edges and joint spacings using tools approved by NCC Representative.

3.4 Tolerances

- .1 Finish surfaces to within 3mm in 3m as measured with 3m straightedge placed on surface.

3.5 Expansion and Contraction Joints

- .1 Install transverse contraction joints after floating, when concrete is stiff, but still plastic, at intervals indicated on the drawings. Refer also to drawings for specific sawcut patterns. Do not tool expansion joints or sawcuts.
- .2 Install expansion joints as indicated on the drawings.
- .3 When sidewalk is adjacent to curb, make joints of curb, gutters and sidewalk coincide.

3.6 Isolation Joints

- .1 Install isolation joints around manholes and catch basins and along length adjacent to concrete curbs, catch basins, buildings, or permanent structure.
- .2 Install joint filler in isolation joints full depth of slab flush with finished surface.
- .3 Seal isolation joints with sealant approved by NCC Representative.

3.7 Curing

- .1 Cure concrete by adding moisture continuously in accordance with CSA-A23.1/A23.2 to exposed finished surfaces for at least 1day after placing, or sealing moisture in by curing compound as directed by NCC Representative.
- .2 Where burlap is used for moist curing, place two prewetted layers on concrete surface and keep continuously wet during curing period.
- .3 Apply curing compound evenly to form continuous film, in accordance with manufacturer's requirements.

3.8 Backfill

- .1 Allow concrete to cure for 7days prior to backfilling.
- .2 Backfill to designated elevations with material as directed by NCC Representative
 - .1 Compact and shape to required contours as indicated.

3.9 Linseed Oil Treatment

- .1 Use if concrete is to be placed late in the season or if a 30 day air drying is not obtained.
- .2 Apply two coats of linseed oil mixture uniformly to surfaces of curbs, walks and gutters, after concrete has cured for specified curing time and when surface of concrete is clean and dry.
- .3 Linseed oil mixture to consist of 50% boiled linseed oil and 50% mineral spirits by volume.
- .4 Apply treatment when air temperature above 10 degrees C.
- .5 Apply first coat at 135 mL/m².
- .6 Apply second coat at 90mL/m² when first coat has dried.

3.10 Cleaning

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

END OF SECTION

PART 1 - GENERAL

1.1 Section Include

- .1 Materials and installation for chain link fences and gates, Salvaged chain link fabric, top rails and gates to be used in installation.

1.2 Related Sections

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 35 29.06 - Health and Safety Requirements.
- .3 Section 01 61 00 - Waste Management.
- .4 Section 31 23 10 – Excavating, Trenching and Backfilling

1.3 Measurement Procedures

- .1 Refer to Section 01 05 05 – Pay Item Description.

1.4 References

- .1 American Society for Testing and Materials International, (ASTM).
 - .1 ASTM A 53/A 53M-[02], Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
 - .2 ASTM A 90/A 90M-[01], Standard Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings.
 - .3 A653/A653M-[03], Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .4 ASTM C 618-[03], Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete.
- .2 Canadian General Standards Board (CGSB).
 - .1 CAN/CGSB-138.1-96, Fabric for Chain Link Fence.
 - .2 CAN/CGSB-138.2-Steel Framework for Chain Link Fence.
 - .3 CAN/CGSB-138.3-96, Installation of Chain Link Fence.
 - .4 CAN/CGSB-138.4-96, Gates for Chain Link Fence.
 - .5 CAN/CGSB-1.181-99, Ready-Mixed Organic Zinc-Rich Coating.

- .3 Canadian Standards Association (CSA International).
 - .1 CAN/CSA-A23.1/A23.2-00(August 2001), Concrete Materials and Methods of Concrete Construction/Methods of Test for Concrete.
 - .2 CAN/CSA-G164-M92(R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .3 CAN/CSA-A3000-98(R2002), Cementitious Materials Compendium. Includes:
 - .1 CAN/CSA-A23.5-98, Supplementary Cementing Materials
- .4 Department of Justice Canada (Jus).
 - .1 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
- .5 Health Canada/Workplace Hazardous Materials Information System (WHMIS).
 - .1 Material Safety Data Sheets (MSDS).
- .6 The Master Painters Institute (MPI) - Architectural Painting Specification Manual - [March 1998].
 - .1 MPI # 18, Organic Zinc Rich Primer.
- .7 Transport Canada (TC).
 - .1 Transportation of Dangerous Goods Act (TDGA), 1992, c. 34.

1.5 Submittals

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures].
- .2 Submit WHMIS MSDS - Material Safety Data Sheets.
- .3 Shop Drawings to indicate: all hardware components.

1.6 Quality Assurance

- .1 Installer Qualifications
 - .1 Fencing shall be installed by mechanics having a minimum of 2 years documented experience in the installation of chain link fencing. Submit proof of experience to Consultant.
- .2 Installation
 - .1 Fencing installation shall be performed in strict accordance with manufacturer's printed instructions, and in accordance with all warranty requirements.

- .3 Pre-installation Meeting
 - .1 Convene a pre-installation meeting for the Products specified in this section. Attendees must include, as a minimum, representatives of the following:
 - .1 Contractor (Site Superintendent & Project Manager)
 - .2 Installation Subcontractor (Site Foreman & Project Manager)
 - .3 Product Manufacturer and/or Distributor (Technical Representatives)
 - .4 Related Subcontractors (ie. Landscape)
 - .5 Consultant

1.7 Health and Safety

- .1 Do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.

1.8 Utilities

- .1 Before commencing work, establish locations and extent of underground utility lines in area of excavation.
- .2 Known underground and surface utility lines are indicated on drawings. No guarantee is given of completeness or accuracy.
- .3 Relocate existing lines in area of excavation, which must remain active.
- .4 Make good and pay for damage to existing utility lines resulting from work.

1.9 Delivery, Storage and Handling

- .1 Store and manage hazardous materials to approval of NCC Representative.
- .2 Fencing mesh and top rails shall be stored from salvage operations to approval of NCC Representative.
- .3 Deliver and store posts, rails, and brackets so as not to damage factory finish.

1.10 Waste Management and Disposal

- .1 Separate waste materials for reuse and recycling according to project Waste Management Plan.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper plastic polystyrene corrugated cardboard packaging material in appropriate on-site bins for recycling.
- .4 Separate for reuse and recycling and place in designated containers Steel Metal Plastic.

- .5 Place materials defined as hazardous or toxic in designated containers.
- .6 Handle and dispose of hazardous materials in accordance with CEPA , TDGA , Regional and Municipal regulations.
- .7 Divert unused metal and wiring materials from landfill to metal recycling facility as approved by Departmental Representative.
- .8 Divert unused concrete materials from landfill to local facility as approved by Departmental Representative.
- .9 Unused paint or coating material must be disposed of at official hazardous material collections site as approved by Departmental Representative.
- .10 Do not dispose of unused paint material into sewer system, into streams, lakes, onto ground or in other location where it will pose health or environmental hazard.
- .11 Fold up metal banding, flatten and place in designated area for recycling.

PART 2 - PRODUCTS

2.1 Materials

- .1 Concrete mixes and materials:
 - .1 Nominal coarse aggregate size: 20mm maximum size, - 5mm minimum size.
 - .2 Compressive strength: 27 MPa minimum at 28 days.
 - .3 Water/cement ratio to CAN3-A23.1-M77 Table 7 for Class A exposure and 60 mm slump at time and point of deposit. Air entrainment to CAN3-A23.1-M77 Table 8.
- .2 Chain-link fence fabric: salvaged fabric.
- .3 Posts, braces and rails: to CAN/CGSB-138.2, galvanized steel pipe. Dimensions as indicated.
 - .1 Dimensions as indicated.
 - .1 Top Rails: 42.9mm O.D., 3.56mm wall thickness.
 - .2 Line Posts: 63.5mm O.D., 3.91mm wall thickness.
 - .3 Corner / Gate / End Posts: 76.2mm O.D., 5.49mm wall thickness.
 - .4 Vehicular Gate Posts: 101.6mm O.D.
 - .5 Colour to match fabric.
 - .2 Top Rail locations.
 - .1 Top Rails: all fencing sections.
- .4 Bottom tension wire: to CAN/CGSB-138.2, single strand, galvanized steel wire, 7 gauge conforming to requirements of fence fabric.
- .5 Tie wire fasteners: to CSA G162.1M. Single strand, galvanized steel wire

conforming to requirements of fence fabric.

- .6 Tension bar: to ASTM A 653/A 653M, 5 x 20 mm minimum galvanized steel.
- .7 Gates:
 - .1 Relocate vehicular gates at entrance from Sir John A Macdonald Parkway to location approved by NCC Representative.
- .8 Fittings and hardware: to CAN/CGSB-138.2, cast aluminum alloy or galvanized steel.
 - .1 Tension bar bands: 3 x 20 mm minimum galvanized steel or 5 x 20 mm minimum aluminum.
 - .2 Post caps to provide waterproof fit, to fasten securely over posts and to carry top rail.
 - .3 Turnbuckles to be drop forged.
- .9 Organic zinc rich coating: to CAN/CGSB-1.181

2.2 Finishes

- .1 Galvanizing:
 - .1
 - .2 For pipe: 550g/m² minimum to ASTM A 90.
 - .3 For other fittings: to CAN/CSA-G164.

PART 3 - EXECUTION

3.1 Grading

- .1 Remove debris and correct ground undulations along fence line to obtain smooth uniform gradient between posts.
 - .1 Provide clearance between bottom of fence and ground surface of 30mm to 50 mm.

3.2 Erection of Fence

- .1 Erect fence along lines as indicated and to CAN/CGSB-138.3.
- .2 Excavate post holes to the following dimensions: 1000mm depth (of concrete) x 250mm diameter for line posts, and 1200mm depth (of concrete) x 300mm diameter for end, corner, and gate posts.
- .3 Space line posts 3 m apart, measured parallel to ground surface.
- .4 Space straining posts at equal intervals not to exceed 150m if distance between end or corner posts on straight continuous lengths of fence over reasonably smooth grade, is greater than 150m.
- .5 Install additional straining posts at sharp changes in grade and where directed by NCC Representative.

- .6 Install corner post where change in alignment exceeds 10 degrees.
- .7 Install end posts at end of fence and at buildings.
 - .1 Install gate posts on both sides of gate openings.
- .8 Place concrete in post holes then embed posts into concrete to depths indicated.
 - .1 Extend concrete 50 mm above ground level and slope to drain away from posts.
 - .2 Brace to hold posts in plumb position and true to alignment and elevation until concrete has set.
- .9 Do not install fence fabric until concrete has cured minimum of 5 days.
 - .1 Install fence fabric along the street side of the fence line.
- .10 Install brace between end and gate posts and nearest line post, placed in centre of panel and parallel to ground surface.
 - .1 Install braces on both sides of corner and straining posts in similar manner.
- .11 Install top rail between posts and fasten securely to posts and secure waterproof caps.
- .12 Install bottom tension wire, stretch tightly and fasten securely to end, corner, gate and straining posts with turnbuckles and tension bar bands.
- .13 Lay out fence fabric. Stretch tightly to tension recommended by manufacturer and fasten to end, corner, gate and straining posts with tension bar secured to post with tension bar bands spaced at 300mm intervals.
 - .1 Knuckled selvedge at top.
 - .2 Twisted selvedge at bottom.
- .14 Secure fabric to top rails, line posts and bottom tension wire with tie wires at 450 mm intervals.
 - .1 Give tie wires minimum two twists.

3.3 Installation of Gates

- .1 Install gates in locations as indicated.
- .2 Level ground between gate posts and set gate bottom approximately 40 mm above ground surface.
- .3 Determine position of centre gate rest for double gate.
 - .1 Cast gate rest in concrete as directed.
 - .2 Dome concrete above ground level to shed water.
- .4 Install gate stops where indicated.

3.4 Touch Up

- .1 Clean damaged surfaces with wire brush removing loose and cracked coatings. Apply two coats of organic zinc-rich paint to damaged areas in accordance with Section 09 91 13 - Exterior Painting.
 - .1 Pre-treat damaged surfaces according to manufacturers' instructions for zinc-rich paint.

3.5 Cleaning

- .1 Clean and trim areas disturbed by operations.
 - .1 Dispose of surplus material as directed by NCC Representative.

END OF SECTION

PART 1 - GENERAL

1.1 Section Includes

- .1 Work in this section includes all materials, equipment, and labour to install all furnishings listed in this section.
- .2 Refer to products lists for furnishing items supplied by the NCC and stored at the NCC Woodroffe depot. Contractor is to be responsible for collection at Woodroffe depot.
- .3 Inspect all NCC supplied furnishings with the NCC Representative to verify suitability for use.
- .4 Supply all other materials and equipment required to complete the installation.

1.2 Related Sections

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 61 00 - Waste Management.

1.3 Submittals

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .3 Indicate dimensions, sizes, assembly, anchorage and installation details for each furnishing specified.
- .4 Provide maintenance data for care and cleaning of site furnishings.

1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for recycling in accordance with Section 01 61 00 - Waste Management.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard packaging material in accordance with Waste Management Plan.
- .4 Separate for reuse and recycling and place in designated containers Steel, Metal, Plastic waste in accordance with Waste Management Plan.
- .5 Fold up metal banding, flatten and place in designated area for recycling.

1.5 Storage and Protection

- .1 Ensure that furnishings are stored in location(s) where they will not be subject to accidental shock, to staining or other damage.
- .2 Provide adequate protection around bench markers, layout markers, survey markers and geodetic monuments.
- .3 Provide protection to ensure no damage to existing facilities and equipment situated on site.
- .4 Effect approved measures to minimize dust as result of this work.

1.6 Measurement Procedures

- .1 Refer to Section 01 05 05 – Pay Item Description.

PART 2 - PRODUCTS

2.1 Seating Boulders for Terraced Seating (supplied by NCC)

- .1 Seating Boulders: limestone seating boulders supplied by NCC at Woodroffe depot.
 - .1 Size: varies from 1.1 to 1.8 metres long by average 0.5 X 0.5 metres wide and deep.
 - .2 Quantity: 25.

2.2 Standard Bench (supplied by NCC)

- .1 Bench: black metal frame with wood slats, supplied by NCC at Woodroffe depot.
 - .1 Size: 1800mm long.
 - .2 Quantity: 8.
 - .3 Anchorage: Duckbill anchor (1 per bench), Model 68 as supplied by Geosynthetics Systems 613-733-9585, or approved equivalent.

2.3 Stone Bench 1 (supplied by NCC)

- .1 Stone Bench 1: each bench consists of 2 granite steps, supplied by NCC at Woodroffe depot.
 - .1 Granite step: 600mm x 1800mm long x 300-400mm wedge.
 - .2 Quantity: 10 steps (for 5 benches).

2.4 Stone Bench 2 (supplied by NCC)

- .1 Stone Bench 2: each bench consists of 4 granite curbs, supplied by NCC at Woodroffe depot.
 - .1 Granite curb: 250-300mm wedge x 400mm x 1000 - 1500mm long.
 - .2 Quantity: 48 steps (for 12 benches).

2.5 Bicycle Rack (supplied by NCC)

- .1 Bicycle rack: steel frame, accommodates 7 bikes, supplied by NCC at Woodroffe depot.
 - .1 Size: approximately 1400mm long.
 - .2 Quantity: 5
 - .3 Anchorage: Duckbill anchor (1 per bench), Model 68 as supplied by Geosynthetics Systems 613-733-9585, or approved equivalent.

2.6 Waste Receptacles (supplied by NCC)

- .1 Waste Receptacle: steel frame with wood slats.
 - .1 Quantity: 6
 - .2 Anchorage: Duckbill anchor (1 per bench), Model 68 as supplied by Geosynthetics Systems 613-733-9585, or approved equivalent.

2.7 Landscape Boulder 1 (supplied by NCC)

- .1 Landscape Boulder 1: granite boulder, supplied by NCC at Woodroffe depot.
 - .1 Size: approximately 500mm x 600mm x 1200mm.
 - .2 Quantity: 2
- .2 Bedding and Backfill:
 - .1 Bedding: Granular 'A' to OPSS 1010.
 - .2 Backfill: approved fill material, refer to civil.
- .3 Geotextile: Nonwoven geotextile, 'Linq 125EX' distributed by Geosynthetics or approved equivalent.

2.8 Landscape Boulders

- .1 Landscape Boulders for use in East Block:
 - .1 Weathered fieldstone: Approved granite / limestone (no blast rock) from exposed open fields or development lands (with minimum scarring, good colour and veining, and of sound quality with no fissures).
 - .2 Size: Minimum size in any direction: 700mm. Average size to be 1.2 – 1.8 cubic metres (up to 20% small at 0.7 - 1.0 cubic metres, and 35% large at 1.8 – 2.5 cubic metres). Rock sizes to vary from low & flat to high & narrow. Have rock approved prior to shipment to site.
- .2 Quantity:
 - .1 At landforms: varying sizes - 43 Boulders.
 - .2 At Inner circle and for interpretive panels: 15 select large boulders

- .3 Bedding and Backfill:
 - .1 Bedding: Granular 'A' to OPSS 1010.
 - .2 Backfill: approved fill material, refer to civil.
- .4 Geotextile: Nonwoven geotextile, 'Linq 125EX' distributed by Geosynthetics or approved equivalent.

2.9 Solar Light Bollard (supplied by NCC)

- .1 Solar Light Bollard: steel bollard with LED light, solar panel cover and battery, supplied by NCC at Woodroffe depot.
 - .1 Size: approximately 150mm diameter by 900mm height.
 - .2 Quantity: 11
 - .3 Install as per manufacturer's specifications and instructions using concrete sonotube footings with bottom flair, provide shop drawings.

2.10 Installation of Historic Fountain (supplied by NCC)

- .1 Historic Fountain (Fleck Fountain), supplied by NCC at Woodroffe depot.
 - .1 Size: refer to detail drawing for sizes, installation method and procedures, shop drawings.

2.11 Installation of Interpretive Elements and Footings (interpretive Elements by others)

- .1 All installation and footings to be carried out under a cash allowance.
- .2 Booth West Interpretive.
 - .1 Interpretive Panel for Fountain (surface mounted): 1
 - .2 Footings (helical piles) for poles: 4
 - .3 Banner and Pole installation: 4
 - .4 Panels attachment to Interpretive Arches: 3
- .3 Booth East Interpretive.
 - .1 Footings (helical piles) for poles: 6
 - .2 Install sculptures to footings: 2
 - .3 Core and epoxy sculptures: 3
 - .4 Core and epoxy interpretive panels to Landscape Boulders: 5

2.12 Concrete

- .1 Concrete mixes and materials:
 - .1 Nominal coarse aggregate size: 20mm maximum size, -5mm minimum size.
 - .2 Compressive strength: 27 MPa minimum at 28 days.
 - .3 Water/cement ratio to CAN3-A23.1-M77 Table 7 for Class A exposure and 60 mm slump at time and point of deposit. Air entrainment to CAN3-A23.1-M77 Table 8.

PART 3 - EXECUTION

3.1 Installation

- .1 Assemble furnishings in accordance with manufacturer's instructions and approved shop drawings.
- .2 Install furnishings true, plumb, and anchored as indicated on approved shop drawings.
- .3 Touch-up damaged finishes to approval of NCC Representative

3.2 Protection After Completion

- .1 Protect, maintain site furnishings, including accessories, until acceptance of project work.
- .2 Immediately remove from site, damaged furnishings and accessories. Replace repair, refinish or otherwise make good to approval of NCC Representative.

END OF SECTION

PART 1 - GENERAL

1.1 Related Work Specified Elsewhere

- .1 Section 31 23 10 - Excavating & Backfilling
- .2 Section 32 92 19.13 – Mechanical Seeding
- .3 Section 32 92 19.16 – Hydraulic Seeding
- .4 Section 32 93 10 – Tree, Shrub & Groundcover Planting

1.2 Testing

- .1 Obtain NCC Representative's initial approval of imported topsoil at source.
- .2 Contractor is responsible to obtain soil analysis and requirements for amendments to supply topsoil as specified.
- .3 If defects are revealed during inspection and/or testing, the appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by NCC Representative at no cost to the Owner. Pay costs for retesting and reinspection.
- .4 All samples and test results shall be clearly marked to indicate the Contractor's name, the date tested, type of topsoil specified and the contract for which it is to be used. Provide samples of all types indicated in materials.
- .5 Test imported topsoil for N, P K, Mg, trace minerals, soluble salt content, organic matter, soil texture and pH value prior to delivery to site.
 - .1 Submit 0.5 kg sample of topsoil to testing laboratory and indicate intended use.
 - .2 Determine requirements for amendments to bring pH value of soil to 5.5 to 7.7 level.
 - .3 Submit two copies of soil analysis and recommendations for corrections to NCC Representative. Recommendation(s) to include for application prior to seeding or planting and recommendation(s) for maintenance application.
 - .4 Inspections and testing of topsoil will be carried out by testing laboratory designated by NCC Representative.
 - .5 National Capital Commission will pay cost of testing.
- .6 Employment of inspection/testing agencies does not relax the responsibility to perform Work in accordance with the Contract Documents.

1.3 References

- .1 ASTM D698-91, Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (600 kN-m/m³).
- .2 ASTM F1815-97, Test Method for Bulk Density.
- .3 84-001, 84-002, 84-003 Analytical Methods Manual Agricultural Canada, 1984, testing of soil pH conductivity.
- .4 84-004 Analytical Methods Manual Agricultural Canada, 1984, testing of mineral content in soil (K, Mg).
- .5 84-017 Analytical Methods Manual Agricultural Canada, 1984, testing of phosphorous content in soil.
- .6 S-9.20 Western States laboratory proficiency testing program soil and plant analytical methods, version 4.00, 1997 for organic matter content in soil.

1.4 Quality Assurance

- .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .3 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, installation instructions and warranty requirements.

1.5 Waste Management and Disposal

- .1 Separate and recycle waste materials according to project Waste Management Plan.
- .2 Divert unused soil amendments from landfill to official hazardous material collections site approved by Departmental Representative.
- .3 Do not dispose of unused soil amendments into sewer systems, into lakes, streams, onto ground or in locations where it will pose health or environmental hazard.

1.6 Scheduling of Work

- .1 Schedule placing of topsoil to permit immediate seeding and planting operations.

1.7 Delivery and Storage

- .1 Deliver and store fertilizer in waterproof bags, showing weight, analysis

and name of manufacturer.

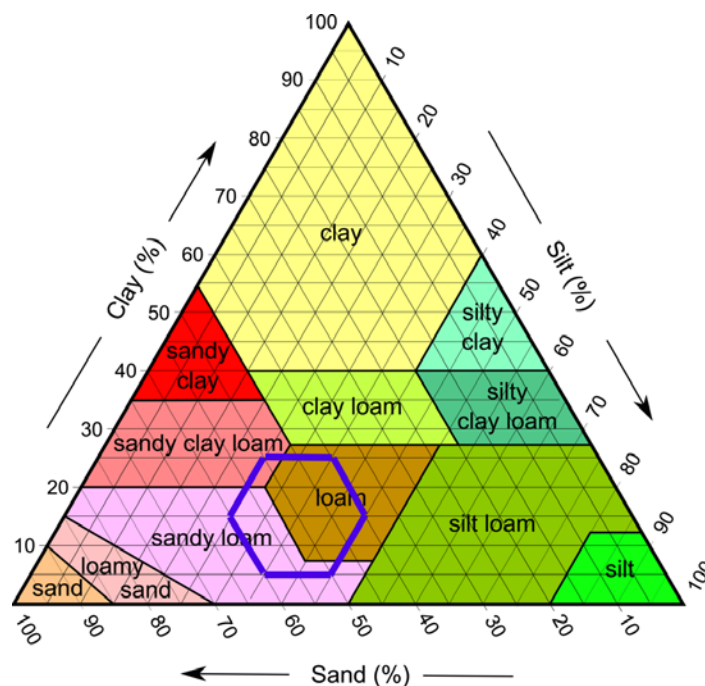
1.8 Measurement Procedures

- .1 Refer to Section 01 05 05 – Pay Item Description.

PART 2 - PRODUCTS

2.1 Materials

- .1 Imported topsoil: mixture of mineral 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
 - .1 Friable loam / sandy loam with the following parameters: 40 to 60% sand, 25 to 45% silt, 5 to 25% clay.
 - .2 Containing minimum 4% organic matter **by weight**.
 - .2 Fertility: macro and micro soil nutrients adequate to support germination and establishment of intended vegetation. Adjust topsoil nutrients to meet analysis recommendations.
 - .3 pH value: 6.0 to 7.0 .
 - .4 Contain no toxic elements or growth-inhibiting materials.
 - .5 Free from:
 - .1 Debris and stones over 50mm diameter.
 - .2 Course vegetative material, 10mm diameter and 100mm length, occupying more than 2% of soil volume.
 - .6 Consistency: friable when moist.



2.2 Amended Topsoil

- .1 Imported Topsoil amended for use as Planting Medium.
 - .1 Planting Medium: planting medium to be composed of imported Topsoil incorporated with 20% organic matter by volume or 4% - 6% by weight. Ready mixed topsoil can be used after obtaining approval by Landscape Architect prior to shipment to site. Supply all topsoil analysis of mix for approval.

2.3 Soil Amendments

- .1 Organic matter: compost Category A, unprocessed organic matter, such as rotted manure, hay, straw, bark residue or sawdust, meeting the organic matter, stability and contaminant requirements.
 - .1 Aged (minimum 2 years) mushroom compost, leaf mold, humus peat, or similar approved material. Soluble salt content must not exceed 1.0 ms/cm.
 - .2 Free of wood and deleterious material which could prohibit growth.
- .2 Lime: Ground agricultural limestone containing minimum 85% of total carbonates, 90% passing 1.0 mm sieve, 50% passing 0.125 mm sieve by weight.
- .3 Sulphur: Horticultural Grade.
- .4 Fertilizer: industry accepted standard medium containing nitrogen, phosphorous, potassium and other micro-nutrients suitable to specific plant species or application or defined by soil test.
 - .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 8.0 .

PART 3 - EXECUTION

3.1 Preparation

- .1 Grade subgrade, eliminating uneven areas and low spots, ensuring positive drainage. Remove stones larger than 50 mm diameter and other deleterious materials. Remove subsoil that has been contaminated with oil, gasoline or calcium chloride. Dispose of removed materials as directed by the NCC Representative.

- .2 Cultivate entire area which is to receive topsoil to minimum depth of 100 mm. For preparation of planting beds and landforms, refer to plans and details.
- .3 Core aerate in those areas where equipment used for hauling and spreading has compacted the select cover material layer.

3.2 Spreading of Topsoil

- .1 Do not spread topsoil until NCC Representative has inspected and approved subgrade.
- .2 Spread topsoil with adequate moisture in uniform layers during dry weather over approved, dry, unfrozen subgrade, where planting, sodding or seeding are indicated.
- .3 Bring topsoil up to finished grade.
- .4 Apply topsoil to the following minimum depths:
 - .1 200 mm for seeding areas, excluding landforms.
 - .2 See details for landforms.
 - .3 See details for planting beds.
- .5 Remove stones, roots, grass, weeds, construction materials, debris and foreign non-organic objects from topsoil.
- .6 Manually spread topsoil around trees, plants, surface utilities and other obstacles.

3.3 Soil Amendments

- .1 If required, apply lime, sulphur or other soil amendment at rate determined from soil sample test.
- .2 Mix soil amendment well into full depths of topsoil by cultivating prior to application of fertilizer.

3.4 Finish Grading

- .1 Fine grade entire topsoiled area to contours and elevations as indicated or as directed. Eliminate rough spots and low areas to ensure positive drainage.
- .2 Roll topsoil with 50 kg roller, minimum 900 mm wide, to compact and retain surface.
- .3 Leave surface smooth, uniform, firm against deep foot printing, with fine loose texture.

3.5 Acceptance

- .1 .1 Consultant will inspect topsoil in place and determine acceptance of material, depth of topsoil and finish grading.

3.6 Surplus Material

- .1 .1 Dispose of surplus imported topsoil not required for fine grading/landscaping off site.

END OF SECTION

PART 1 - GENERAL

1.1 Related Sections

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 61 00 - Waste Management.
- .3 Section 32 91 21 – Topsoil and Fine Grading
- .4 Section 32 93 12 – Plant Maintenance and Warranty

1.2 Measurement Procedures

- .1 Refer to Section 01 05 05 – Pay Item Description.

1.3 Submittals

- .1 Product Data:
 - .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Provide product data for:
 - .1 Seed.
 - .2 Fertilizer.
 - .3 Mulch

1.4 Quality Assurance

- .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .3 Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, installation instructions and warranty requirements.

1.5 Scheduling

- .1 Schedule seeding using grass mixtures after frost has left ground and before May 15th or between August 15th and September 30th.
- .2 Schedule seeding to coincide with preparation of soil surface.
- .3 Schedule completion of work immediately prior to hydraulic mulching where mulching is proposed.

1.6 Waste Management and Disposal

- .1 Separate and recycle waste materials.in accordance with Section

01 61 00 - Waste Management.

- .2 Divert unused fertilizer from landfill to official hazardous material collections site approved by NCC Representative.
- .3 Do not dispose of unused fertilizer into sewer systems, into lakes, streams, onto ground or in locations where it will pose health or environmental hazard.

PART 2 - PRODUCTS

2.1 Seed Mix 1 – Clover/Trefoil

- .1 Canada "Certified" seed, "Canada No. 1 Legume Mixture" in accordance with Government of Canada "Seeds Act" and "Seeds Regulations".
 - .1 Ground Cover seed mixture (Application 1 – Broadcast Seed Method).
 - .1 50 % White Clover (*Trifolium repens*)
 - 50 % Birdsfoot Trefoil (*Lotus corniculatus*)
 - .2 Nurse crop seed mixture (Application 2 – Brillion method).
 - .1 100% Creeping Red Fescue. (*Festuca rubra* var. *rubra*)
- .2 Inoculant / seed coating in packages individually labelled in accordance with "Seeds Regulations" and indicating name of supplier.

2.2 Seed Mix 2 – Meadow Grasses

- .1 Canada "Certified" seed, "Canada No. 1 Grass Mixture" in accordance with Government of Canada "Seeds Act" and "Seeds Regulations".
 - .1 Grass seed mixture (Brillion method).
 - .1 20% Annual Ryegrass (*Lolium multiflorum*), nurse crop
 - 10% Canada Wild Rye (*Elymus Canadensis*)
 - 10% Virginia Wild Rye (*Elymus virginicus*)
 - 15% Little Bluestem (*Schizachyrium scoparium*)
 - 30% Blue Grama (*Bouteloua gracilis*)
 - 15% Side Oats Grama (*Bouteloua curtipendula*)
- .2 In packages individually labelled in accordance with "Seeds Regulations" and indicating name of supplier.

2.3 Seed Mix 3 – Fescue Landforms

- .1 Refer to Section 32 92 19.16 – Hydraulic Seeding.

2.4 Seed Mix 4 – Standard Grass Seed

- .1 Canada "Certified" seed, "Canada No. 1 Lawn Grass Mixture" in accordance with Government of Canada "Seeds Act" and "Seeds Regulations".
 - .1 Grass seed mixture (Brillion method).
 - .1 20 % Perennial Ryegrass

- .2 40 % Kentucky Bluegrass
- .3 40 % Creeping Red Fescue

- .2 In packages individually labelled in accordance with "Seeds Regulations" and indicating name of supplier.

2.5 Water

- .1 Free of impurities that would inhibit germination and growth.

2.6 Fertilizer

- .1 To Canada "Fertilizers Act" and "Fertilizers Regulations".
- .2 Complete synthetic fertilizer with guaranteed minimum analysis as specified.

2.7 Mulch

- .1 Mulch to be used to maintain seed germination and prevent erosion.
 - .1 Hydro-mulch specially manufactured for use in hydraulic seeding equipment – 'Cell-u-mulch' or approved equivalent.
- .2 Provide data on mulch type to NCC Representative for approval.

PART 3 - EXECUTION

3.1 Quality of Work

- .1 Do not perform work under adverse field conditions as determined by NCC Representative
- .2 Remove and dispose of weeds; debris; stones 50 mm in diameter and larger; soil contaminated by oil, gasoline and other deleterious materials; to a licenced contaminated soils disposal site as directed by NCC Representative

3.2 Seed Bed Preparation

- .1 Verify that grades are correct. If discrepancies occur, notify NCC Representative and do not commence work until instructed by NCC Representative
- .2 Fine grade surface free of humps and hollows to smooth, even grade, to contours and elevations indicated to tolerance of plus or minus 15mm, surface draining naturally.
- .3 Cultivate fine grade approved by NCC Representative to 25mm depth immediately prior to seeding.
- .4 Ensure areas to be seeded are moist to depth of 50 mm before seeding.
- .5 Obtain Consultant's approval of grade and topsoil depth before starting

to seed.

3.3 Seed Placement

- .1 For mechanical seeding (refer to seed mixes):
 - .1 Use "Brillion" type mechanical landscape seeder which accurately places seed at specified depth and rate and rolls in single operation.
 - .2 Use equipment and method acceptable to NCC Representative
- .2 For manual or broadcast seeding (refer to seed mixes):
 - .1 Use "Cyclone" type manually operated seeder.
 - .2 Use manually operated, water ballast, landscaping type, smooth steel drum roller. Ballast as directed by NCC Representative
 - .3 Use equipment and method acceptable to NCC Representative
- .3 On cultivated surfaces, sow seed uniformly at rate of:
 - .1 For Seed Mix 1.
 - .1 Application 1 (Broadcast): 0.3kg / 100m².
 - .2 Application 2 (Brillion): 1.5kg / 100 m².
 - .2 For Seed Mix 2.
 - .1 1.5kg / 100m².
 - .3 For Seed Mix 3.
 - .1 Refer to Section 32 92 19.16 – Hydraulic Seeding.
 - .4 For Seed Mix 4.
 - .1 1.8kg / 100m².
- .4 Blend applications 300 mm into previous applications to form uniform surfaces.
- .5 Sow half of required amount of seed in one direction and remainder at right angles as applicable.
- .6 Incorporate seed by light raking in cross directions.
- .7 Consolidate mechanically seeded areas by rolling area if soil conditions warrant or if directed by NCC Representative with equipment approved by NCC Representative immediately after seeding.
- .8 Water with fine spray to avoid seed wash-out. Water to ensure optimum penetration for germination.
- .9 Protect seeded areas from trespass satisfactory to NCC Representative.
- .10 Remove protection devices after seeded areas have been accepted by NCC Representative.

3.4 Fertilizing Program

- .1 Fertilize seeded areas six weeks after seeding. Spread evenly at rate of 0.5kg of nitrogen/100m² and water in well. Second application of

fertilizer to be applied in the late summer (spring seeding) or in the spring (late summer seeding). Postpone fertilizing until next spring and late summer for seeding carried out after August 30.

3.5 Maintenance During Establishment Period

- .1 Perform following operations from time of seed application until acceptance by NCC Representative:
 - .1 Water seeded area to maintain optimum soil moisture level for germination and continued growth of grass. Control watering to prevent washouts.
 - .2 Repair and reseed dead or bare spots to allow establishment of seed prior to acceptance.
 - .3 For Seed Mix 4 only: Cut grass to 50mm whenever it reaches height of 80 mm. Remove clippings which will smother grass [as directed by NCC Representative
 - .4 Fertilize seeded areas in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles and water in well.
 - .5 Control weeds by mechanical means utilizing acceptable integrated pest management practices.
 - .6 Repair and reseed dead or bare spots to allow establishment of seed prior to acceptance.
 - .7 Over seed areas where required the following spring. Areas to be overseeded will be established with the NCC Representative.

3.6 Final Acceptance

- .1 Seeded areas will be accepted by NCC Representative provided that:
 - .1 Areas are uniformly established and turf is free of rutted, eroded, bare or dead spots and free of weeds.
 - .2 Areas have been cut to approval of NCC Representative.
 - .3 Areas have been fertilized.
- .2 Areas seeded in fall will be accepted in following spring, one month after start of growing season provided acceptance conditions are fulfilled.

3.7 Maintenance During Warranty Period

- .1 Perform following operations from time of acceptance until end of warranty period.
 - .1 Water seeded area to maintain optimum soil moisture level for continued growth of grass. Control watering to prevent washouts.
 - .2 Repair and reseed dead or bare spots to satisfaction of NCC Representative.
 - .3 Fertilize seeded areas in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles and water in well.
 - .4 Refer to Section 32 93 12 – Plant Maintenance and Warranty for

specific grass cutting, weeding and maintenance requirements.

3.8 Cleaning

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END OF SECTION

PART 1 - GENERAL

1.1 Related Sections

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 61 00 - Waste Management.
- .3 Section 32 91 21 – Topsoil and Fine Grading.
- .4 Section 32 93 12 – Plant Maintenance and Warranty.

1.2 Measurement Procedures

- .1 Refer to Section 01 05 05 – Pay Item Description.

1.3 Submittals

- .1 Product Data.
 - .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures
 - .2 Provide product data for:
 - .1 Seed.
 - .2 Mulch.
 - .3 Tackifier.
 - .4 Fertilizer.
 - .3 Submit in writing to NCC Representative prior to commencing work:
 - .1 Volume capacity of hydraulic seeder in litres.
 - .2 Amount of material to be used per tank based on volume.
 - .3 Number of tank loads required per hectare to apply specified slurry mixture per hectare.

1.4 Quality Assurance

- .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .3 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, installation instructions and warranty requirements.

1.5 Scheduling

- .1 Schedule hydraulic seeding to coincide with preparation of soil surface.
- .2 Schedule hydraulic seeding using grass mixtures between dates

recommended by the Provincial Agricultural Department.

1.6 Waste Management and Disposal

- .1 Separate and recycle waste materials in accordance with Section 01 61 00 - Waste Management.
- .2 Divert unused fertilizer from landfill to official hazardous material collections site approved by NCC Representative
- .3 Do not dispose of unused fertilizer into sewer systems, into lakes, streams, onto ground or in locations where it will pose health or environmental hazard.

PART 2 - PRODUCTS

2.1 Materials

- .1 Seed Mixes 1, 2 and 4: refer to Section 32 92 19.13 – Mechanical Seeding.
- .2 Seed Mix 3 – Fescue Landforms: "Canada pedigreed grade" in accordance with Government of Canada Seeds Act and Regulations.
 - .1 Grass mixture: "Certified", "Canada No. 1 Lawn Grass Mixture" in accordance with Government of Canada "Seeds Act" and "Seeds Regulations".
 - .1 Mixture composition:
 - .1 45 % Blue Sheeps Fescue (*Festuca ovina glauca*)
 - .2 15 % Annual Ryegrass (*Lolium multiflorum*)
 - .3 40 % Canada Bluegrass (*Poa compressa*)
- .3 Mulch: non-toxic, water activated, green colouring, free of germination and growth inhibiting factors with following properties:
 - .1 Type I mulch:
 - .1 Made from wood cellulose fibre.
 - .2 Organic matter content: 95% plus or minus 0.5%.
 - .3 Value of pH: 6.0.
 - .4 Potential water absorption: 900%.
- .4 Tackifier: water dilutable, liquid dispersion or water soluble vegetable carbohydrate powder. Use maximum application as per manufacturer's specifications.
- .5 Water: free of impurities that would inhibit germination and growth.
- .6 Fertilizer:
 - .1 To Canada "Fertilizers Act" and "Fertilizers Regulations".
 - .2 Complete synthetic, slow release with 35% of nitrogen content in water-insoluble form.
- .7 Inoculants: inoculant containers to be tagged with expiry date.

PART 3 - EXECUTION

3.1 Workmanship

- .1 Do not spray onto structures, signs, guide rails, fences, plant material, utilities and other than surfaces intended.
- .2 Clean-up immediately, any material sprayed where not intended, to satisfaction of NCC Representative.
- .3 Do not perform work under adverse field conditions such as wind speeds over 10km/h, frozen ground or ground covered with snow, ice or standing water.
- .4 Protect seeded areas from trespass until plants are established.

3.2 Preparation of Surfaces

- .1 Fine grade areas to be seeded free of humps and hollows. Ensure areas are free of deleterious and refuse materials.
- .2 Cultivated areas identified as requiring cultivation to depth of 25mm.
- .3 Ensure areas to be seeded are moist to depth of 150mm before seeding.
- .4 Obtain NCC Representative approval of grade and topsoil depth before starting to seed.

3.3 Fertilizing Program

- .1 Fertilize during establishment and warranty periods to manufacturer's specifications and recommendations.

3.4 Preparation of Slurry

- .1 Measure quantities of materials by weight or weight-calibrated volume measurement satisfactory to NCC Representative. Supply equipment required for this work.
- .2 Charge required water into seeder. Add material into hydraulic seeder under agitation. Pulverize mulch and charge slowly into seeder.
- .3 After all materials are in the seeder and well mixed, charge tackifier into seeder and mix thoroughly to complete slurry.

3.5 Slurry Application

- .1
 - .1 Hydraulic seeding equipment:
 - .1 Slurry tank.
 - .2 Agitation system for slurry to be capable of operating during charging of tank and during seeding, consisting of recirculation of slurry and/or mechanical agitation method.
 - .3 Capable of seeding by 50m hand operated hoses and appropriate

- nozzles.
- .4 Tank volume to be certified by certifying authority and identified by authorities "Volume Certification Plate".
- .2 Slurry mixture applied per hectare.
 - .1 Seed: Grassmixture 245 kg.
 - .2 Mulch: Type I.
 - .3 Tackifier: maximum, as per manufacturer's recommendation.
 - .4 Water: Minimum 30,000L.
 - .5 Fertilizer: 2 kg/100m² (4.5 lbs/sq ft), ratio 7-24-12.
- .3 Apply slurry uniformly, at optimum angle of application for adherence to surfaces and germination of seed.
 - .1 Using correct nozzle for application.
 - .2 Using hoses for surfaces difficult to reach and to control application.
- .4 Blend application 300mm into previous applications to form uniform surfaces.
- .5 Re-apply where application is not uniform.
- .6 Remove slurry from items and areas not designated to be sprayed.
- .7 Protect seeded areas from trespass satisfactory to NCC Representative
- .8 Remove protection devices as directed by NCC Representative

3.6 Maintenance During Establishment Period

- .1 Perform following operations from time of seed application until acceptance by NCC Representative
- .2 Grass Mixture:
 - .1 Repair and reseed dead or bare spots to allow establishment of seed prior to acceptance.
 - .2 Fertilize seeded areas 10 weeks after germination provided plants have mature true leafs in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles ; water in well.
 - .3 Control weeds by mechanical or chemical means utilizing acceptable integrated pest management practices.
 - .4 Water seeded area to maintain optimum soil moisture level for germination and continued growth of grass. Control watering to prevent washouts.

3.7 Acceptance

- .1 Seeded areas will be accepted by NCC Representative provided that:
 - .1 Plants are uniformly established and seeded areas are free of rutted, eroded, bare or dead spots and free of weeds.

.2 Areas have been fertilized.

- .2 Areas seeded in fall will achieve final acceptance in following spring, one month after start of growing season provided acceptance conditions are fulfilled.

3.8 Maintenance During Warranty Period

- .1 Perform following operations from time of acceptance until end of warranty period.
- .1 Water seeded area to maintain optimum soil moisture level for continued growth of grass. Control watering to prevent washouts.
 - .2 Repair and reseed dead or bare spots to satisfaction of NCC Representative.
 - .3 Fertilize seeded areas in accordance with fertilizing program. Spread half of required amount of fertilizer in one direction and remainder at right angles and water in well.
 - .4 Refer to Section 32 93 12 – Plant Maintenance and Warranty for specific grass cutting, weeding and maintenance requirements.

3.9 Cleaning

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END OF SECTION

PART 1 - GENERAL

1.1 Related Sections

- .1 Topsoil and Finish Grading - Section 31 91 21
- .2 Mechanical Seeding – Section 32 92 19.13
- .3 Hydraulic Seeding – Section 32 19.16
- .4 Plant Material Maintenance - Section 32 92 12

1.2 References

- .1 Agriculture and Agri-Food Canada (AAFC).
 - .1 Plant Hardiness Zones in Canada-2000.
- .2 Canadian Nursery Landscape Association (CNLA).
 - .1 Canadian Standards for Nursery Stock-2001.
- .3 Department of Justice Canada (Jus).
 - .1 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
 - .2 Transportation of Dangerous Goods Act (TDGA), 1992, c.34.
- .4 Health Canada/Workplace Hazardous Materials Information System (WHMIS).
 - .1 Material Safety Data Sheets (MSDS).

1.3 Submittals

- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit product data for:
 - .1 Fertilizer.
 - .2 Anti-desiccant.
 - .3 Guying assembly including clamps, collar, guying wire, anchors and wire tightener.
 - .4 Mulch.
- .3 Submit samples for:
 - .1 Mulch.

1.4 Source Quality Control

- .1 The Contractor shall commence sourcing the specified material immediately upon award of the Contract.
- .2 No substitutions will be considered unless the Contractor can demonstrate to the NCC Representative's satisfaction that a prolonged and widespread search for the specified cultivars has been undertaken.

- .3 Obtain approval of source of plant material. Acceptance of plant at its source does not prevent rejection on site prior to or after planting operations.

1.5 Shipment And Pre-Planting Care

- .1 Protect plant materials against abrasion, exposure and extreme temperature change during transit.
- .2 Keep roots moist and protected from sun and wind

1.6 Storage And Protection

- .1 Protect plant materials from frost, excessive heat, wind and sun during delivery.
- .2 Immediately store and protect plant material which will not be installed within 1 hour after their arrival on site, in storage locations approved by NCC Representative.
- .3 Protect plant material from damage during transportation
 - .1 When delivery distance is less than 30 km, and vehicle travels at speeds under 80 km/h, tie tarpaulins around plants or over vehicle box.
 - .2 When delivery distance exceeds 30 km or vehicle travels at speeds over 80 km/h, use enclosed vehicle where practical.
 - .3 Protect foliage and root balls using anti-desiccants and tarpaulins, where use of enclosed vehicle is impractical due to size and weight of plant material.
- .4 Protect stored plant material from frost, wind and sun and as follows:
 - .1 For bare root plant material, preserve moisture around roots by heeling-in or burying roots in topsoil, and watering to full depth of root zone.
 - .2 For pots and containers, maintain moisture level in containers.
 - .3 For balled and burlapped, and wire basket root balls, place to protect branches from damage. Maintain moisture level in root zones.
- .5 Waste Management and Disposal:
 - .1 Separate waste materials for reuse and recycling in accordance with project Waste Management Plan (WMP).
 - .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
 - .3 Collect and separate for disposal paper plastic polystyrene corrugated cardboard packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan (WMP).
 - .4 Separate for reuse and recycling and place in designated containers Steel Metal Plastic waste in accordance with WMP.

- .5 Place materials defined as hazardous or toxic in designated containers.
- .6 Handle and dispose of hazardous materials in accordance with CEPA , TDGA , Regional and Municipal regulations .
- .7 Divert unused metal materials from landfill to metal recycling facility as approved by NCC Representative.
- .8 Fold up metal and plastic banding, flatten and place in designated area for recycling.
- .9 Divert discarded plastic plant containers materials from landfill to plastic recycling facility approved by NCC Representative.
- .10 Dispose of unused fertilizer at official hazardous material collection site approved by NCC Representative.
- .11 Dispose of unused anti-desiccant at official hazardous material collections site approved by NCC Representative.
- .12 Divert unused wood and mulch materials from landfill to recycling composting facility approved by NCC Representative.

1.7 Scheduling

- .1 Obtain approval from NCC Representative of schedule 7 days in advance of shipment of plant material.
- .2 Schedule to include:
 - .1 Quantity and type of plant material.
 - .2 Shipping dates.
 - .3 Arrival dates on site.
 - .4 Planting Dates.

1.8 Warranty

- .1 Refer to Section 32 93 12 – Plant Maintenance and Warranty.

1.9 Measurement Procedures

- .1 Refer to Section 01 05 05 – Pay Item Description.

PART 2 - PRODUCTS

2.1 Plant Materials

- .1 Comply with Guide Specification for Nursery Stock, latest edition, of Canadian Nursery Trades Association referring to size and development of plant material and root ball.
- .2 All plant material will be sourced from commercial from a commercial nursery. All plant material will be grown in zones 4b or 5a according to the Plant Hardiness Zones in Canada as defined by Agriculture and Agri-Food Canada.
- .3 Use plants with strong fibrous root systems free of disease, insects,

defects or injuries and structurally sound. Plants must have been root pruned regularly, but not later than one growing season prior to arrival on site.

- .4 Substitution to plant material as indicated on planting plan are not permitted unless written approval has been obtained as to type, variety and size. Size indicated are the minimum allowable after pruning.

2.2 Bonemeal

- .1 Raw bonemeal finely ground with a minimum analysis of 4% nitrogen and 20% phosphoric acid.

2.3 Water

- .1 Free of impurities that would inhibit plant growth.

2.4 Stakes

- .1 Two (2) metal t-bar stakes, 40 x 40 x 2440 mm.

2.5 Guying Collar

- .1 Galvanized 3 mm wire encased in 2 ply rubber hose.

2.6 Trunk Protection

- .1 Plastic; perforated spiraled strip.
- .2 Burlap: clean, minimum 2.5 kg/m² mass and 150mm wide, and twice fastener.

2.7 Mulch

- .1 Mulch will be composed of fragments of Cedars type 'Shredded Cedar mulch' as manufactured by 'Lanark Cedar' or equivalent approved by the NCC. It will be free from seeds, gravel, rocks or other foreign matter.
 - .1 Coarse shredded cedar or pine (for tree saucers and shrub beds): varying in size from 25 to 125 mm in length.
 - .2 Fine shredded pine mulch (for perennial beds).
 - .3 A sample must be supplied to the NCC Representative for approval prior to the commencement of the planting.

2.8 Planting Medium

- .1 Planting Medium according to Topsoil and Finish Grading - section 32 91 21.

2.9 Fertilizer

- .1 Fertilizer containing a minimum of 35% slow release nitrogen, ratio 3:2:1.

2.10 Anti-Desiccant

- .1 Wax-like emulsion to provide film over plant surfaces reducing evaporation but permeable enough to permit transpiration

PART 3 - EXECUTION

3.1 Pre-Planting Preparation

- .1 Ensure plant material is found acceptable by the NCC Representative.
- .2 Remove damaged roots and branches from plant material.
- .3 Apply anti-desiccant to deciduous trees leaves, in accordance with manufacturer's instructions.

3.2 Planting Time

- .1 Plant material shall be planted from May 15 to June 15 or from August 15 to October 1, unless otherwise approved by the NCC Representative.
- .2 The contractor shall arrange for all plant species recommended for spring only digging, to be dug and containerized in the spring, immediately upon award of the Contract. Affected genus species include, but are not limited to: Quercus and Salix.
- .3 The foliage of deciduous trees which have broken buds shall be sprayed with anti-desiccant to slow down transpiration prior to transplanting.

3.3 Excavation and Preparation of Planting Beds

- .1 Excavate planting holes to width and depth as indicated on drawings.
- .2 The sides of the planting hole shall be scarified so that water and roots can readily penetrate.
- .3 Place one generous handful of bonemeal in the bottom of each shrub planting hole and two generous handfuls in the bottom of each tree hole. Mix bonemeal thoroughly with soil.
- .4 Topsoil parameters are specified in Section 32 91 19.13 - Topsoil Placement and Grading.
- .5 Planting Medium:
 - .1 Trees and shrub beds: planting medium, see Section 02911 – Topsoil and Finish Grading.
 - .2 Refer to detail for planting medium depths.
- .6 For individual planting holes:
 - .1 Stake out location and obtain approval from Consultant prior to excavating.
 - .2 Excavate to depth and width as indicated.
 - .3 Remove subsoil, rocks, roots, debris and toxic material from

excavated material that will be used as planting soil for trees and individual shrubs. Dispose of excess material.

- .4 Scarify sides of planting hole.
- .5 Remove water which enters excavations prior to planting. Notify Consultant if water source is ground water.

3.4 Planting

- .1 Plant trees and shrubs vertically at the places indicated, oriented to produce the best possible effect with the surrounding structures such as buildings, roads and sidewalks.
- .2 For burlapped root balls, ensure rootball is thoroughly wetted to ensure rootmass stays in-intact. Cut away wrapping and wire basket without damaging root ball.
- .3 For container stocks or root balls in non-degradable wrapping, remove entire container or wrapping without damaging root ball.
- .4 For trees and shrubs:
 - .1 Backfill soil in 150 mm layers. Tamp each layer to eliminate air pockets. When two thirds of depth of planting pit has been backfilled, fill remaining space with water. After water has penetrated into soil, backfill to finish grade.
 - .2 Form watering saucers as indicated.
- .5 Spread 75mm of mulch over all areas of bare soil. Keep mulch away from trunks.
- .6 Water plant material thoroughly.
- .7 After soil settlement has occurred, fill with soil to finish grade.
- .8 Remove dead and injured branches and branches that rub causing damage to bark.
- .9 Dispose of burlap, wire and container material off site.

3.5 Trunk Protection

- .1 Install trunk protection on deciduous trees as indicated.
- .2 Install trunk protection prior to installation of tree supports.

3.6 Tree Supports

- .1 Install stakes as specified.
 - .1 Place stake on prevailing wind side, at location shown on drawings.
 - .2 Drive stake minimum 300 mm into undisturbed soil beneath roots. Ensure stake is secure, vertical and not split.
 - .3 Install 150 mm long guying collar 1100 mm above grade.

- .4 Thread Type 1 guying wire through guying collar tube. Twist wire to form collar and secure firmly to stake. Cut off excess wire.
- .2 After tree supports have been installed, remove broken branches with clean, sharp tools.

3.7 Maintenance During Establishment Period

- .1 Perform following maintenance operations from time of planting until final acceptance has been given in writing by the NCC Representative.
 - .1 Water to maintain soil moisture conditions, for optimum establishment, growth and health of plant material without causing erosion.
 - .2 Remove weeds from plant beds and tree saucers.
 - .3 Replace or re-spread damaged, missing or disturbed mulch.
 - .4 Remove dead or broken branches from plant material.
 - .5 Keep trunk protection and guy wires in proper repair and adjustment.
 - .6 Remove and replace dead and unhealthy plants. Make replacements in same manner, as specified for original planting.

3.8 Maintenance During Warranty Period

- .1 Refer to Plant Material Maintenance - Section 32 92 12.

3.9 Final Inspection

- .1 At final inspection, plant material shall be acceptable when it is properly installed, unbroken, shows adequate formation of buds and is free from blight of any description. All planting areas shall be free of weeds and litter and shall be in good order.

3.10 Warranty Period

- .1 Warranty will commence upon acceptance by NCC Representative (refer to Final Inspection above). Plant Material Maintenance will take place during this period.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED WORKS

- .1 Trees, shrub and ground cover planting Section 32 93 10

1.2 WARRANTY

- .1 All plant material shall be warranted for a period of two years from the date of substantial completion.
.2 The warranty shall cover any defects in materials and workmanship.
.3 A warranty inspection will be carried out at the end of the warranty period.
.4 Extend warranty on replacement plant material.

1.3 MAINTENANCE

- .1 Maintenance specifications are to be read in conjunction with the Contract Documents including the Landscape Maintenance Plan and are to be used as a set of minimum requirements.
.2 Plant material maintenance shall begin immediately after each portion of planting has been completed and shall continue throughout the maintenance and warranty period to the satisfaction of the NCC Representative.
.3 The Contractor shall maintain a daily maintenance log for watering, fertilizing, weeding, deadheading and pinching (as required and when necessary) according to the best horticultural practices in order to provide a planting display of outstanding health and appearance. The Contractor is responsible for providing the preceding week's maintenance log to the NCC Contract Administrator at the weekly maintenance meetings.
.4 The Contractor shall replace within 48 hours damaged or stolen plants, protect against and treat plant pests and diseases and respond to emergencies such as acts of vandalism or damage due to public access. It is the Contractors responsibility to provide additional plants for replacement purposes.
.5 Refer to Landscape Maintenance Plan for establishment period maintenance interventions included in this scope of work.

1.4 WORKMANSHIP & DISPLAY QUALITY

- .1 All work of this section is to be carried out under the direction and supervision of a certified horticulturalist. It is the contractor's responsibility to demonstrate to the satisfaction of the NCC that this evaluation criterion has been met.
.2 Certified horticulturalist shall mean a person with a degree or diploma in horticulture, and a minimum of 3 years' experience as a horticulturalist.
.3 Contractor to provide a description of their organization and their accumulated experience in horticultural or gardening services specific to naturalized plantings and their maintenance. Include any and all sub-contractors and plant growers that are part of Contractor's team.
.4 All horticultural practices shall conform to the best horticultural practices as defined by recognized horticultural associations shall.

1.5 MONITORING & REPORTING

- .1 Throughout the warranty period, the NCC Representative will coordinate weekly maintenance meetings to review the condition, health, and appearance of the landscape with the Certified Horticulturalist. The NCC together with the Contractor will conduct regular evaluations to assess the status of the planting. Written evaluation reports and directives will be prepared by the NCC and provided to the Contractor following each meeting.
.2 Any issues identified during the maintenance meetings will be immediately rectified and reinstatement completed by the following meeting.
.3 The contractor shall be responsible for submitting weekly reports on the NCC Form Maintenance Report (see Annexe A - Forms) outlining the outcomes of the weekly maintenance meeting and the actions taken as a result.

- .4 The Contractor must review the design and specifications and discuss opportunities for quality and performance with the NCC Representative throughout the establishment period.
- .5 Good communication and teamwork between the NCC and the Contractor is essential to ensure that all issues are addressed in a timely fashion, ensuring success and viability of the planting project.
- .6 Additional work resulting from failure to promptly address problems identified during the weekly meetings shall be performed at no additional cost to the contract.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Water: shall be free from any contaminants which could adversely affect plant growth.
- .2 Mulch: according to section 32 93 10
- .3 Pruning Tools: shall be designed specifically for horticultural purposes and shall be clean, sharp and in proper, safe, working order. Pruning equipment shall be capable of producing clean, flush cuts without tearing or fraying the bark.
- .4 Fertilizer: Horticulturalist shall recommend fertilization as needed to ensure success of specified plant material.

PART 3 - EXECUTION

3.1 OPERATIONAL CONSTRAINTS

- .1 Do each maintenance operation continuously and complete within the time period specified by the NCC Representative.
- .2 No maintenance equipment, materials or other miscellaneous items may be stored on site.
- .3 All debris, waste and other extraneous material resulting from the maintenance operation shall be removed from the site daily upon completion of maintenance.
- .4 The Contractor shall be fully acquainted with all relevant Provincial and Municipal By-laws and Regulatory Codes relating to the work of this contract, and will be required to comply with such by-laws and codes without extra compensation.
- .5 Notify the NCC Representative immediately of damage incurred by pest, disease, mechanical or vandalism.

3.2 INTERIM REPLACEMENT OF PLANT MATERIAL

- .1 Throughout the maintenance and warranty period, units of plant material that are found to be unacceptable will be replaced by the Contractor.
- .2 At the discretion of the NCC Representative, plant material that is identified as dead or in a poor or diseased condition shall be immediately removed from the site.

3.3 WATERING and FERTILIZING (Consider an irrigation system set up)

- .1 The success of the planting depends on good horticultural practices, undertaken on a regular weekly basis. It is essential that the Contractor be prepared to respond immediately to changing environmental conditions by practicing good, watering and fertilizing regimens specific to indigenous and naturalized plantings. Each area must receive sufficient water in order to maintain ongoing soil saturation during the establishment period. Fertilizing shall be applied if required during the establishment period in order to ensure sufficient nutrient to sustain healthy growth and establishment. A watering strategy that meets the changing atmospheric conditions will be developed and discussed with the NCC Representative. This will include appropriate watering time periods to avoid high-temperature daytime periods detrimental to plant health.
- .2 For the first week after planting, all areas shall be watered daily, weather depending. Fertilizer shall not be added in the first week.

- .3 During the warranty period, thoroughly water plant material on a weekly basis until fully established to the approval of the NCC Representative, and thereafter whenever natural precipitation falls below 20 mm per week (Sunday to Saturday) for 2 consecutive weeks. Precipitation data shall be as per Environment Canada from the Macdonald-Cartier Airport weather station.
- .4 Water will be imported to site and applied in a manner that does not disturb the seeded surfaces. Do not allow surface run-off to transport seeds. Use a gentle "shower nozzle" and low water pressure, to minimize damage to plants and soil displacement during watering. Water shall be applied to the root zone, until soil is saturated with water.
- .5 Do not circulate with truck or other vehicles on the site after planting has been completed.
- .6 The use of softened water is not permitted. It contains dissolved salts that are toxic to plants.

3.4 SEEDED AREAS

- .1 Monitor seeded areas to ensure proper and consistent germination. Ensure areas do not dry-out until full germination has occurred.
- .2 Immediately repair and re-seed any areas that do not germinate.
- .3 Perform regular weeding to eliminate competition of undesirable species as directed by NCC Representative.
- .4 Mow seeded areas by seed type until established as follows:
 - .1 Seed Mix 1 Clover/Trefoil: cut twice, and spring and fall thereafter.
 - .2 Seed Mix 2 Meadow : cut twice, and spring and thereafter.
 - .3 Seed Mix 3 Landforms: cut twice, and not thereafter.
 - .4 Turf: Mow every second week until end of warranty period.
- .5 Over seed in spring and fall, areas that do not exhibit full coverage or where bare soil is showing.
- .6 Provide protection of seeded areas from public circulation until germination has occurred.

3.5 SELECTIVE WEEDING

- .1 All weeds, dead plants, leaves, branches, paper and other refuse within landscaped areas shall be removed by hand and disposed of off the Contract site.
- .2 Weeding shall be performed according to best horticultural practices and in a manner that discourages reproduction of target plant species. Pull weeds to remove majority of root mass, and at intervals that impede the dispersal of seeds.
- .3 At a minimum, weeding shall occur:
 - .1 At a weekly interval following the maintenance meetings;
 - .2 A final weeding shall be completed immediately prior to the final warranty inspection
- .4 The application of herbicides or mechanical weed removers is prohibited.
- .5 Weeds shall mean any plants not intended as part of the planting plan and identified for removal by the NCC Representative.
- .6 Horticulturalist to inform NCC Representative Immediately upon the Discovery of any Alien Invasive Species or noxious weeds found within the project site.

3.6 PRUNING

- .1 Prune off dead and injured branches in accordance with accepted arboricultural practices.

3.7 PEST MANAGEMENT

- .1 As part of the ongoing monitoring program early detection of pest or mold and disease problems shall be undertaken and an appropriate and timely intervention implemented. Cultural and biological methods shall be used initially to treat problems. Use of pesticide and insecticide must be approved by NCC prior the application.
- .2 The Contractor shall follow all provincial regulations including obtaining all

- appropriate licenses and liability insurance for the application of pesticides, herbicides and fungicides (Contractor to provide proof of liability insurance and license).
- .3 All chemical applications are to be in accordance with the provincial regulations of the Ontario Ministry of the Environment or Environment Quebec. Use only products registered by Agriculture Canada under the Pest Control Products Act.
- .4 Provide spray report after every use of pest control products on the NCC form Pesticide Application Record, see Annex A – Forms.

3.8 WINTER PREPARATION

- .1 In the fall, the Contractor is responsible for completion of the following:
 - .1 Ensure all plant material is watered before freeze-up.

3.9 INCIDENTAL MAINTENANCE

- .1 The Contractor shall, in general, be responsible for any incidental maintenance to ensure healthy plant growth and a satisfactory appearance of plant material.

3.10 REINSTATEMENT

- .1 Any damage to vegetation, hard surfaces, structures or services caused as a result of the Contractor's work methods and practices for plant material maintenance shall be reinstated or repaired in a timely manner to the satisfaction of the NCC Representative. The cost of such reinstatement or repair shall be solely at the Contractor's expense.

3.11 MAINTENANCE INTERVALS FOR PAYMENT

- .1 Maintenance period shall commence immediately following installation and continue for a period of two years from the date of substantial completion.
- .2 Completion of maintenance will be assessed for payment on a bi-annual interval, and will be paid in 2 equal instalments over each of the 1 year maintenance periods. Maintenance shall be deemed **acceptable** when it meets all the requirements of this section.
- .3 Biannual intervals will include the following seasonally specific requirements:
 - .1 **Spring Interval** : Finishing June 30th. Ongoing maintenance from beginning of growing season to June 30th. Must include pruning and repair of all winter damages, top dressing of mulch layer, removal of weeds and debris from landscape and spring cutting of Ornamental Grasses/dead heading of over wintered perennials.
 - .2 **Fall Interval**: Finishing Nov. 15th. Ongoing maintenance from July 1st to end of growing season. Must include fall pruning of diseased and damaged plant material, winter preparation, plant material protection as required, and removal of leaf litter and debris.

3.12 FINAL WARRANTY INSPECTION

- .1 A one-time inspection of all plant material shall be carried out by the NCC Representative upon completion of the maintenance and warranty period.
- .2 Plant material shall be **acceptable** when it is undamaged, shows adequate growth and formation of buds, and is free from blight of any description. All planting beds and tree pits shall be free of weeds, litter and in good order, including the removal of all tree supports.
- .3 Plant material shall be **unacceptable** when it does not meet this quality standard.
- .4 Units of plant material that are found to be unacceptable will be replaced by the Contractor at the earliest opportunity. The NCC Representative reserves the right to extend the Contractor's maintenance and warranty responsibilities for an additional one-year for replacement plant material.
- .5 In the event that this inspection is satisfactory to the NCC Representative, and that there are no outstanding commitments to the contracted works, the Contractor will be given final approval of the maintenance and warranty requirements.
- .6 Where, in the opinion of the NCC Representative, the Contractor has failed to complete obligations as detailed in this Specification; and further, fails to rectify said deficiency within two days of written notification from the NCC Representative, the Contract

Administrator reserves the right to retain others to complete the work and deduct incurred expenses from monies owing to the Contractor.

END OF SECTION

PART 1 - GENERAL

1.1 Related Sections

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 31 23 33.01 - Excavating Trenching and Backfilling.

1.2 References

- .1 American Society for Testing and Materials International, (ASTM)
 - .1 ASTM C 136-06, Standard Method for Sieve Analysis of Fine and Coarse Aggregates.
 - .2 ASTM D 698-00a, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-8.1-88, Sieves, Testing, Woven Wire, Inch Series.
- .3 Canadian Standards Association (CSA International)
 - .1 CSA B1800-15, Thermoplastic Non-pressure Pipe Compendium - B1800 Series (Consists of B181.1, B181.2, B181.3, B181.5, B182.1, B182.2, B182.4, B182.6, B182.7, B182.8 and B182.11).
 - .1 CSA B182.8-15, Profile Polyethylene (PE) Storm Sewer and Drainage Pipe and Fittings.
- .4 Ontario Provincial Standard Specification (OPSS)
 - .1 OPSS.PROV 1004 (November 2012), Material Specification for Aggregates – Miscellaneous.
 - .2 OPSS 1860 (April 2012), Material Specification for Geotextiles.

1.3 Submittals

- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Inform Engineer of proposed source of bedding and filter materials and provide access for sampling at least 4 weeks prior to commencing work.
- .3 Submit manufacturer's test data and certification that drain pipe materials meet requirements of this Section at least 4 weeks prior to beginning Work.
- .4 Certification to be marked on pipe.

1.4 Waste Management and Disposal

- .1 Separate waste materials for reuse and recycling.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard packaging material.
- .4 Separate for reuse and recycling and place in designated containers Steel, Metal, Plastic waste.
- .5 Divert unused metal materials from landfill to metal recycling facility.
- .6 Divert unused concrete materials from landfill to local quarry.
- .7 Divert unused aggregate materials from landfill to quarry.
- .8 Fold up metal banding, flatten and place in designated area for recycling.

PART 2 - PRODUCTS

2.1 Materials

- .1 Perforated corrugated plastic pipe and fittings: to CAN/CSA-B182.8. Nominal pipe sizes as specified.
 - .1 Certification to be marked on pipe.
 - .2 Minimum stiffness of 320 kPa.
- .2 Cast iron cover including:
 - .1 Slotted openings.
 - .2 H2O loading requirement.
 - .3 Snug fit to end of pipe to prevent movement.
- .3 Granular filter material in accordance with following requirements:
 - .1 Screened and washed stone or gravel.
 - .2 Gradations to be within limits specified when tested to ASTM C 136. Sieve sizes to CAN/CGSB-8.1.
 - .3 19 mm Type I clear stone to OPSS.PROV 1004.
- .4 Geotextile filter: non-woven synthetic fibre fabric, supplied in rolls.
 - .1 Class I as per OPSS 1860
 - .2 Filter opening size (FOS): 100 microns.

PART 3 – EXECUTION

3.1 Excavating

- .1 Do excavating and backfilling in accordance with Section 31 23 33.01 - Excavating Trenching and Backfilling.

3.2 Installation of Drywell

- .1 Install pipe on native soil, true to line and grade.
 - .1 If rock is encountered, install pipe on rock surface and reduce depth of drywell accordingly.
- .2 Install bell and spigot pipe with bell ends facing up.
 - .1 Do not mortar joints.
- .3 Make joints tight in accordance with manufacturer's instructions.
- .4 Install cast iron cover.
- .5 Surround drain with granular filter material in uniform 150 mm layers as indicated.
- .6 Wrap granular filter material with geotextile filter as indicated.
- .7 Backfill remainder of excavation to Section 31 23 33.01 - Excavating Trenching and Backfilling and as indicated.
- .8 Do not place bedding surround and backfill materials in frozen condition.
- .9 Protect drywells against flotation during installation.

END OF SECTION

LeBreton Flats Interim Improvements

DC 4125-07

Annex A - Forms

July 2015

MAINTENANCE REPORT

Outcome of weekly meeting:

[illegible]

Continue on subsequent page if necessary

ANNEX 2

PESTICIDE APPLICATION RECORD

Written approval for application received from the NCC: Yes <input type="checkbox"/> No <input type="checkbox"/>					
Location of property sprayed:					
Plant material treated	Treated for	Type of pesticide(s)		Rate/litre	Application rate/ hectare or 100 trees
Type of machine or equipment	Wind			Temperature summary	Time of treatment _____ A.M _____ P.M
	Direction	Velocity	Temp.		
Comments:					
Equipment worn by exterminator:					
Signature of exterminator:		Date:		Name of operator:	
License number:		License class:		License number:	

ANNEX 3

OCCURRENCE/INCIDENCE REPORT #
(attach photo/map whenever possible)

MANAGER NAME: To:	
DATE:	TIME
SITE:	
DETAILS	
ACTION REQUIRED:	
REPORTED BY:	PHONE #: FAX #:
FOLLOW-UP ACTION REQUIRED:	
DATE COMPLETED:	
COMMENTS:	
SIGNATURE:	DATE:

*Shaded Portion for NCC use only*