

<p>NCC Tender File #</p>	<p>NR127</p>
<p>Project Description</p>	<p>139 March Road Barn Restoration Ottawa, Ontario</p>
<p>Site Visit</p>	<p>A NON MANDATORY site visit will be held on Monday June 18, 2018 at 1 pm 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.</p>
<p>Closing date and time</p>	<p>Tuesday, July 3, 2018 at 3pm Ottawa time</p>

RETURN TENDERS TO: National Capital Commission 40 Elgin Street, Security Office on the 2 nd floor Ottawa, ON K1P 1C7	NCC Tender Number NR127
	NCC Contract Number
TENDER CLOSING DATE AND TIME: July 3, 2018 at 3:00 p.m., Ottawa time	

DESCRIPTION OF WORK: Barn Restoration at 139 March Road
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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The tender shall not be withdrawn for a period of 60 days following the date and time of tender closing.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:
 - (a) Invitation to Tender & Acceptance Form when signed by the NCC;
 - (b) Duly completed Invitation to Tender & Acceptance Form and any Appendices attached thereto;
 - (c) Drawings and Specifications;
 - (d) General Conditions (GC1 to GC10);
 - (e) Supplementary Conditions, if any;
 - (f) Insurance Terms;
 - (g) Occupational Health and Safety Requirements;
 - (h) Addenda
 - (i) Any amendments issued or any allowable tender revision received before the date and time set for tender closing;
 - (j) Any amendment incorporated by mutual agreement between the NCC and the Contractor before acceptance of the tender; and
 - (k) Any amendment or variation of the contract documents that is made in accordance with the General Conditions;
 - (l) Security Requirements.

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

NCC Tender Number NR127

NCC Contract Number

5. APPENDICES

The tender includes Appendix(ces) Nos I and II 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 within 13 weeks from 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 (excluding taxes) and the Estimated Total Price (excluding taxes) must be entered for each item listed;
- (c) the Price per Unit (excluding taxes) as tender governs in calculating the Total Estimated Amount, and any errors in the extension of the Price per Unit (excluding taxes) 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 No.	Description	Unit	Estimated Quantity	Unit Price	Amount
RESTORATION OF 139 MARCH ROAD, OTTAWA ON, ASSET #3491, ASSET #3493, ASSET #94458					
1	General Conditions	lump sum	-	-	
2	Construct new concrete strip footings; provide temporary support for existing structure as required	lump sum	-	-	
3	Construct new concrete isolated footing under existing timber columns; provide temporary support for existing structure as required	unit	10		
4	Remove and replace selected sections of existing timber sill beam along perimeter of structure (Structure A)	linear meter	60		
5	Remove and replace selected sections of existing timber sill beam along perimeter of structure (Structure B)	linear meter	35		
6	Remove and Replace selected sections of existing timber columns in kind	Linear Meter	18		

7	Remove and Replace selected sections of existing timber beam in kind	Linear Meter	45		
8	Remove and Replace selected timber door and window frame members in kind; include hardware	Linear Meter	30		
9	Remove and Replace selected existing exterior timber siding in kind	m ²	215		
10	Remove and Salvage metal roof sheathing in order to expose timber plank sheathing; remove and replace selected timber plank sheathing members in kind; reinstate salvaged materials	m ²	80		
11	Remove existing damaged metal roof sheathing; supply and install new metal roof sheathing	m ²	55		
12	Remove and replace selected sections of existing timber top plates in kind	Linear Meter	30		
13	Remove and Replace selected floor decking members in kind	m ²	55		
14	Remove and Replace interior/exterior sheathing as required to expose posts; reinstate interior/exterior sheathing; include supply and install of new sheathing to match existing as required	Lump Sum	-		
15	Supply and Install new timber bracing members to match existing	Unit	10		
16	Supply and install new purlin timber bracing members to match existing	Unit	10		
17	Supply and Install new timber log rafters to match existing	Unit	8		
18	Supply and Install new timber strut to match existing	Unit	2		
19	Paint Metal Roof Sheathing	Lump Sum	-	-	
Total before taxes					

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).

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
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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
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INVOICING

Send the original invoice to:

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

Or by email at the following address: pavables@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 subcontractors:

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: _____

Supplier No. / N° du fournisseur

New supplier / Nouveau fournisseur Update / Mise à jour

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

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

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

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

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

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

IMPORTANT : CHOOSE ONLY ONE OF THE FOLLOWING/CHOISIR SEULEMENT UNE DES OPTIONS SUIVANTES:

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

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

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

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

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

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

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

E-mail address / Adresse courriel :

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

E-mail address / Adresse courriel :

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

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

IMPORTANT

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

SUPPLIER – DIRECT DEPOSIT PAYMENT AND TAX INFORMATION FORM

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

Supplier Tax Information

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

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

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

Direct deposit payment information

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

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

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

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

The advantages of direct deposit payment

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

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

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

Renseignements sur les fournisseurs aux fins de l'impôt

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

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

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

Renseignements sur le paiement par dépôt direct

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

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

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

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

Avantages du paiement par dépôt direct

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

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

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

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

SI01 TENDER DOCUMENTS

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

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

SI02 ENQUIRIES DURING THE SOLICITATION PERIOD

- 1) Enquiries regarding this tender must be submitted in writing to the following: Sr. Contract Officer, Nathalie Rheault telephone number - 613-239-5678 ext. 5080 or e-mail address – nathalie.rheault@ncc-ccn.ca as early as possible within the solicitation period. Except for the approval of alternative materials as described in GI15 of the General Instructions to Bidders, enquiries should be received no later than five (5) calendar days prior to the date set for solicitation closing to allow sufficient time to provide a response. Enquiries received after that time may result in an answer not being provided.
- 2) To ensure consistency and quality of the information provided to Bidders, the Sr. Contract Officer shall examine the content of the enquiry and shall decide whether or not to issue an amendment.
- 3) All enquiries and other communications related to this tender sent throughout the solicitation period are to be directed ONLY to the Sr. Contract Officer named above. Non-compliance with this requirement during the solicitation period can, for that reason alone, result in disqualification of a tender.

SI03 NON MANDATORY SITE VISIT

- 1) A NON MANDATORY site visit will be held on June 18, 2018 at 1 pm Ottawa Time. The meeting place will be at 139 March Road.
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.

The site visit for this project is NON MANDATORY. The representative of the Bidder will be required to sign the Site Visit Attendance Sheet at 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, Nathalie Rheault, telephone number 613-239-5678 ext. 5080, or by e-mail address nathalie.rheault@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:
 - (a) continue to evaluate the tenders of those who have accepted the proposed extension and seek the necessary approvals; or
 - (b) cancel the invitation to tender.
- 4) The provisions expressed herein do not in any manner limit the NCC's rights in law or under GI11 of the General Instructions to Bidders.

SI08 CONSTRUCTION DOCUMENTS

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

SI09 PUBLIC TENDER OPENING

- 1) A public tender opening will be held on [July 3, 2018 at 3:00pm](#) Ottawa time at 40 Elgin Street, Ottawa, ON beside the security office on the 2nd floor.

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

GI01 Completion of Tender

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

GI02 Identity or Legal Capacity of the Bidder

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

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

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

GI03 Goods and Services Tax / Harmonized Sales Tax

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

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

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

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

GI04 Quebec Sales Tax

- 1) See GI03.

GI05 Capital Development and Redevelopment Charges

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

GI06 Registry and Pre-qualification of Floating Plant

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

GI07 Listing of Subcontractors and Suppliers

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

GI08 Tender Security Requirements

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

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

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

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

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

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

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

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

GI09 Submission of Tender

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

GI10 Revision of Tender

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

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

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

GI11 Acceptance of Tender

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

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

GI12 Procurement Business Number

- 1) Not applicable.

GI13 Bid Depository

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

GI14 Compliance with Applicable Laws

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

GI15 Approval of Alternative Materials

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

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

GI16 Performance Evaluation

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

BID BOND

Bond Number _____

Amount \$ _____

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

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

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

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

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

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

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

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

SIGNED, SEALED AND DELIVERED in the presence of:

Principal _____

Witness _____

Surety _____

Note: Affix Corporate seal if applicable.

Date	Contract no. / No du contrat
Description of work / Description des travaux	
Contractor's business name / Nom de l'entreprise de l'entrepreneur	Contractor's site superintendent / Contremaître de l'entrepreneur
Contractor's business address / Adresse de l'entreprise de l'entrepreneur	

NCC representative / Représentant de la CCN		
Name / Nom	Telephone no. / N ^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	Category / Catégorie	Scale / Échelle	Points / Pointage
<p>This is the rating of the quality of the workmanship. At final completion the quality of the materials and equipment incorporated in the work must meet the requirements set out in the plans and specifications.</p> <p>Il s'agit de l'évaluation de la qualité des travaux exécutés. À l'achèvement des travaux, la qualité des matériaux et de l'équipement doit satisfaire les exigences établies dans les plans et devis.</p>	Unacceptable / Inacceptable	0 – 5	<div style="border: 1px solid black; width: 80px; height: 80px; margin: auto;"></div>
	Not satisfactory / Non-satisfaisant	6 – 10	
	Satisfactory / Satisfaisant	11 – 16	
	Superior / Supérieur	17 – 20	

Time / Délai d'exécution	Category / Catégorie	Scale / Échelle	Points / Pointage
<p>This is the rating of the timeliness of completion considering the actual completion date compared with the original (or amended) contract completion date and allowing for conditions beyond the control of the contractor.</p> <p>Il s'agit de l'évaluation du délai d'exécution des travaux en prenant en considération la date actuelle d'achèvement des travaux par rapport à la date originale (ou modifiée) et en tenant compte des conditions indépendantes de la volonté de l'entrepreneur.</p>	Unacceptable / Inacceptable	0 – 5	<div style="border: 1px solid black; width: 80px; height: 80px; margin: auto;"></div>
	Late / En retard	6 – 10	
	On time / À temps	11 – 16	
	Ahead of schedule / En avance sur le calendrier	17 – 20	

Project management / Gestion de projet	Category / Catégorie	Scale / Échelle	Points / Pointage
<p>This is the rating of how the project, as described in the drawings and specifications, was managed including co-ordination, quality control, effective schedule development and implementation.</p> <p>Voici l'évaluation de la façon dont le projet décrit dans les documents contractuels a été géré, y compris la coordination, le contrôle de la qualité, l'élaboration d'un calendrier efficace et la mise en œuvre.</p>	Unacceptable / Inacceptable	0 – 5	<div style="border: 1px solid black; width: 80px; height: 80px; margin: auto;"></div>
	Not satisfactory / Non-satisfaisant	6 – 10	
	Satisfactory / Satisfaisant	11 – 16	
	Superior / Supérieur	17 – 20	
Criteria not applicable / Critère non-applicable			<input type="checkbox"/> N/A / S/O

Contract management / Gestion de contrat	Category / Catégorie	Scale / Échelle	Points / Pointage
<p>This is the rating of how the contract was administered in accordance with the provisions expressed in the "front end" portion of the documents.</p> <p>Voici l'évaluation de la façon dont le contrat a été administré conformément aux dispositions comprises dans la partie « prioritaire » des documents.</p>	Unacceptable / Inacceptable	0 – 5	<div style="border: 1px solid black; width: 80px; height: 80px; margin: auto;"></div>
	Not satisfactory / Non-satisfaisant	6 – 10	
	Satisfactory / Satisfaisant	11 – 16	
	Superior / Satisfaisant	17 – 20	
Criteria not applicable / Critère non-applicable			<input type="checkbox"/> N/A / S/O

Health and safety / Santé et sécurité	Category / Catégorie	Scale / Échelle	Points / Pointage
<p>This is the rating of the effectiveness of how the occupational health and safety provisions (whether identified in the contract or those of provincial legislation or those otherwise applicable) were managed and administered.</p> <p>Voici l'évaluation de l'efficacité avec laquelle les dispositions relatives à la santé et à la sécurité au travail (dans le contrat, dans les règlements provinciaux ou dans tout autre document) ont été gérées et administrées.</p>	Unacceptable / Inacceptable	0 – 5	<div style="border: 1px solid black; width: 80px; height: 80px; margin: auto;"></div>
	Not satisfactory / Non-satisfaisant	6 – 10	
	Satisfactory / Satisfaisant	11 – 16	
	Superior / Satisfaisant	17 – 20	

Total points / Pointage total	/100
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Comments / Commentaires			
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Name / Nom	Title / Titre	Signature	Date
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INSTRUCTIONS AND ADDITIONAL INFORMATION (Contractor Performance Evaluation Report)
INSTRUCTIONS ET RENSEIGNEMENTS SUPPLÉMENTAIRES (Rapport d'évaluation du rendement de l'entrepreneur)

QUALITY OF WORKMANSHIP – QUALITÉ DES TRAVAUX EXÉCUTÉS

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

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

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

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

TIME / DÉLAIS D'EXÉCUTION

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

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

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

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

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

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

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



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



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

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

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

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

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

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

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

Consideration should be given to: Did the contractor

Il faut examiner si l'entrepreneur a :

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

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

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

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

CONTRACT MANAGEMENT / GESTION DU CONTRAT

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

Consideration should be given to: Did the contractor

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

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

Il faut examiner si l'entrepreneur a :

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

HEALTH AND SAFETY / SANTÉ ET SÉCURITÉ

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

Consideration should be given to: Did the contractor

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

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

Il faut examiner si l'entrepreneur a :

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

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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

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;

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

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

SIGNED, SEALED AND DELIVERED in the presence of:

Principal _____

Witness _____

Surety _____

Note: Affix Corporate seal if applicable.

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

GC10.1 INSURANCE CONTRACTS

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

GC10.2 INSURANCE PROCEEDS

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

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

GC10.3 INSURANCE TERMS

GC10.3.1 General

GC10.3.1.1 Proof of Insurance

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

GC10.3.1.2 Payment of Deductible

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

GC10.3.2 Commercial General Liability

GC10.3.2.1 Scope of Policy

- 1) The insurance coverage provided shall not be less than that provided by IBC Form 2100, as amended from time to time, and shall have:
 - (a) an Each Occurrence Limit of not less than \$5,000,000;
 - (b) a Products/Completed Operations Aggregate Limit of not less than \$5,000,000; and
 - (c) a General Aggregate Limit of not be less than \$10,000,000 per policy year, if the policy is subject to such a limit.

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

GC10.3.2.2 Insured

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

GC10.3.2.3 Period of Insurance

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

GC10.3.3 Builder's Risk / Installation Floater

GC10.3.3.1 Scope of Policy

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

GC10.3.3.2 Amount of Insurance

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

GC10.3.3.3 Insurance Proceeds

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

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

CONTRACT / MARCHÉ				
Description and location of work / Description et endroit des travaux			Contract no. / N° de contrat	
INSURER / ASSUREUR				
Name / Nom				
Address / Adresse				
No., Street / N°, rue				
City / Ville		Province		Postal code / Code postal
BROKER / COURTIER				
Name / Nom				
Address / Adresse				
No., Street / N°, rue				
City / Ville		Province		Postal code / Code postal
INSURED / ASSURÉ				
Name of contractor / Nom de l'entrepreneur				
Address / Adresse				
No., Street / N°, rue				
City / Ville		Province		Postal code / Code postal
ADDITIONAL INSURED / ASSURÉ ADDITIONNEL				
The National Capital Commission / La Commission de la capitale nationale				
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.				
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				
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)				
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.		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.		
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 employees submit to a personal security screening process (Security Clearance Form TBS/SCT 330-60E). The NCC may also perform a credit check when the duties or tasks to be performed require it or in the event of a criminal record containing a charge/offence of a financial nature.

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

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

Additional information

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

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

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

Company Security Representative

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

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

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

Responsibilities of the Company Security Representative

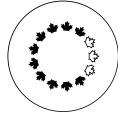
The CSR's responsibilities are the following:

- Act as liaison between the NCC's Corporate Security and the Contractor to ensure coordination;
- In collaboration with the NCC's Corporate Security, identify the Contractor's employees who will require access to NCC information/assets/sites **as well as any recurring subcontractors** (and their employees) who will require similar access and may not be supervised by the Contractor at all times during such access. Ensure that accurate and complete Personnel Security Screening documentation is

SECURITY REQUIREMENTS

submitted to the NCC's Corporate Security for the employees/subcontractors who have been identified;

- Ensure that employees/subcontractors, upon notification of having been granted a reliability status, sign the *Security Screening Certificate and Briefing Form* and return to the NCC's Corporate Security;
- Ensure that only persons who have been security screened to the appropriate level and who are on a "need-to-know basis" will have access to information and assets;
- Maintain a current list of security screened employees/subcontractors;
- Ensure proper safeguard of all information and assets, including any information/assets entrusted to subcontractors;
- If a Security incident or suspected breach of security occurs, prepare and submit to the NCC an occurrence report as soon as possible.



COMMISSION DE LA CAPITALE NATIONALE
NATIONAL CAPITAL COMMISSION

National Capital Commission

Capital Stewardship Branch
Real Estate Management Division
Residential and Agriculture

BARN RESTORATION
139 March Road

TERMS OF REFERENCE

April 2018

Terms of Reference -Table of Contents

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01	Index of Specifications	1
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End of Table of Contents

1.0 Summary

- 1.1 The National Capital Commission (NCC) is inviting proposals from qualified bidders to undertake barn rehabilitation of 3 barns. Work will include but is not limited: Structural timber repairs, foundation and footing installation, barn envelope repairs and roof work. The barn is located in the East end of Kanata – 139 March Road. The existing barns have exhibited significant signs of deterioration over the years on an otherwise sound structure. This work is expected to commence in August 2018. The expected date of completion will be December 31, 2018.

2.0 Related Documents

- 2.1 The Drawings and the General Provisions of the Contract, including the current edition of the National Capital Commission Standard General Conditions apply to each section of this Project's specifications
- 2.2 All terminology used within the Contract Documents identifying “Project Manager”, “Consultant”, “Architect”, “Engineer”, etc. shall be replaced by “NCC Representative” as defined by the NCC General Conditions.
- 2.3 In the case of conflict or discrepancy herein these Terms of Reference, or within the Contract Documents, or translation of the documents, the most stringent requirement shall apply and be binding.

3.0 Project Description

- 3.1 The specific works required under this tender will be to address structural repairs, prepare the site, shore the building, lift the structure, remove the existing foundation, install footings and foundation as per the specifications provided and reinstate conditions as indicated. Major aspects of the work include but are not limited to:
- a. Extrusion fencing to be installed to restrict unauthorized access.
 - b. Snow Management
 - c. Scaffolding
 - d. Species at Risk Mitigation Measures plan,
 - e. Structural repairs in conjunction with Structural Engineer Specifications
 - f. Lifting of structure complete with Engineered shoring
 - g. Excavation
 - h. Demolition of existing foundation and disposal
 - i. Construction of new forms for footings
 - j. Placing rebar and concrete for footings
 - k. Repair/Restoration of siding, doors and windows
 - l. Restoration and painting of Metal Roofing
- 3.2 The Scope of work of this contract is described by drawings and specification sections as identified in the Sections below. Work includes all Labour, Services, Materials, Products, Construction machinery and Equipment necessary for the work in accordance with the Contract Documents.
- 3.2.1 The Scope of work of this contract is described by:

- SECTION 3 – Scope of Work
- APPENDIX A – Structural and Foundation Drawings 01:06 as prepared by HP Engineering Inc. “Restoration of 139 March Road...”
- APPENDIX B – Construction Specifications : “Restoration of 139 March Road...” as prepared by HP Engineering Ltd. dated March, 2018
- APPENDIX C – Geotechnical Subsurface Investigation PG4349-LET.01 as prepared by Patterson Group Inc. dated December, 2017
- APPENDIX D – Outbuildings Designated Substance Survey EHS Project No.: 04-0034-13-032
- APPENDIX E – Mitigation Measures Form, 139 March Road...(18895)

4.0 Fees, Permits and Certificates

- 4.1 Pay all fees and obtain all permits. Provide authorities with plans and information for acceptance certificates. Provide inspection certificates as evidence that work conforms to requirements of Authority having jurisdiction.
- 4.2 Contractor shall obtain a Municipal Building Permit.

5.0 Equipment and Tool Inventory

- 5.1 All equipment and tools necessary to perform the work shall be supplied by the contractor.
- 5.2 All equipment and tools shall be made available to the NCC Representative, when requested, for inspection. The contractor shall provide all necessary equipment for the successful completion of the work.

6.0 Minimum Standards

- 6.1 Materials shall be new and work shall conform to the minimum applicable standards of the Canadian General Standards Board, the Canadian Standards Association, the National Building Code of Canada 2015 (NBC) and all applicable provincial and municipal codes. In the case of conflict or discrepancy the most stringent requirement shall apply.

7.0 Work Schedule

- 7.1 Commence work in accordance with this Terms of Reference and the notification of acceptance of your offer. Complete the work within the period stated in the tender form, no later than December 31, 2018.
- 7.2 Work Sequence (Phasing): Contact the Project Manager when weather permits and provide the least possible interference to activities of the Owner's farming operation.
- 7.3 Work is to be performed during regular business hours from Monday to Friday 07:00 to 19:00 hours. Work can be performed between 09:00 to 18:00 hours on Saturdays when approved by the NCC Representative. No work is to be performed on Sundays and Statutory holidays unless approved by the NCC Representative.

8.0 Quality of Equipment, Materials and Workmanship

8.1 Use only new materials, unless indicated otherwise, exceed or meet the minimum requirements of standards referenced in the specifications, such as the Canadian Standards Association (CSA), and the National Building Code of Canada (current edition), and of all applicable federal, provincial, and municipal codes. In the case of conflict or discrepancy between these requirements, the most stringent applies.

8.2 Workmanship

8.2.1 Workmanship shall be best quality, executed by workers experienced and skilled in respective duties for which they are employed.

8.2.2 Employ persons fit for and skilled in their required duties.

8.3 Alternatives

8.3.1 The NCC Representative will only consider Alternatives for materials, products or processes specified with the term “and/or approved equivalent” applied and; submitted in accordance with the “General Instructions for Tendering”.

8.3.2 The NCC Representative will approve alternatives that are in his opinion equal in material content, workmanship and quality to the materials, products or processes identified and at least conformant to the standards specified.

9.0 Codes, Standards and Contract Document Conflicts

9.1 Unless otherwise specified or indicated, perform work in accordance with the National Building Code of Canada, current addition, and all applicable provincial or local building codes.

9.2 In the instance of a conflict among building codes, referenced standards and contract documents, the more stringent requirement shall apply.

9.3 The Qualified Contractor is to have a good working knowledge of the codes and standards below and for the prompt and efficient application of the correct interpretation of such during the course of performing all work for the NCC.

9.4 All the work shall be in accordance with the following codes and standards:

- a. Canada Labour Code Part II
- b. The Occupational Health and Safety Act and regulations for Industrial Establishments.
- c. The Occupational Health and Safety Act for Construction Projects.
- d. Canadian Construction and Labour Safety Codes.
- e. Construction Safety Code of Quebec and/or Ontario (where applicable).
- f. All NCC Health and Safety Policies;
- g. Migratory Birds Convention Act, 1994 (S.C. 1994, c. 22)
- h. All other code, act, law or regulation, of federal, provincial, or local application.
- i. In any case of conflict or discrepancy the more stringent requirements shall apply.

- 9.5 The Qualified Contractor is to provide only qualified personnel fully trained, certified and experienced in performing the work requested in accordance with good industry practices. All work shall be performed in a professional manner and in accordance with good trade practice, and must be continually acceptable to the NCC.
- 9.6 If, following performance of any of the Services, the NCC is of the opinion that such Services have not been performed to the standard (in respect of quality and quantity) required by the Contract, the NCC will notify the Contractor. If, following discussions between the NCC and the Contractor, the NCC remains dissatisfied with the manner in which the Services were performed, the Contractor must re-perform the Services at his cost, and to the complete satisfaction of the NCC. The NCC shall have final authority and sole discretion as to the acceptability.
- 9.7 As deemed by the NCC, call backs for incomplete, unsatisfactory and/or guarantee work, shall be at the sole expense of the qualified contractor.

10.0 Personnel

9.1 Qualifications:

The employees shall have sufficient training, experience and qualifications in order to perform the required tasks. The work herein described is to be performed by professionals who through related training and on-the-job experience are familiar with the techniques, tools and equipment to perform all related duties pertaining to the scope of work noted. All contractors shall have the tools, education, certifications, and expertise to diagnose a problem and perform a quality repair as required; submission of licenses, certifications and experience is mandatory. Technical Standards and Safety Authority (TSSA) certification is required.

9.2 Forms and Reports

Contractor will be required to present control forms and reports, and information on disposal sites, to the satisfaction of the NCC.

9.3 Transportation

The contractor shall provide all necessary transportation for his personnel, tools and materials to and from the work site. No personal vehicle will be tolerated on the work site.

9.4 Dress

The Contractor shall be aware that NCC dress regulations for this work do not allow athletic style T-shirts, halters or short pants while working. All employees of the contractor shall be dressed in a neat and presentable fashion and shall wear CSA approved footwear. Shirts are to be worn buttoned at all times and free of rips/tears.

9.5 Removal of Staff

The NCC may, at its sole discretion, request the Contractor to reprimand or remove any one of the Contractor employees or sub-contractors for any one or more of the following reasons and the Contractor is to promptly comply with such requests:

- a. Unfit to work; or
- b. Intoxication; or
- c. Electronic communication device use while engaged in performance of the work; or
- d. Use of foul, profane, vulgar or obscene language or gestures; or
- e. Failure to provide qualified personnel; or
- f. Disrupting work or workers; or
- g. Willful, negligent or reckless action in disregard of safety or sanitary requirements; or
- h. Any action that the NCC may determine constitutes a public nuisance or disorderly conduct; or
- i. Any other reason considered appropriate, at the sole discretion of the NCC.

END OF SECTION 02

1. General

- 1.1 The following is a general scope of work intended to assist the Contractor in assessing the Work involved for the 139 March Road Barn Restoration. The work to be completed shall consist of furnishing all labour, materials, documentation and equipment necessary for the work described herein.
- 1.2 All Sections shall be read in conjunction with the Contract Documents. In the case of conflict or discrepancy herein, or within the Contract Documents, the most stringent requirement shall apply and be binding

2. Related Documents

- APPENDIX A – Structural and Foundation Drawings 01:06 as prepared by HP Engineering Inc. “Restoration of 139 March Road...”
- APPENDIX B – Construction Specifications : “Restoration of 139 March Road...” as prepared by HP Engineering Ltd. dated March, 2018
- APPENDIX C – Geotechnical Subsurface Investigation PG4349-LET.01 as prepared by Patterson Group Inc. dated December, 2017
- APPENDIX D – Outbuildings Designated Substance Survey EHS Project No.: 04-0034-13-032
- APPENDIX E – Mitigation Measures Form, 139 March Road... (18895)

3. Prior to Project Commencement

- 3.1 Following Contract signing, schedule a meeting of parties in contract to discuss and establish administrative procedures and responsibilities.
- 3.2 Submit preliminary construction progress schedule for NCC Representative review. Following NCC Representative review and comments revise and resubmit schedule in accordance. The Contractor shall then supply the final project timeline for the work and arrange schedules for kickoff and progress inspections.
- 3.3 The Contractor must apply for and pay for all permits related to the Work and retain on site and file the copies of these permits. Duplicate copies of the permits and Project documentation are to be submitted to the NCC Representative prior to commencing the Work.
- 3.4 A stamped Shoring Plan for the buildings must be submitted for record.

4. Construction Activities

- 4.1 Undertake Work as described in this section and above, in accordance with:
- The Shoring Plan
 - Structural Drawings 01:06 as prepared by HP Engineering Inc. “Restoration of 139 March Road”

- Construction Specifications : “ Restoration of 139 March Rd...” as prepared by HP Engineering Inc. dated March, 2018
- Geotechnical Subsurface Investigation PG4349-LET.01 prepared by Paterson Group Inc. dated December, 2017
- Designated Substance Survey Report, EHS Project No.: 04-0034-13-032 prepared by EHS Partnerships Ltd. for Del Management Solutions dated July, 2013.
- Mitigation Measures Form, Titled “Barn Rehabilitation and Restoration” at 139 March Road...(18895)

5. Mobilization

- 5.1 Provide construction fencing and signage as necessary to the satisfaction of the NCC Representative to isolate working area during construction.
- 5.2 Provide shoring to support the structure during the Work. Work will also involve hydraulic jacking of the exterior barn walls to bring the structure plumb and level. Submit a shoring and hydraulic jacking plan stamped by a provincially licensed Engineer to the NCC Representative for review prior to starting the Work.

6. Snow & Ice Removal

- 6.1 The Contractor shall provide all labour, equipment, and material for the complete service of snow and ice control at all areas surrounding the Work or essential for the execution of the Work, including but not limited to:
- The Barns and Additions; including surrounding areas
 - Staging areas and potential staging areas
 - Contractor use of premises
 - Access to Site
- 6.2 The Contractor shall ensure they are constantly informed of current weather forecasts in order to pro-actively respond to snow removal and ice control demands.
- 6.3 Confirm acceptable snow and ice storage locations with the NCC Representative. Adjust snow and ice control when required by the NCC Representative.
- 6.4 Take all reasonable and required measures, including those required by authorities having jurisdiction, to protect the public and those employed in the work from bodily harm, to protect adjacent property in performance of the Work.
- 6.5 Make full restitution for all damage resulting from the performance of the Work

7. Species at Risk Mitigation Measures

- 7.1 All sections shall be read in conjunction with the Migratory Bird Convention Act, 1994 (S.C. 1194, c. 22) and the Species at Risk Act (S.C. 2002, c. 29), and with the tender documents.
- 7.2 All sections shall be read in conjunction with the Mitigation Measures Form.

- 7.3 The Contractor shall develop, adjust as required, implement and adhere to a Species at Risk Mitigation Measures plan.
- 7.4 The Contractor, or the subcontractor or consultant engaged by the Contractor to coordinate and implement the Species at Risk Mitigation Measures shall demonstrate a minimum five (5) years' experience implementing successful mitigation plans for species at risk within areas of Work. Demonstration of this experience shall be provided to the NCC Representative.
- 7.5 Prior to any work commencing, the Contractor shall coordinate, implement, and be responsible for the Species at Risk Mitigation Measures. Contractor shall provide the methods, materials and equipment required to adequately and humanely deter and mitigate the presence and of all species of concern and at risk within the areas of the Work, during the execution of the Work.
- 7.6 Species at Risk subject to the Species at Risk Mitigation Measures include, but are not limited to:
- Barn Swallow (*Hirundo rustica*);
 - Little Brown Bat (*Myotis lucifugus*);
 - Northern Bat (*Myotis septentrionalis*);
 - Eastern Small-footed Bat (*Myotis leibii*);
 - Tri-colored Bat (*Perimyotis subflavus*); and
 - Eastern Milksnake (*Lampropeltis triangulum triangulum*)
- 7.7 **Species at Risk Mitigation Measures plan:** Major aspects of the Species at Risk Mitigation Measures plan include, but are not limited to:
- Identification of subject species
 - Exclusion and preventative nesting measures to adequately deter presence of species at risk in areas of Work
 - The Protocol for Wildlife Protection
- 7.8 The Contractor shall furnish all labour, materials and equipment necessary to comply with and successfully accomplish the Species at Risk Mitigation Measures plan.
- 7.9 The Species at Risk Mitigation Measures plan shall be implemented prior to the commencement of the Work to avoid damaging SAR species and habitat during this period.
- 7.10 The Species at Risk Mitigation Measures plan shall be posted in a visible area within the area of Work.
- 7.11 The Contractor shall ensure all staff employed under this Contract are knowledgeable of the City of Ottawa Protocol for Wildlife Protection, including but not limited to:
- All staff shall be able to identify subject Species at Risk;
 - All staff shall be aware of the mitigation measures put in place for the Project;
 - All staff shall be aware of the Contractor Representative tasked with ensuring that the Protocol for Wildlife Protection is implemented
- 7.12 The Contractor shall monitor and maintain all preventative and exclusion measures throughout the execution of the Work and ensure the measures remain intact and that no Species at Risk become entrapped or risk injury. The Contractor shall immediately repair or replace damaged

or deficient measures.

- 7.13 If during the execution of the Work, a Species at Risk becomes established in the areas of Work, despite Contractor adherence to the Species at Risk Mitigation Plan, the Contractor shall immediately stop Work and advise the NCC Representative and the NCC Environmental Officer. The Contractor shall not resume Work until authorized by the NCC Representative.
- 7.14 The Contractor shall ensure that the contact information for the NCC Representative and NCC Environmental Officer is readily available and shall ensure that all staff are aware of its location.
- 7.15 The Contractor shall not proceed with work in areas affected by a Species at Risk until directed otherwise by the NCC Representative.
- 7.16 The Contractor shall not destroy active nests (occupied nests, nests with eggs or young birds), or wound or kill birds, of species protected under the Migratory Birds Convention Act, 1994 and/or Regulations under that Act.
- 7.17 The Contractor shall bear all associated costs of a delay resulting from the legal requirement to respect the regulations set forth in the Migratory Bird Convention Act, 1994 and the Species at Risk Act.
- 7.18 Upon completion of the Work, the Contractor shall dismantle, remove or return the preventative and exclusion measures as directed by the NCC Representative.

8. Site Preparation/Demolition

- 8.1 Prior to any Work commencing, the Contractor shall ensure that all dust control, silt barriers, snow management, hoarding, safety fencing, and protection measures required for the safety of the environment, animals and the public are adequately in place.
- 8.2 Prior to commencing Work, inspect all elements of the barn structure and interior components. Use caution and note localized areas where the existing structure may be deteriorated and/or unstable.
- 8.3 Exercise caution when dismantling rubble foundations, and wood components so as to not damage existing barn structure during demolition.
- 8.4 Exercise caution when dismantling wood components as they are to be salvaged and reused for repairs to main barns. Stack demolished wood in an area approved by the NCC Representative.
- 8.5 Contractor shall be responsible for any Damages or undesired effects on the structures occurring as a result of execution of the Work.

10.0 Lifting and Shoring of Structures

- 10.1 Qualifications: The Contractor, or subcontractor engaged by the Contractor, shall demonstrate a minimum (5) years' experience of performance of the work of this section.

- 10.2 A stamped Lifting Plan for the buildings must be submitted for record, which is to include the stamp of a Professional Engineer experienced in the design of this work and licensed at the place where the Project is located.
- 10.3 A stamped Shoring Plan for the building must be submitted for record.
- 10.4 Make full restitution for all damage resulting from the performance of the Work.

11.0 Excavation and New Foundation

- 11.1 When Structure has been lifted and/or securely shored and braced, the excavation can commence with the soil moved out of the way so as not to impede the forming and placing for the footings and foundation wall. Note that the excavated soil will then be used to back fill once the footings are in place.
- 11.2 Once excavation is completed footing can be formed and placed as per drawings. Through consultation with the NCC Representative, the elevation for the top of the footings will be determined. Once footings have had the forms stripped they can be backfilled with the soil set aside from the excavation ensuring that the ground surrounding the barn is properly graded so that water will be encouraged to move away from the building.

12.0 Post Repairs/Replacement

- 12.1 Replace and repair the missing or damaged posts as identified in the Drawings. By supporting the surrounding structure, bring the surrounding structure plumb and level.

13.0 Timber Beam/Roof Rafter Repair

- 13.1 Inspect and mark out all beam and rafter repair locations in conjunction with the NCC Representative. In addition, mark out all deteriorated roof rafters. Generally, the roof rafter deterioration is adjacent to beam deterioration.
- 13.2 Repair damaged beams and rafters by supporting the structure, removing the damaged timber sections, and providing new joinery to adjacent beams, posts and struts as per the Drawings, and as per Specifications.
- 13.3 Provide new bearing support notches and fasteners at the top surface of the new beam repair locations of the roof rafters to match the existing bearing support detail.
- 13.4 All beam and rafter repair locations are to be completed as per drawing, and as per Specifications.

14.0 Knee Brace Replacement

- 14.1 Inspect and mark out all replacement locations in conjunction with the NCC Representative
- 14.2 Provide new knee braces where specified. Match existing adjacent materials. Replace in kind where required.
- 14.3 Submit for review all connection details prior to Work.

15.0 Sheet Metal Roofing Repairs

- 15.1 Inspect and mark out the existing sheet metal roofing repair locations in conjunction with the NCC Representative.
- 15.2 Where directed by the NCC Representative, and concentrating at all valley locations remove and replace localized areas of existing sheet metal. Contractor shall be responsible to ensure the profile of new sheet metal closely matches the existing roofing. Submit samples of the new sheet metal to the NCC Representative for approval prior to installation. Install new sheet metal roofing as per manufacturer's instructions; including new galvanized, hex head, self-sealing fasteners into existing roof deck.
- 15.3 Using a sealant prescribed by the roofing sheet metal manufacturer, provide a continuous seal at the joint between the underside of the sheet metal roofing panels and the top surface of the flat-stock roof valley at all four existing roof valleys. Ensure all deformations in sheet metal panels are filled and water-tight. Submit proposed sealant product data to the NCC Representative for approval prior to application.

16.0 Cladding Repair

- 16.1 Inspect the existing cladding in conjunction with the NCC Representative. Assist the NCC Representative in marking out all deteriorated wood cladding.
- 16.2 Remove and replace cladding panels where required in order to access structural points required to raise the barn.
- 16.3 Remove and replace cladding panels where directed by the NCC Representative. Install the new cladding to match the adjacent layout/pattern. Include for appropriate new galvanized fasteners as per specification section 06 03 15 – Historic Period Carpentry.

17.0 Barn Door Repairs

- 17.1 Inspect the existing barn doors in conjunction with the NCC Representative noting all deteriorated and missing wood components.
- 17.2 Replace all missing and deteriorated wood components with material to match existing. Doors shall be re-built and re-hung ensuring that they close and operate properly.

18.0 Rafter and Top Plate Replacement

- 18.1 Where directed by the NCC Representative, replace rafter, struts, and sections of top plate where they have been damaged by water.

19.0 Wood Framing Sheathing and Siding

- 19.1 Following localized dismantling, install 25mm thick wood cladding to match existing. Include for adequate backing and additional wood cladding (to match existing) required to complete reinstatements. Include for appropriate new galvanized fasteners as per specification section 06 03 15 – Historic Period Carpentry.

20.0 Foundation, Log Repair, Replacement

- 20.1 Once Building has been lifted and securely shored, the perimeter base of the building can proceed to be cleared.
- 20.2 Deteriorated base timbers can be removed and labeled as they will be used to create patterns for the new timbers reinstatements. Ensure timbers are securely stored and protected for future requirements.
- 20.3 Following the removals of deteriorated timbers, new foundation work is to be completed as per design specifications – refer to Drawings. Details should be confirmed with the NCC Representative prior to wall construction beginning.
- 20.4 Following completed footing work, the new timbers can be cut to fit and secured in place as per specification section 06 03 15 – Historic Period Carpentry.

21.0 Window and Doors Barn (F)

- 21.1 New and Rebuilt wooden windows and doors shall be made in kind and installed square, level and plumb – refer to Drawings. Submit details for NCC Representative review.
- 21.2 Ensure weathertight seal of components to adequately protect from exterior elements. Ensure adequate sloping to shed surface water.

22.0 Interior of Barn

- 22.1 Reinstate affected interior finishes utilizing existing materials, or new materials of comparable adequacy, as directed by the NCC Representative.
- 22.2 Ensure smooth and level surfaces.
- 22.3 Reinstate any and all affected electrical and water components to barn.

23.0 Excavation, Reinstatements & Re-Grading

- 23.1 Footings /foundation walls that have had the forms stripped they can be backfilled with the native soil set aside from the excavation ensuring that the ground surrounding the barn is properly graded so that water will be encouraged to move away from the building. This is to be completed in conjunction with the Geotechnical Consultant – refer to APPENDIX C.
- 23.2 Landscaping impacted by construction activities shall be reinstated to original condition. Grading around the barn should be upgraded according Geotechnical survey – refer to APPENDIX C.

END OF SECTION 03

1.0 Summary

1.1 This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

- 1.1.1 Adjust list below to suit Project.
- 1.1.2 Contractor's Construction Schedule.
- 1.1.3 Submittals Schedule.

2.0 Contract Documents

- 2.1 All the drawings listed on the sheet titled "List of Drawings" or "Index of Drawings" will form part of the contract documents.
- 2.2 All the divisions and sections listed on the "Index of Specifications" will form part of the contract documents.
- 2.3 All the addenda issued during and before the proposal closing will form part of the contract documents.
- 2.4 The Request for Tender completely filled in by the Bidder, will form part of the contract documents.
- 2.5 All contract documents are complementary. Items indicated in one and not in the other are deemed to be included in the contract work.
- 2.6 Obtain direction from NCC Representative before proceeding if a possible obstacle or interference with an indicated installation is identified.
- 2.7 When the Contractor encounters an obstacle or interference that could have been reasonably foreseen and the Contractor failed to obtain direction from the NCC Representative in the matter, the NCC Representative may require that the work of the Contractor be modified in whole or part in response to the obstacle or interference. The Contractor shall assume the costs of additional work arising from such work.
- 2.8 Submit shop drawings to scale of metal, timber, splices, connections showing details of layout, materials, and construction to the NCC Representative prior to Work commencing.
- 2.9 When requested by the NCC Representative, provide invoices, purchase orders, and supplier certificates to establish that materials used in this contract meet requirements of specifications.
- 2.10 As-Built Drawings
 - 2.10.1 Maintain project record drawings and record accurately all deviations from Contract documents as project progresses. Maintain on-going as-built records on site, ready for inspection during the course of the construction.
 - 2.10.2 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.

2.11 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 Approved Work Schedule
- .7 Permits
- .8 Field Test Reports
- .9 Reviewed Shop Drawings
- .10 As-Built Drawings

2.12 Submittals

2.12.1 Submittals Schedule: Submit Project schedule to the NCC Representative for review. Arrange the following information in a tabular format in chronological order:

2.12.2 Revise list below to suit Project. Add information, such as scheduled dates for purchasing and installation and the activity or event number, if a CPM construction schedule is used.

- .1 Scheduled date for first submittal.
- .2 Specification Section number and title.
- .3 Submittal category (action or informational).
- .4 Name of subcontractor.
- .5 Description of the Work covered.
- .6 Scheduled date for Engineers final release or approval.
- .7 Contractor's Construction Schedule: Submit one printed copy of initial schedule, large enough to show entire schedule for entire construction period.

2.12.3 Submittals are to be submitted with reasonable promptness and in orderly sequence so as not to cause delay in the Work schedule. Work affected by Submittal shall not proceed until review is completed.

2.12.4 Submittals not stamped, signed, dated, identified specific to the Project and attesting to their review specific for the Project shall be considered rejected and not reviewed.

2.12.5 Contractor's responsibility for errors and omissions in submission is not relieved by the NCC Representative's review of Submittals.

2.12.6 Contractor's responsibility for deviations in submission from requirements is not relieved by the NCC Representative's review of the submittals.

3.0 Project Management and Coordination

3.1.1 Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

3.1.2 Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required

schedules and reports.

- 3.1.3 Secure time commitments for performing critical elements of the Work from parties involved.
- 3.1.4 Coordinate each construction activity in the network with other activities and schedule them in proper sequence
- 3.1.5 Coordinate inspections and testing of concealed Work prior to concealing that Work.
- 3.1.6 Coordinate Sequencing of Work to occur during conditions of temperature, humidity, exposure, forecast weather, and status of Project completion, which will ensure best possible results for each unit of Work. Isolate each unit of Work from non-compatible Work, as required to prevent deterioration.
- 3.1.7 Coordinate work between trades for the most efficient sequence of installation, to prevent space conflicts, and to provide clearances required by code, Drawings, and the manufacturer.
- 3.1.8 Minor dimension changes (including the need to adjust finish dimensions), difficult installations and/or the addition of off-set fittings will not be considered changes to the Contract.
- 3.1.9 Obtain approval of the NCC Representative prior to any changes or alternate configurations.

4.0 Communication

- 4.1 The successful contractor shall ensure he has been informed and is aware of the official NCC representative for the area described herein. Although authority and responsibility for the immediate area may rest elsewhere the only contact for the successful contractor is the official NCC Representative. The Contractor will be notified if the official NCC representative changes. Site problems and deficiencies shall be reported to the NCC representative immediately.
- 4.2 The successful Contractor shall arrange with the NCC Representative a communication link. The communication link must be established for urgent situations which may arise during operations. Furthermore, the Contractor shall identify the level of authority of his personnel. The site crew shall have a communication device in order to permit the NCC representative to communicate with them at all time during the working hours and during emergency operations.
- 4.3 Project Meetings
 - 4.3.1 The Contractor shall schedule and attend regular meetings, as directed by the NCC Representative.
 - 4.3.2 Location of meetings will be determined by NCC Representative.
 - 4.3.3 The Contractor will distribute written notice of each meeting in advance of meeting date to the NCC Representative, Consultants, and all other affected parties.
 - 4.3.4 When required, the Contractor shall ensure required Subcontractors attend.

4.3.5 The Contractor shall record minutes and include significant proceedings and decisions and identify 'action by' parties.

4.3.6 The Contractor will reproduce and distribute copies of minutes to meeting participants and affected parties not in attendance.

5.0 General Conditions

5.1 No majoring of the Contract amount will be accorded to the Contractor due to any increase in wages or materials.

5.2 The NCC Representative will stop the Work at any time if they feel that it is necessary for the good of the Work or Property. They are also authorized to make any modifications which prove to be necessary to protect life, injury or property.

5.3 The various works are to be executed in a substantial workmanlike manner incorporated the best materials and workmanship of their various kinds in accordance with the plans, specifications and instructions given from time to time, and said works are to be carried out and completed.

5.4 No part of the structure shall be loaded during the construction with a load greater than it is calculated to bear safely when completed. Every temporary support shall be as strong as the permanent support. Should any accident occur through the violation of these requirements the Owner will hold the Contractor solely answerable and liable.

5.5 The setting out of work shall rest solely with the Contractor who will be responsible for the same and if any discrepancies should be found, he will have to alter and make good the same at his own expense, to the approval of the NCC Representative.

5.6 All protective measures shall comply with the requirements of all applicable by-laws and to all special requirements of the authorities having jurisdiction.

5.7 The Contractor shall co-ordinate all work and shall be responsible to define everyone's jurisdiction and responsibility

5.8 In the event of conflict, such as but not limited to situations, circumstances, between documents, personnel, or other events, the decision of the NCC Representative shall be final and binding.

5.9 Site meetings will be held on a weekly basis as deemed necessary by the NCC Representative. Meeting minutes will be recorded and distributed by the Contractor.

5.10 Temporary lighting and power to be provided by the Contractor throughout the work area during the period of the work as required. Contractor to maintain same in good working order during this period.

5.11 Contractor shall provide to the NCC Representative, prior to start of work, a full list of all controlled products to be used during the performance of this contract, with appropriate material safety data sheets, in accordance with procedures outlined by Workplace Hazardous

Material Information System (WHIMIS). Contractor shall provide any and all additional protection required as preventative measured for both construction personnel and building occupants.

- 5.12 Prior to commencing work the Contractor shall accompany the NCC Representative during a pre-construction survey of the entire work area. Any existing deficiencies or damage to the building systems are to be identified at that time. Any damage incurred during the repair operations is to be made good by the Contractor at no expense to the NCC.

6.0 Construction Condition

- 6.1 The Contractor is to co-ordinate all construction operations with the NCC Representative.
- 6.2 Contractor to ensure that all aspects of the project conform to all applicable safety codes, municipal by-laws, and other applicable regulations. Contractor to ensure that all equipment utilized during repair operations conforms to all applicable noise by-laws.
- 6.3 Maintain all emergency and other exits from the building.
- 6.4 The Contractor shall remove from site on a regular basis, all refuse and surplus material using the container method and all appropriate chutes and/or other suitable dust control methods. Clean up must take place regularly. Accumulation of piles of dirt and debris will not be permitted. Any debris outside the construction area shall be kept to a minimum and must be cleaned up at the end of each day or immediately if it affects the use of the building. Disposal bins are to be located to the approval of the NCC Representative.
- 6.5 The Contractor is to supply all temporary washroom facilities as required by the Ministry of Labour and all other regulatory bodies. All temporary facilities are to be located to the approval of the NCC Representative.
- 6.6 The Contractor shall co-ordinate and supervise all hoisting, craning, lifting, lowering, hanging, pumping and any other material handling operations and shall be held responsible in first instance for any damage arising out of the above mentioned operations.
- 6.7 The Contractor shall be responsible for co-ordination of storage, allocation of storage space and shall be responsible for any overloading and any damage or claim arising from it, regardless how or by who caused.
- 6.8 The Contractor is to notify the NCC Representative 48 hours in advanced for site review. No new work is to be installed until approval has been obtained from the NCC Representative.

7.0 Construction Schedule

- 7.1 Hours of Work: Work may be performed between the hours of 7:00 a.m. to 7:00 p.m. Monday to Friday. These hours are subject to restriction by Municipal or other regulatory bodies.
- 7.2 The Contractor shall submit a construction schedule for approval within two days of request by the NCC Representative.

8.0 Health and Safety

- 8.1 Upon award of contract, the Contractor will issue a notice of project to the Ministry of Labour. The Contractor will provide proof of notification to the NCC Representative.
- 8.2 The Contractor will be responsible to conduct weekly health and safety (tailgate) meetings with all site personnel. Upon request, submit minutes of these meetings to the NCC Representative.
- 8.3 The Contractor shall submit 2 copies of a site-specific safety plan prior to commencement of work on site.

9.0 Temporary Facilities and Controls

9.1 Quality Assurance

- 9.1.1 Standards and Regulations: Comply with applicable laws and regulations and the following:
- 9.1.2 Conditions of Use: Keep facilities clean and neat. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.

9.2 Construction / Extrusion Fence

- 9.2.1 Temporary Barriers and or extrusion barriers are mandatory around the work area.
- 9.2.2 Safety fencing and protection measures are required for the safety of building occupants, workers, environment, and animals in order to prevent from injury or property damage.
- 9.2.3 Construction/Extrusion fencing is to be installed. Construction fence is to protect construction area.
- 9.2.4 Construction/Extrusion Fencing is to separate farm livestock for the duration of the project.

9.3 Execution / Performance

- 9.3.1 Barriers: In general, provide barriers between active construction operations and completed areas of work, and between construction activity and Tenant occupied areas. Provide barriers in locations indicated on drawings, or if not indicated, as required by the NCC Representative.

9.3.2 Protection of Work and Site

- .1 Protect finished work against damage until take-over.
- .2 Protection and Hoarding, identification of the Designated Work Site Area: the Contractor shall clearly demarcate the work site area by erecting Construction/Extrusion fencing. Review proposed installations with the NCC Representative.
- .3 Protect hard and soft landscaping adjacent to the work form damage unless indicated or described otherwise.

- .4 Protect adjacent building spaces and occupants against spread of dust, harmful vapours, hazardous materials and dirt. Use devices and methods that minimize inconvenience and risk to the occupants.
- .5 Construct construction barriers serving as separation between active construction areas and livestock, occupied areas to provide.
- .6 Provide dust covers over Tenant equipment and furnishings. Use 6 mil thick clear plastic sheet and thoroughly tape seams to provide dust-proof cover.

9.4 Temporary Utility Installation

9.4.1 Water and electrical service are not available. Provide or connect, use and disconnect at the Contractors own expense and responsibility.

9.4.2 Notify the NCC Representative and Utility companies of any intended interruption of services. Keep duration of these interruptions to a minimum. These notifications shall be subject to review and acceptance by the NCC Representative.

9.4.3 Notification of Utilities

- .1 The Contractor shall notify all the utilities of the proposed investigations or if Work involves any excavating at least 48 hours prior to the commencement of such activities. Utility locates shall be obtained prior to mobilization of equipment to the site. Cost for such will be assumed to be included in this contract.

9.4.4 Utilities for Construction

- .1 Unless otherwise provided for in these specifications, the Contractor shall furnish his own source of electricity, fuel, and water required to perform the Work, and shall bear the cost of these services.

9.4.5 Existing Services

- .1 Where work involves disruption of existing services:
- .2 Execute work at times directed by NCC Representative,
- .3 Submit schedule to and obtain approval from NCC Representative for any shutdown or closure of active services,
- .4 Notify NCC Representative at least 48 hrs. before service disruption.
- .5 Adhere to approved schedule.

9.4.6 Electrical Service:

- .1 Comply with ESA standards and regulations for temporary electrical service. Install services in compliance with National Electrical Code (NFPA 70). Provide outlets and lighting as required for operations. Comply with applicable provisions.

9.4.7 Water Service:

- .1 Unless otherwise provided for in these specifications, the Contractor shall furnish his own source of water required to perform the Work, and shall bear the cost of these services. Comply with applicable provisions.
- .2 Immediately advise NCC Representative when unknown services are encountered.

9.4.8 Weather Enclosures:

- .1 Provide weather tight closures at openings in floors and roofs where required to protect building components as the work proceeds.
- .2 Design enclosures to withstand wind pressure.
- .3 Maintain and relocate protection until such Work is complete
- .4 Installation/Removal
 - Provide construction facilities and temporary controls in order to execute work efficiently.
 - Remove from site all such work after use.

9.4.9 Dewatering

- .1 Provide temporary drainage and pumping facilities to keep excavations, building and site free from water.

9.4.10 Site Storage / Loading

- .1 Confine the Work and operations of employees to limits indicated by Contract Documents and as directed by the NCC Representative. Do not unreasonably encumber premises with Products.
- .2 Do not load or permit to be loaded any part of the Work with a weight or force that will endanger the Work.

9.4.11 Sanitary Facilities

- .1 Provide portable sanitary facilities for Contractor use. Locate as directed by NCC Representative.
- .2 Provide all necessary supplies and maintain in clean condition.
- .3 At completion of the Work remove from the site.

9.4.12 Ventilation

- .1 Provide ventilation to prevent accumulation of dust, fumes, mists, vapours, or gases in areas of Work.

- .2 Provide ventilation through portable fan(s) exhausted to the out of doors to prevent migration of dust and debris within the building.
- .3 Dispose of exhaust materials in manner that does not contaminate adjacent areas.
- .4 Continue operation of ventilation and exhaust systems for sufficient time after cessation of operations to ensure removal of pollutants.

9.4.13 Access Equipment

- .1 Provide all scaffolding, ladders and lifting equipment required for the work.

9.4.14 Signage

- .1 Meet with NCC Representative prior to commencement of work to prepare list of signs and other devices required for the project. Signs and notices for safety and instruction shall be in both official languages. Do not post any sign without prior permission of the NCC Representative.

9.4.15 Dust Control

- .1 Provide dust tight screens or partitions to localize dust generating activities, and for protection of workers, finished areas of work and public.
- .2 Maintain and relocate protection until such work is complete.
- .3 Protect all furnishings within work area during construction..

9.4.16 Protection of Work and Site

- .1 Protect finished work against damage until take-over.
- .2 Protect hard and soft landscaping adjacent to the work form damage unless indicated or described otherwise.
- .3 Protect adjacent building spaces and occupants against spread of dust, harmful vapours, hazardous materials and dirt. Use devices and methods that minimize inconvenience and risk to the occupants.

9.4.17 Protection and Maintenance of Traffic

- .1 Provide access and temporary relocated roads as necessary to maintain traffic.
- .2 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.
- .3 Verify adequacy of existing roads and allowable load limit on these roads. Contractor shall be responsible for repair of damage to roads caused by construction operations.

- .4 All traffic control on NCC and other municipal roadways shall be the responsibility of the contractor. The contractor is responsible for the supply, installation and maintenance of traffic control devices necessary for the protection of the public and the work site. Traffic control must be in accordance with the Manual of Uniform Traffic Control Devices for Canada. The NCC field manual of traffic control shall or NCC policies and regulations shall also be used. All signs used for traffic control shall be bilingual.

10.0 Use of Premises

10.1 Contractor's Use of Site:

- 10.1.1 Coordinate use of premises under direction of the NCC Representative.
- 10.1.2 The barns are located on a property that is occupied by tenants. Farming operations will continue to operate during construction. The Contractor will coordinate construction efforts with NCC Representative and Tenant to minimize interference with farming operations.
- 10.1.3 Cooperate with the NCC Representative and Tenant so as to minimize conflict and impacts to other activities in to the farming operations.
- 10.1.4 Maintain egress routes for tenants and any farming personnel as directed by NCC Representative.
- 10.1.5 Contractor's personnel are prohibited from using the tenant's toilets and facilities during construction. The Contractor is to provide temporary facilities for construction personnel. Coordinate location with NCC'S representative
- 10.1.6 Contractor's staging area is strictly limited to areas indicated on the drawings. Where no staging area is indicated, Contractor's use of site is limited to areas within the Contract bounds, or as reasonably required to complete the Work. Strictly comply with NCC Representative directions establishing staging and operation areas, through-building routes, and locations for material delivery and disposal.
- 10.1.7 Smoking is prohibited in all NCC buildings and grounds, including, Project site, mechanical rooms, utility spaces, and roof tops.
- 10.1.8 Execute work with the least possible interference or disturbance to the normal use of premises and farming operations. Make arrangements with the NCC Representative and Tenant to facilitate work as stated.
- 10.1.9 Protect work temporarily until permanent enclosures completed.
- 10.1.10 Design, construct and maintain temporary access to and egress from work areas, including stairs, runways, ramps or ladders and scaffolding, independent of finished surfaces and in accordance with relevant municipal, provincial and other regulations
- 10.1.11 NCC Representative will arrange with the Contractor a work schedule and procedures for entry to the property. Do not commence work until these requirements have been confirmed

and approved by NCC Representative.

- 10.1.12 Do not unreasonably encumber exterior of site with materials or equipment.
- 10.1.13 Protect grass, trees and other surfaces on the ground from damage in areas not directly affected by the work. Refer to the "DAMAGES" article below.
- 10.1.14 Move stored products or equipment as directed by NCC Representative to ensure public pedestrian access around property.
- 10.1.15 Provide for personnel and vehicle access. Maintain safe exiting routes from the site and building at all times.
- 10.1.16 Provide 48 hours' notice to and obtain requisite permissions from the NCC Representative and utility companies of any intended interruption of services. Keep duration of these interruptions to a minimum.
- 10.1.17 Park in area designated for Contractor's use unless NCC Representative specifically authorizes other parking arrangements.
- 10.2 Welding and Cutting
 - 10.2.1 At least 48 hours prior to commencing cutting, welding or soldering procedure, provide to the NCC Representative:
 - .1 Notice "of intent, "indicating devices affected, time and duration of isolation or bypass.
 - .2 Completed welding permit as defined in FC 302.
 - .3 Return welding permit to Project Officer/Consultant immediately upon completion of procedures for which permit was issued.
 - 10.2.2 A fire watcher as described in FC 302 shall be assigned when welding or cutting operations are carried out in areas where combustible materials within 10m may be ignited by conduction or radiation.
 - 10.2.3 Where work requires interruption of fire alarms or fire suppression, extinguishing or protection systems:
 - .1 Provide watchman, service as described in FC 301; In general, watchman service is defined as an individual conversant with Fire Emergency Procedures, performing fire picket duty within an unprotected and unoccupied (no workers) area once per hour.
- 10.3 Site Storage/Loading
 - 10.3.1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
 - 10.3.2 Do not load or permit to load any part of Work with weight or force that will endanger Work.

- 10.3.3 Do not unreasonably encumber site with materials or equipment.
- 10.3.4 Move stored products or equipment which interferes with operations.
- 10.4 Construction Parking
- 10.4.1 Parking will be permitted on site provided it does not disrupt performance of Work or building operations
- 10.4.2 Provide and maintain adequate access to project site.
- 10.5 Equipment, Tools and Materials Storage
- 10.5.1 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- 10.5.2 Provide all scaffolding, ladders and lifting equipment required for the work.
- 10.5.3 Locate materials not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.
- 10.6 Sanitary Facilities
- 10.6.1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- 10.6.2 Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.
- 10.7 Construction Signage
- 10.7.1 No signs or advertisements, other than warning signs, are permitted on site.
- 10.7.2 Signs and notices for safety and instruction in both official languages Graphic symbols to CAN/CSA-Z321.
- 10.7.3 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 Consultant.
- 10.8 Power/Explosive Actuated Fastening Devices
- 10.8.1 Do not employ power guns using explosives without prior written permission of NCC Representative.
- 11.0 Environmental Protection**
- 11.1 All the work will be done in accordance with the federal environmental law and regulation and the provincial environmental law and regulation (Quebec and Ontario) any other code of provincial or local application provided that in any case of conflict or discrepancy more stringent requirements shall apply.

- 11.2 All work shall be coordinated and performed in accordance with the Mitigation Measures Form (MMF). See Appendix E for additional information.
- 11.3 No vegetation should be removed unless specified or directed by the NCC. The Contractor shall take all responsible precautions to ensure that no damage is caused to any vegetation not required to be removed.
- 11.4 Keep soil disturbance to a minimum. Disturbed soil shall be reinstated to its original conditions, or better, including the restoration of both topsoil and native vegetation. Seed reinstated soil. Seed mixtures are to follow the NCC portfolio of approved seeding, sodding, and mulch.
- 11.5 Seeding of disturbed area around the construction site will be undertaken using NCC approved seed mixture such as the Ministry of Transportation Ontario (MTO) “Old field mix”:
- Flat-topped Aster – *Aster umbellatus*
 - New England Aster – *Aster novae angliae*
 - Purple-stemmed Aster – *Aster punicens*
 - Canada Goldenrod – *Solidago Canadensis*
 - Panicked Aster – *Aster simplex/lanceolatus*
 - Heath Aster – *Aster ericoides*
 - Grass-leaved Goldenrod – *Solidago nemoraliss*
- 11.6 Access to the site (s) through areas other than a road or paved areas specifically for that purpose is not permitted without prior written approval of the NCC.
- 11.7 Contractors should conserve energy and non-renewal natural resources with due regard for property protection, safety of workers, occupants and the public and overriding by-laws and regulations.
- 11.8 If, during excavation activities or soil disturbance, contamination is observed or suspected (i.e. evidence of staining, odours, presence of deleterious materials including ashes, cinders, refuse, glass, bricks, metal, etc.) , work shall immediately stop and the NCC Representative shall be contacted for further instruction.
- 11.9 Tree Protection & Plant Protection
- 11.9.1 Protect all trees and plants onsite.
- 11.9.2 Protect trees as follows:
- .1 Provide temporary protection at the protective zone for each tree susceptible to being damaged. Fencing must form a complete circumference, along the dripline.
 - .2 All trees within 2 meters of equipment shall be protected.
 - .3 No activity, including storage of materials or driving of vehicles, shall be allowed within the protective zone.
 - .4 Do not move, remove or alter fencing for the duration of the Project.

- .5 Coordinate with NCC Representative to provide aeration and gator bags as remediation measures for trees which have been negatively impacted by construction.
- .6 No tree shall be cut or trimmed without the authorization of the NCC Representative.
- 11.10 Contractor shall be responsible to replace all trees (with DBH greater than 10cm) that have been approved for cutting, or been badly damaged during the Work.
- 11.11 Environmental Protection
- 11.11.1 Fires
- .1 Fires and burning of rubbish on site not permitted.
- 11.11.2 Disposal of wastes
- .1 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.
- .2 Green demolition practices will be incorporated into the project:
- The Contractor will recover, sort, re-use and recycle all demolition materials to the extent practicable
 - The masonry components will be crushed and reused as fill in the cavity of the demolished buildings or sent to a recycling facility
 - The Contractor will ensure that a 100 mm depression is left following removal of the foundation for the final top soil and seeding.
 - The Contractor shall submit a detailed report documenting the volume and type of all materials separated, recovered, recycled, reused and salvaged and that report must be forwarded to NCC Representative.
 - During site works, nearby wells that are judged to be at risk may be subject to a monitoring program to ensure that groundwater quantities are not affected by demolition activities.
- .3 All unsalvageable and unrecyclable materials must be disposed of at a licensed facility in accordance with provincial and federal standards.
- 11.11.3 Drainage
- .1 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.
- .2 Do not pump water containing suspended materials into waterways, sewer or drainage system.
- 11.11.4 Pollution Control
- .1 Control emissions from equipment and plant to local authorities emission requirements.

- .2 Cover or wet down dry materials and rubbish to prevent blowing dust and debris.
- .3 Demolition activities that have the potential to release airborne particles will be avoided during extended periods of drought and high winds.

11.11.5 Spills Reporting

- .1 Prepare an environmental emergency measure plan, to be posted in a highly visible location at the place of work, indicating:
 - The site's refueling area.
 - The NCC Environmental Emergency Service telephone number (613) 239-5353. Call immediately in the event of accidental spill of fuel or other pollutant.
- .2 Contractor shall assume financial responsibility to clean up effects of spill.

11.11.6 Hazardous Material

- .1 If the Contractor encounters hazardous or toxic substances the Contractor shall take all reasonable steps to ensure that no person suffers injury, sickness or death and that no property is destroyed as a result of exposure to substance and shall immediately report the incident to the NCC Representative and then confirm in writing.
- .2 Comply with the requirements of the Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labeling and the provision of Material Safety Data Sheets (MSDS) acceptable to Human Resources Development Canada, Labour Program.
- .3 For work in occupied buildings give the Project Officer/Consultant 48 hours' notice for work involving designated substances (Ontario Bill 208), hazardous substances (Canada Labour Code Part II Section 10), and before painting, caulking, installing carpet or using adhesives.
- .4 The Contractor shall provide a copy of receipts to the NCC Representative as proof of disposal at a licensed facility.

11.12 Relics and Antiquities

- 11.12.1 Protect relics and antiquities, items of historical or scientific interest and similar objects found during the course of work.
- 11.12.2 Notify the NCC Representative prior to excavation work. All excavations shall be monitored by the NCC Archaeologist.
- 11.12.3 Immediately notify NCC Representative of any findings and await NCC Representative's written instructions before proceeding with work adjacent to findings.

- 11.12.4 If any vestiges of early human occupancy of the land are uncovered during construction, suspend construction activity and notify the NCC Representative.
- 11.12.5 Relics, antiquities and items of historical or scientific interest shall remain the property of the Crown.

END OF SECTION 04

Client

National Capital Commission Real Estate Management

**139 March Road, Ottawa ON
Asset #3491, Asset #3493, Asset #94458**

Type of Document:

Construction Specifications

Project Name:

Restoration of 139 March Road, Ottawa ON, Asset #3491, Asset #3493, Asset #94458

Project Number:

DC-XXXX-XX-XX

Prepared By:

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

Date Submitted:

April 20, 2018

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END OF SECTION

PART I - GENERAL

I.1 Invitation

- .1 The National Capital Commission (NCC) is requesting bids from qualified firms for the Restoration of Restoration of 139 March Road, Ottawa On, Asset #3491, Asset #3493, Asset #94458.

I.2 Intent

- .1 Intent of this Bid call is to obtain an offer to restore to original structural integrity the of 139 March Road barn.
- .2 This work shall be performed in an environmentally sustainable manner maximizing the reuse and/or recycling of materials. All work shall be carried out in accordance with the requirements contained herein.

I.3 Contract Documents Identification

- .1 Contract Documents are identified as:
Restoration of 139 March Road, Ottawa On, Asset #3491, Asset #3493, Asset #94458
- .2 Additional documentation included or referenced by the NCC shall form part of the contract Documents.

I.4 Site Assessment

- .1 Visit project site and surrounding area before submitting Bid.
- .2 A Site Visit will be held at the 139 March Road site during tendering.
- .3 During the site visit, bidders will have the opportunity to ask questions on any aspect of this project including the project scope, tendering procedures, etc.
- .4 Representatives of the NCC will be in attendance to provide access to the site and to address all questions related to the project.

I.5 Bid Submission

- .1 The Bid Submission is comprised of a Firm Price Quotation Submission.
- .2 Firm Price Quotation Submission
 - .1 **Submit one copy of executed firm price quotation on the attached Tender Form provided by the National Capital**

Commission, as well as a completed copy of the Pay Item List located Section 01 11 01, signed and with corporate seal together with required bid security in the separate sealed opaque envelope, clearly identified with Bidder's name, project name and Owner's name on outside.

- .2 The total price, in Canadian dollars, including HST is to be quoted in the tender form.
- .3 Bidders are advised that they are responsible for their own quantities and take-off for the purpose of bidding.

END OF SECTION

1 References

- .1 Section 01 11 01 - Pay Item Descriptions
- .2 National Capital Commission (NCC) Standard Drawings
- .3 Cahier des charges et devis généraux (CCDG)
- .4 **Geotechnical Investigation: .**

2 Description of Work

- .1 Work under this contract covers the following:

The Restoration of 139 March Road, Ottawa On, Asset #3491, Asset #3493, Asset #94485 includes:
 - .1 Mobilize to Site
 - .2 Remove existing flat stone footing and construct new concrete strip footings
 - .3 Construct new concrete isolated footing under existing timber columns
 - .4 Remove and replace selected sections of existing timber sill beam along perimeter of structure
 - .5 Remove and replace selected sections of existing timber columns along perimeter of structure
 - .6 Remove and replace selected sections of existing timber beams along perimeter of structure
 - .7 Remove and replace selected vertical timber door and window frame members in kind along perimeter of barns
 - .8 Remove and replace selected existing exterior timber siding panels and paint to match existing
 - .9 Remove and salvage metal roof sheathing, and replace selected timber plank sheathing members
 - .10 Remove existing damaged metal roof sheathing, supply and install new metal roof sheathing
 - .11 Remove and replace selected sections of existing timber top plate along perimeter of barns
 - .12 Remove and replace existing floor decking panels
 - .13 Remove and salvage interior/exterior sheathing as requires to expose posts
 - .14 Supply and install new timber bracing members
 - .15 Supply and install new purlin timber bracing members
 - .16 Supply and install new timber log rafters
 - .17 Remove lean-to structure, salvage and re-use materials as required on other structures

3 Codes

- .1 Perform work in accordance with the contract specifications, "Cahier des charges et devis généraux (CCDG)" and National Capital Commission Standards and any other code

of provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.

- .2 Meet or exceed requirements of:
 - .1 contract documents,
 - .2 specified standards, codes and referenced documents.

4 Documents Required

- .1 Maintain at job site, one copy each of following:
 - .1 Contract drawings
 - .2 Specifications
 - .3 Addenda
 - .4 Approved work schedule
 - .5 Reviewed shop drawings
 - .6 Change orders
 - .7 Other modifications to Contract
 - .8 Field test reports
 - .9 Manufacturers' installation and application instructions
 - .10 Safety and Environmental protection documentation as required by Federal and Provincial legislation and regulations.

5 Work Schedule

- .1 Provide in a form acceptable to the NCC Project Manager (PM), within 5 working days after Contract award, a detailed schedule that complies with timings required by Contract documents and shows at a minimum mobilization date(s), start of work, delivery of equipment and materials, anticipated progress stages if appropriate, and final completion of work. Any work by subcontractors shall be shown in similar detail.
- .2 Construction works shall be done within the hours of 7h00 and 19h00 Monday to Saturday understanding that NCC staff will only be available for consultation during the hours of 08h00 to 16h30 Monday to Friday.
- .3 Interim reviews of work progress based on work schedule will be conducted as decided by NCC Project Manager and schedule updated by Contractor in conjunction with and to approval of NCC Project Manager.
- .5 Site work shall not commence prior to Contract Award.

6 Contractor's Use of Site

- .1 Within the confines of site described within this specification, on the drawings provided, and in additional

written direction from NCC, propose and seek pre-approval of the location and extent of all project related activities from the NCC Project Manager.

- .2 Use areas as directed by the NCC Project Manager for storage.
- .3 Contractor's vehicles and equipment will remain on designated parking, and staging areas; no incursion onto naturalized areas is permitted except where specified in the scope of work. Main access to the work area will be from the existing Driveway leading from March road.

7 Project Meetings

- .1 Hold project meetings at times and locations approved by NCC Project Manager.
- .2 Provide 48 hour notice to participants of date and time of meetings.
- .3 Record minutes of meetings, and distribute to participants within 7 days of meeting. NCC Project Manager

8 Existing Utilities

- .1 Where unknown services are encountered, immediately advise NCC Project Manager and confirm findings in writing.
- .2 Contractor is responsible for any damage to any existing and temporary utility.

9 Additional Drawings

- .1 NCC Project Manager may furnish additional drawings for clarification. These additional drawings have same meaning and intent as if they were included with plans referred to in Contract documents.

10 Payment

- .1 Any minor or miscellaneous items indicated on the drawing as being part of the work of this Contract and for which there are no specific pay items listed on the unit price table must be included by the Contractor in his overhead and indirect charges and incorporated into the unit prices which are listed on the unit price tables.
- .2 No separate payment will be made for work performed in respect to any of the specifications for which there is no specific pay item on the unit price table. The cost of these works must be appropriated among, and included in, the unit prices bid for the pay items listed.
- .3 Included in the unit prices bid for the respective items shall

be, in addition to the actual cost of construction, all other items of work required to complete the Contract to the extent indicated on the drawings and specified herein.

.4 Unit prices shall not be adjusted regardless of quantities of work done on site (+ or -).

11 Damages

.1 Existing plant material, landscaping, roadways, curbs, pathways, stairs, structures, finishes and public utilities damaged during the execution of the work of this Contract, will be restored to their original condition, replaced, or adequate compensation made to affected parties by the Contractor.

.2 It is understood that restored or replaced work includes labour, equipment and material costs.

12 Permits and By-Laws

.1 The Contractor shall make himself fully acquainted with all Provincial, Local and other By-laws relating to the work of this Contract, as he will be required to comply with such by-laws without extra compensation of any nature.

.2 Obtain and pay for permits, factory inspector's approval, and other licenses required for this project and also pay any other charges incidental to such permits.

13 Taxes

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

14 Measurement for Payment

.1 The NCC Project Manager shall take measurements prior to commencement in all areas and additional measurements as required to determine pay quantities. The NCC Project Manager and Contractor shall take measurements at the same time (when practical) and endeavour to agree on all quantities prior to the submission of invoices.

.2 The Contractor shall notify the NCC Project Manager two (2) full work days in advance of any requirements for survey work to be done by the NCC Project Manager.

.3 The Contractor shall ensure that the NCC Project Manager has obtained the necessary measurements prior to commencement of subsequent operations.

15 Addendas

.1 Answers to questions directed to the NCC Project Manager, 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.

16 Interpretation of Bilingual Documents

- .1 If the two (2) language versions of these specifications differ, the preference shall be given to the version thereof, that according to the true spirit, intent and meaning of the text best insures the attainment of its objective.

17 Relics and Antiquities

- .1 Protect relics, archaeological evidence, antiquities, items of historical or scientific interest such as cornerstones and contents, commemorative plaques, inscribed tablets, and similar objects found during course of work.
- .2 Give immediate notice to NCC Project Manager and await NCC Project Manager’s written instructions before proceeding with work in this area.
- .3 Relics, antiquities and items of historical or scientific interest remain her Majesty’s property.

18 Setting Out of Work

- .1 Assume full responsibilities for, and execute complete layout of work to locations, lines, and elevations indicated.
- .2 Provide devices needed for lay out, construction, and demolition work including means of collecting and removing debris.

19 Written Warranties

- .1 Contractor will warranty installation and material such as timber beams, timber siding, stone, etc, required to return site to original use or natural condition and stabilize the site afor twelve (12) months from satisfactory inspection of the work by the PM.

20 Interpretation of “Engineer”

- .1 Unless otherwise distinguished the designation “Engineer” in subsequent Sections is interchangeable with “NCC Project Manager (PM)” or “PM”.

21 Conflict Resolution

- .1 The NCC Representative shall resolve any conflict or discrepancy, and their decision shall be final, binding, and promptly executed by the contractor forthwith. Where conflict or discrepancy is apparent, the contractor shall assume the most stringent condition shall apply.

END OF SECTION

-
- 0 General
- .1 The cost of the work shown on the drawings or implicitly required without items in the tender price table must be included in the cost of the items in the tender price table or be in the site organization cost.
 - .2 There will be measurement for payment in accordance with the Unit Price Table submitted. Payment at the contract unit or lump sum prices tendered shall be full compensation for all labour, materials, and equipment to do the work.
 - .3 Unit rate material dimensions shall be assumed typical dimensions existing onsite. Contractor shall verify dimensions onsite and be responsible for obtaining dimensioning for the purposes of their bid submission. Materials shall be similar, in dimension, orientation, shape, finish, and species to existing components.
 - .4 Payment Includes: Full compensation for required Labour, Products, Tools, Equipment, Plant and Facilities, Transportation, Services and Incidentals; Fabrication, Erection, Application and Installation of an item of the work; Overhead and Profit.
 - .4 Payment will not be made for any of the following:
 1. Products wasted or disposed of in a manner that is not acceptable.
 2. Products determined as unacceptable before or after placement.
 3. Products not completely unloaded from the transporting vehicle.
 4. Products placed beyond the lines and levels of the required Work.
 5. Products remaining on hand after the completion of the Work.
 6. Loading, Hauling, and disposing of rejected materials.
- 1 General Condition
- .1 This item deals with the work, protection measures, and temporary infrastructure required to ensure:
 - the safety of workers and the public,
 - the security of contractor and NCC property,
 - protection of public traffic
 - optimal access to construction work areas,
 - a safe and clean site during and at the end of contract,
 - re-instatement site to original condition.
 - Mobilization and demobilization
 - .2 As shown in the specifications and drawings this item includes the following mobilization, sitework and

demobilization activities:

- Secure staging area
- Improve ground for staging area if required to suit contractor's operations
- Removal and transportation off-site of debris and demolition materials
- Reinstatement of the staging area to previously existing condition
- Excavation, fill, compaction, backfill, grading, landscaping and reinstatements
- Demolition and deconstruction of components

.3 As shown in the Specifications and Drawings this item includes all other incurred costs related to the performance of the work or any part thereof not described by the unit rates or lump sum table

.4 The cost of the work shown on the drawings or implicitly required without items in the tender price table must be included in the cost of the items in the tender price table under the Mobilization, Sitework and Demobilization.

.5 There will be no measurement for payment. This item will be paid on a lump sum basis at the price included in the Form of Tender and summarized in the Unit Price Table. Payment at the contract lump sum price shall be full compensation for all labour, materials, and equipment to do the work.

2 Construct new concrete strip footings .1

This item includes the removal of existing flat stone footing below exterior walls of existing main barn building (structure A), construct new concrete strip footings perimeter of building A, and provide temporary support for existing structure as required that has been pre-authorized by the NCC. This item also includes the disposal of the material off-site and the supply of existing structure as required.

.2 This item will be paid on a lump sum basis at the price included in the Form of Tender and summarized in the Unit Price Table.

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

3 Construct new concrete isolated footing under existing timber columns .1

This item includes the Construct new concrete isolated footing under existing timber columns; provide temporary support for existing structure as required. This item also

		includes the disposal of the material off-site.
	.2	Payment for this item shall be on a unit price basis per isolated footing constructed.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
4 Remove and replace selected sections of existing timber sill beam along perimeter of <u>structure (Structure A)</u>	.1	This item pertains to the removal and replacement of sections of existing timber sill beam along perimeter of structure (structure A), and disposal of excess material at an approved site arranged and paid for by the Contractor.
	.2	Payment for this item shall be on a unit price basis per linear meter of timber replaced.
	.3	The unit price bid shall be full compensation for all labour, equipment and material necessary to do the work including disposal.
5 Remove and replace selected sections of existing timber sill beam along perimeter of <u>structure (Structure B)</u>	.1	This item pertains to the removal and replacement of sections of existing timber sill beam along perimeter of structure (Structure B), and disposal of excess material at an approved site arranged and paid for by the Contractor.
	.2	Payment for this item shall be on a unit price basis per linear meter of timber replaced.
	.3	The unit price bid shall be full compensation for all labour, equipment and material necessary to do the work including disposal.
6 Remove and replace selected sections of existing timber columns along perimeter of <u>structure</u>	.1	This item pertains to the removal and replacement of sections of existing timber columns along perimeter of structure, and disposal of excess material at an approved site arranged and paid for by the Contractor.
	.2	Payment for this item shall be on a unit price basis per linear meter of timber replaced.
	.3	The unit price bid will be full compensation for supply, all labour, equipment and materials necessary to complete the work.
7 Remove and replace selected sections of existing timber <u>beams</u>	.1	This item includes the removal and replacement of existing timber beams, and disposal of excess material at an approved site arranged and paid for by the Contractor.

	.2	This item will be paid on a linear meter basis at the price included in the Tender form.
	.3	The unit price bid shall be full compensation for all labour, equipment and material necessary to do the work.
8 Remove and replace selected vertical timber door and window frame members in kind along <u>perimeter of barns</u>	.1	This item the removal and replacement of selected vertical timber door and window frame members in kind along perimeter of barns including hardware, and disposal of excess material at an approved site arranged and paid for by the Contractor.
	.2	This item will be paid on a linear meter basis at the price included in the Tender form.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
9 Remove and replace selected existing exterior timber siding panels and paint to match <u>existing</u>	.1	This item the removal and replacement of selected existing exterior timber siding panels and paint to match existing, and disposal of excess material at an approved site arranged and paid for by the Contractor.
	.2	The method of payment for this item will be based on square meters of siding panels.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
10 Remove and salvage metal roof sheathing, and replace selected timber plank sheathing <u>members</u>	.1	This item includes the removal and salvation of metal roof sheathing, replacement of selected timber plank sheathing members, and reinstate and paint metal roof sheathing with salvaged and new material as required. Including the disposal of excess material at an approved site arranged and paid for by the Contractor.
	.2	The method of payment for this item will be based on square meters of roof sheathing.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
11 Remove existing damaged metal roof sheathing, supply and <u>install new metal roof sheathing</u>	.1	This item includes the removal and replacement of selected sections of existing metal roof sheathing, and disposal of excess material at an approved site arranged and paid for by the Contractor.

	.2	The method of payment for this item will be based on square meters of roof sheathing.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
12 Remove and replace selected sections of existing timber top <u>plate along perimeter of barns</u>	.1	This item includes the removal and replacement of selected sections of existing timber top plate along perimeter of barns, and disposal of excess material at an approved site arranged and paid for by the Contractor.
	.2	This item will be paid on a linear meter basis at the price included in the Tender form.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
13 Remove and replace existing <u>floor decking members</u>	.1	This item includes the removal and replacement of existing floor decking panels, and disposal of excess material at an approved site arranged and paid for by the Contractor.
	.2	The method of payment for this item will be based on square meters of floor decking panels.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
14 Remove and salvage interior/exterior sheathing as <u>requires to expose posts</u>	.1	This item includes the removal and salvaging interior/exterior sheathing as requires to expose posts, reinstate interior/exterior sheathing including supply and install new sheathing to match existing as required. The disposal of excess material at an approved site arranged and paid for by the Contractor.
	.2	This item will be paid on a lump sum basis at the price included in the Form of Tender and summarized in the Unit Price Table.
	.3	Payment shall be full compensation for all labour, equipment and materials necessary to complete the work.
15 Supply and install new timber <u>bracing members</u>	.1	This item includes the supply and installation of new bracing at identified locations, and disposal of excess material at an approved site arranged and paid for by the Contractor.
	.2	This item will be paid on a unit basis at the price included in

the Tender form.

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

16 Supply and install new purlin timber bracing members .1

This item includes the supply and installation of new purlin timber bracing at identified locations, and disposal of excess material at an approved site arranged and paid for by the Contractor.

- .2 This item will be paid on a unit basis at the price included in the Tender form.

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

17 Supply and install new timber log rafters .1

This item includes the supply and installation of new timber log rafters at identified locations, and disposal of excess material at an approved site arranged and paid for by the Contractor.

- .2 This item will be paid on a unit basis at the price included in the Tender form.

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

18 Supply and Install new timber strut to match existing .1

This item includes the supply and installation of new timber strut at identified locations, and disposal of excess material at an approved site arranged and paid for by the Contractor.

- .2 This item will be paid on a unit basis at the price included in the Tender form.

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

19 Paint Metal Roof Sheathing .1

This item includes the supply and application of metal paint at identified locations, and disposal of excess material at an approved site arranged and paid for by the Contractor.

- .2 This item will be paid on a lump sum basis at the price included in the Form of Tender and summarized in the Unit Price Table.

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

Item No.	Description	Unit	Estimated Quantity	Unit Price	Amount
RESTORATION OF 139 MARCH ROAD, OTTAWA ON, ASSET #3491, ASSET #3493, ASSET #94458					
1	General Conditions	lump sum	-	-	
2	Construct new concrete strip footings; provide temporary support for existing structure as required	lump sum	-	-	
3	Construct new concrete isolated footing under existing timber columns; provide temporary support for existing structure as required	unit	10		
4	Remove and replace selected sections of existing timber sill beam along perimeter of structure (Structure A)	linear meter	60		
5	Remove and replace selected sections of existing timber sill beam along perimeter of structure (Structure B)	linear meter	35		
6	Remove and Replace selected sections of existing timber columns in kind	Linear Meter	18		
7	Remove and Replace selected sections of existing timber beam in kind	Linear Meter	45		
8	Remove and Replace selected timber door and window frame members in kind; include hardware	Linear Meter	30		
9	Remove and Replace selected existing exterior timber siding in kind	m ²	215		
10	Remove and Salvage metal roof sheathing in order to expose timber plank sheathing; remove and replace selected timber plank sheathing members in kind; reinstate salvaged materials	m ²	80		
11	Remove existing damaged metal roof sheathing; supply and install new metal roof sheathing	m ²	55		
12	Remove and replace selected sections of existing timber top plates in kind	Linear Meter	30		
13	Remove and Replace selected floor decking members in kind	m ²	55		
14	Remove and Replace interior/exterior sheathing as required to expose posts; reinstate interior/exterior sheathing; include supply and install of new sheathing to match existing as required	Lump Sum	-		
15	Supply and Install new timber bracing members to match existing	Unit	10		
16	Supply and install new purlin timber bracing members to match existing	Unit	10		
17	Supply and Install new timber log rafters to match existing	Unit	8		
18	Supply and Install new timber strut to match existing	Unit	2		
19	Paint Metal Roof Sheathing	Lump Sum	-	-	
Total before taxes					
H.S.T. 13.0%					
Total Project (Lump Sum Price)					

END OF SECTION

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1. Related Requirements Specified Elsewhere .1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by NCC Project Manager are specified under various sections.
2. Appointment and Payment .1 The NCC will appoint and pay for services of testing laboratory. Where tests or inspections by designated testing laboratory reveal work not in accordance with contract requirements, the Contractor shall pay costs for additional tests or inspections as NCC Project Manager may require to verify acceptability of corrected work.
3. Contractor's Responsibilities .1 Furnish labour and facilities to:
- .1 Provide access to work to be inspected and tested.
 - .2 Facilitate inspections and tests.
 - .3 Make good work disturbed by inspection and test.
 - .4 Provide storage on site for laboratory's exclusive use to store equipment and cure test samples.
- .2 Notify NCC Project Manager a minimum of 72hrs in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .4 Pay costs for uncovering and making good work that is covered before required inspection or testing is completed and approved by NCC Project Manager.

END OF SECTION

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- 1 Section Includes
- .1 Shop drawings and product data.
 - .2 Samples.
 - .3 Certificates and transcripts.
- 2 Precedence
- .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 3 References
- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-94, Stipulated Price Contract.
- 4 Administrative
- .1 Submit to NCC Project Manager submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
 - .2 Work affected by submittal shall not proceed until review is complete.
 - .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
 - .4 Where items or information is not produced in SI Metric units converted values are acceptable.
 - .5 Review submittals prior to submission to NCC Project Manager. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.
 - .6 Notify NCC Project Manager, 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 Project Manager's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by NCC Project Manager review.
- .10 Keep one reviewed copy of each submission on site.

5 Shop Drawings and Product
Data

- .1 Refer to CCDC 2 GC 3.11.
- .2 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .4 Allow five days for NCC Project Manager's review of each submission.
- .5 Adjustments made on shop drawings by NCC Project Manager are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to NCC Project Manager prior to proceeding with Work.
- .6 Make changes in shop drawings as NCC Project Manager may require, consistent with Contract Documents. When resubmitting, notify NCC Project Manager in writing of any revisions other than those requested.
- .7 Accompany submissions with transmittal letter, in duplicate, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.

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- .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
 - .8 Submissions shall include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
 - .9 After NCC Project Manager's review, distribute copies.
 - .10 Submit one transparency on plastic film of shop drawings for each requirement requested in specification Sections and as consultant may reasonably request.
 - .11 Submit 6 copies of product data sheets or brochures for requirements requested in specification Sections and as requested by NCC Project Manager where shop drawings will not be prepared due to standardized manufacture of product.
 - .12 Supplement standard information to provide details applicable to project.
 - .13 If upon review by NCC Project Manager, no errors or omissions are discovered or if only minor corrections are made, transparency will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of

corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

6 Samples

- .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to NCC Project Manager's business address.
- .3 Notify NCC Project Manager in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by NCC Project Manager are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to NCC Project Manager prior to proceeding with Work.
- .6 Make changes in samples which NCC Project Manager may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

7 Certificates and Transcripts

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

END OF SECTION

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- 1 Related Sections .1 Section 01 33 00 - Submittal procedures
- 2 References .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations.
- .2 Province of Ontario
- .1 Occupational Health and Safety Act and the corresponding regulations.
- .3 CSA S269.1-1975 Falsework for Construction Purposes.
- .4 FCC No. 301-1982 Standard for Construction Operations.
- 3 Submittals .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
- .1 Results of site specific safety hazard assessment.
- .2 Results of safety and health risk or hazard analysis for site tasks and operation.
- .3 NCC Project Manager will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 5 days after receipt of plan. Revise plan as appropriate and resubmit plan to NCC Project Manager within 5 days after receipt of comments from NCC Project Manager.
- .4 NCC Project Manager's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .5 On-site Contingency and Emergency Response Plan: Address standard operating procedures to be implemented during emergency situations.
- .6 Medical Surveillance: Where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to NCC Project Manager.

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- .7 Submit immediately upon receipt or completion:
 - .1 construction safety checklists,
 - .2 reports or directions issued by Federal and Provincial health and safety inspectors,
 - .3 incident and accident reports,
 - .4 Material Safety Data Sheets (MSDS), and
 - .5 health and safety training records including names of personnel and alternates responsible for site safety and health, hazards present on site, and use of personal protective equipment.
 - .8 Submit two (2) copies of Contractor's authorized representative's work site health and safety inspection reports at least once every two (2) weeks to NCC Project Manager.
- 4 Filing of Notice
- .1 File Notice of Project with Provincial authorities prior to commencement of Work.
- 5 Safety Assessment
- .1 Perform site specific safety hazard assessments related to project.
- 6 Meetings
- .1 Schedule and administer Health and Safety meeting with NCC Project Manager prior to commencement of Work.
- 7 General Requirements
- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to commencing any site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
 - .2 NCC Project Manager may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.
- 8 Responsibility
- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
 - .2 Comply with and enforce compliance by employees with

safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

- 9 Compliance Requirements .1 Comply with the Occupational Health and Safety Act and the corresponding regulations and Regulations for Construction Projects.
- .2 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.
- 10 Unforeseen Hazards .1 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, and follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction. Advise NCC Project Manager verbally and in writing.
- 11 Posting of Documents .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with NCC Project Manager.
- 12 Correction of Non-Compliance .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by NCC Project Manager.
- .2 Provide NCC Project Manager with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 NCC Project Manager may stop Work if non-compliance of health and safety regulations is not corrected.
- 13 Work Stoppage .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.
- 14 Construction Safety Measures .1 Observe construction safety measures of National Building Code 1995 Part 8, Provincial Government,

Workers'/Workmen's Compensation Board and municipal authority provided that in any case of conflict or discrepancy more stringent requirements shall apply.

- .2 Comply with requirements of FCC No. 301.

15 WHMIS

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

16 Health and Safety Coordinator

- .1 Employ and assign to Work, competent and authorized representative as Health and Safety Coordinator must:
 - .1 have minimum two (2) years' site-related working experience specific to activities associated with the work.
 - .2 have basic working knowledge of specified occupational safety and health regulations,
 - .3 be responsible for completing health and safety training session and ensuring that personnel not successfully completing the required training are not permitted to enter site to perform Work,
 - .4 be responsible for implementing, enforcing daily and monitoring site-specific Health and Safety Plan, and
 - .5 be on site during execution of Work.

17 Construction Safety Checklist

- .1 Obtain NCC Construction Safety checklist from PM and incorporate into checklist for site.
- .2 Review and implement applicable health and safety checklists provided by NCC Project Manager in collaboration with NCC Construction Safety personnel.

18 Overloading

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

19 Structural Stability

- .1 Ensure components of new structure and Contractor's temporary structures are braced adequately to ensure stability during

work (loss of supporting material or members) and in the event of inclement weather (snow or wind loading).

- 20 Scaffolding .1 Design and construct scaffolding in accordance with CSA S269.2
- 21 Falsework .1 Design and construct falsework in accordance with CSA S269.1.
- 22 Fall Arrest .1 Design, construct and employ fall arrest systems in accordance applicable federal and provincial regulations.
- 23 Traveller Cables/Winching .1 Design, construct, and operate traveller cables, anchors, and winch systems in accordance with federal and provincial safety regulations and manufacturer specifications.
- 24 Power Actuated Fasteners .1 Use power actuated devices only after receipt of written permission from PM.
- 25 Needles & Drug Paraphernalia .1 Follow the “Safe handling and disposal of needles” procedure from the Ottawa Public Health at <http://www.ottawapublichealth.ca/en/public-health-topics/discarded-needles-in-our-communities.aspx#safe-handling> to safely remove and dispose off site.

END OF SECTION

<u>1 Related Sections</u>	.1	Section 01 11 01 - Pay Item Descriptions
<u>2 Access</u>	.1	Provide and maintain adequate access to project site.
	.2	If authorized to use existing roads, parking and paths for access to project site, maintain these for duration of Contract and make good damage resulting from Contractors' use.
	.3	Clean all areas used by Contractor's equipment.
	.4	Upon request NCC will authorize the Contractor sole access to all of the parking lot during the work if required. If granted, the contractor will be responsible for securing this parking area from public access until the project is complete.
<u>3 Sanitary Facilities</u>	.1	Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
	.2	Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.
<u>4 Parking</u>	.1	Do not park vehicles on grassed surfaces except where designated and previously authorized by the NCC Project Manager. Do not park on or block adjoining streets except where authorized by the local authorities.
<u>5 Temporary Facilities</u>	.1	Remove temporary facilities from site when directed by NCC Project Manager.
<u>6 Water</u>	.1	Contractor is to procure or provide their own source of water.
<u>7 Electrical Power</u>	.1	Contractor is to procure or provide their own source of electrical power.
<u>8 Shoring</u>	.1	Secure approval of shoring, scaffolding and all temporary structures erected during construction.
<u>9 Staging Areas</u>	.1	Establish staging and temporary work areas in locations approved by PM. Secure staging and temporary work areas from public access and operate in a manner that ensures public safety.

- .2 Remove or relocate staging areas as directed by PM.
- .3 When work on site is stopped for a period of time Contractor may with the approval of the PM close or relocate staging areas.
- .4 Contractor is responsible for security of material, equipment and structures left on or near site.

END OF SECTION

1 General

- .1 Use new material and equipment unless otherwise specified.
- .2 Within 5 days of written request by NCC Project Manager, submit following information for materials and equipment proposed for supply:
 - .1 Name and address of manufacturer,
 - .2 Trade name, model and catalogue
 - .3 Performance, descriptive and catalogue,
 - .4 Manufacturer installation or application instructions
 - .5 Evidence of arrangements to procure.
- .3 Use products of one manufacturer for material and equipment of same type or classification unless otherwise specified.

2 Section Includes

- .1 Product quality, availability, storage, handling, protection, and transportation.
- .2 Manufacturer's instructions.
- .3 Quality of Work, coordination and fastenings.

3 Precedence

- .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.

4 Reference Standards

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-94, Stipulated Price Contract.
 - .2 DOC 14-2000, Design-Build Stipulated Price Contract.
 - .3 DOC 15-2000, Design-Builder/ Consultant Contract.
- .2 Within text of each specifications section, reference may be made to reference standards.
- .3 Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .4 If there is question as to whether any product or system is in conformance with applicable standards, NCC Project Manager reserves right to have such products or systems tested to prove or disprove conformance.
- .5 Cost for such testing will be borne by Owner in event of

conformance with Contract Documents or by Contractor in event of non-conformance.

- .6 Conform to latest date of issue of referenced standards in effect on date of submission of Tenders, except where specific date or issue is specifically noted.

5 Quality

- .1 Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .3 Should any dispute arise as to quality or fitness of products, decision rests strictly with NCC Project Manager based upon requirements of Contract Documents.
- .4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

6 Availability

- .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify NCC Project Manager of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .2 In event of failure to notify NCC Project Manager at commencement of Work and should it subsequently appear that Work may be delayed for such reason, NCC Project Manager reserves right to substitute more readily available

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- products of similar character, at no increase in Contract Price or Contract Time.
- 7 Storage, Handling and Protection
- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
 - .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
 - .3 Store products subject to damage from weather in weatherproof enclosures.
 - .4 Store material and equipment in accordance with suppliers instructions.
 - .5 Store cementitious products clear of earth or concrete floors, and away from walls.
 - .6 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
 - .7 Store sheet materials and lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
 - .8 Store and mix paints in heated and ventilated enclosure. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
 - .9 Remove and replace damaged products at own expense and to satisfaction of NCC Project Manager.
 - .10 Touch-up damaged factory finished surfaces to NCC Project Manager's satisfaction. Use touch-up materials to match original. Do not paint over name plates.
- 8 Transportation
- .1 Pay costs of transportation of products required in performance of Work.
 - .2 Transportation cost of products supplied by Owner will be paid for by Owner. Unload, handle and store such products.
- 9 Manufacturer's
- .1 Unless otherwise indicated in specifications, install or erect

Instructions

products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.

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

10 Quality of Work

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

11 Co-Ordination

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

12 Remedial Work

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

13 Fastenings

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.

- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

14 Fastenings - Equipment

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.
- .5 Seek authority from NCC Project Manager prior to using explosive actuated tools and ensure trades are appropriately trained and licensed for these tools.

15 Protection of Work in Progress

- .1 Prevent overloading of any part of the work. Do not modify, cut, drill or sleeve any load bearing structural member, unless specifically indicated without written approval of NCC Project Manager .

16 Existing Utilities

- .1 With the assistance of authorities having jurisdiction, locate and mark underground and overhead services at the work site and associated areas.
- .2 Tie-in to local utilities must be pre- approved by authorities having jurisdiction.
- .3 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work and pedestrian and

vehicular traffic.

- .4 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

17 Contractor's Options for Selection of Materials for Tendering

- .1 Materials specified by referenced standard, select any material that meets or exceeds the specified standard.
- .2 Where materials are required to be listed on the "Canadian General Standards Board, Qualified Products List" select any manufacturer so listed.
- .3 Materials specified by "Prescriptive" or "Performance" specification, select any material meeting or exceeding specification.
- .4 Materials specified by naming one or more materials, select any material named. For the purpose of these specifications, the term "Acceptable Material" is deemed to be a complete and working commodity as described by a manufacturer's name, catalogue number, trade name or any combination thereof.
- .5 When materials are specified by a Standard, Prescriptive or Performance specifications, upon request of the NCC Project Manager, obtain from manufacturer an independent testing laboratory reporting, showing that the material or equipment meets or exceeds the specified requirements.

18 Substitution

- .1 No substitutions will be permitted without prior written approval of NCC Project Manager.
- .2 Proposals for substitution may only be submitted after award of contract. Such request must include statements of respective costs of items originally specified and the proposed substitution. Refer to GI15 Approval of Alternative Materials in the Instructions To Tenderers for instructions on submitting substitution
- .3 Proposals will be considered by NCC Project Manager if:
 - .1 materials selected by tenderer from those specified are not available;
 - .2 delivery date of materials selected from those materials

specified would unduly delay completion of contract,

or

.3 alternative material to those specified, which are brought to the attention of and considered by NCC Project Manager as equivalent to the material, specified and will result in a credit to the Contract amount.

.4 Should proposed substitution be accepted either in part or in whole, assume full responsibility and costs when substitution affects other work on project. Pay for design or drawing changes required as result of substitution.

.5 Amounts of all credits arising from approval of substitutions will be determined by NCC Project Manager and Contract Price will be reduced accordingly.

19 Construction Equipment and
Plant

.1 On request, prove to the satisfaction of NCC Project Manager that the construction equipment and plant are adequate to manufacture, transport, place and finish work to quality and production rates specified. If inadequate, replace or provide additional equipment or plant as directed.

.2 Maintain construction equipment and plant in good operating order.

End of Section

1 General

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

2 Materials

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

3 Cleaning During Construction

- .1 Provide on-site containers for collection of waste materials, and debris.
- .2 Dispose of waste materials, and debris off site.
- .3 Remove grease, dust, dirt, stains, and other foreign materials from timber stairs, concrete and asphalt parking areas, and associated structures on a daily basis and always before staining occurs.

4 Final Cleaning

- .1 Remove grease, dust dirt, stains, labels, and other foreign materials from exterior finished surfaces.
- .2 Broom clean paved surfaces; rake clean other surfaces of grounds.
- .3 Remove debris and surplus materials from site.

END OF SECTION

PART 1 - GENERAL

- 1.1 Section Includes .1 Includes Waste Audit, Waste Reduction Workplan, Materials Source Separation Program, and Cost/Revenue Analysis Workplan. Lists significant generic types of products, work, or requirements specified. Does not include procedure, process, preparatory work, or final adjusting and cleaning.
- 1.2 Regulatory Requirements .1 Ensure all work is performed in compliance with all federal and provincial legislation and applicable standards.
- 1.3 Reference .1 Federal Legislation
- .1 Canadian Environmental Protection Act (CEPA) 1999, c.33, C-15.31, (Assented to September 14, 1999), 2004, c. 15; 2005, c. 23.
 - .2 Canadian Environmental Assessment Act (CEAA) (2012) L.C. 2012, c. 19, art. 52 Assented to 2012-06.
 - .3 Transportation of Dangerous Goods Act (TDGA) 1992, c. 34, T-19.01, (Assented to June 23, 1992), 1992, c. 34; 1994; c. 26; 1997, c. 9; 1999, c. 31.
 - .4 Motor Vehicle Safety Act (MVSA) 1995. Ref 1993, c. 16, M-10.01, (Assented to May 6, 1993, Act in force April 12, 1995), 1993, c. 16, 2.2; 1999, c. 33, s. 350.
- 1.4 Definitions .1 Waste Audit (WA): Relates to projected waste generation. Involves measuring and estimating quantity and composition of waste, reasons for waste generation, and operational factors which contribute to waste. Indicates quantities of reuse, recycling and landfill
- .2 Waste Reduction Workplan (WRW): Written report which addresses opportunities for reduction, reuse, or recycling of materials. WRW is based on information acquired from WA (Schedule A).
- .3 Demolition Waste Audit (DWA): Relates to actual waste generated from project.
- .4 Materials Source Separation Program (MSS P): Consists of a series of ongoing activities to separate reusable and recyclable waste material into material categories from other types of waste at point of generation.

- .5 Waste Management Coordinator (WMC): Designate individual who is in attendance on-site, full-time. Designate, or have designated, individuals from each Subcontractor to be responsible for waste management related to their trade and for coordinating activities with WMC.
- .6 Separate Condition: Refers to waste sorted into individual types.
- .7 Alternate Disposal: The reuse and recycling of materials by a designated facility, user or receiving organization which has a valid License or Certificate of Approval to operate. The alternative to landfill disposal.
- .8 Disassembly: The physical detachment of materials from a structure. Includes prying, pulling, cutting, unscrewing, etc.
- .9 Site Representative: National Capital Commission (NCC) representative.
- .10 High Recovery Demolition/Deconstruction: The systematic dismantling of a structure to salvage materials for reuse. What cannot be reused is considered subsequently for recycling. The ultimate objective is to recover potentially valuable resources while diverting what has traditionally been a significant portion of the waste stream from landfill.
- .11 Hauler: A company, possessing appropriate and valid License of Certificate of Approval, contracted to transport waste and/or reusable/recyclable materials off site to designated facility, user or receiving organization.
- .12 Hazardous Materials: Dangerous substances, dangerous goods, hazardous commodities and hazardous products, such as poisons, corrosive agent, flammable substances, ammunition, explosives, radioactive substances, or any other material that can endanger human health or well-being or the environment if handled improperly.
- .13 Inert Fill: inert waste - exclusively asphalt and concrete.
- .14 Processing: Tasks which are subsequent to disassembly. Includes moving materials, de-nailing, cleaning, separating, stacking, etc.

- .15 Recyclable: ability of product or material to be recovered at end of its life cycle and re manufactured into new product for reuse.
- .16 Recycling: process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- .17 Reuse: repeated use of product in same form but not necessarily for same purpose. Reuse includes:
 - Salvaging reusable materials from re modelling projects, before demolition stage, for resale, reuse on current project or for storage for use on future projects.
 - Returning reusable items including pallets or unused products to vendors.
- .18 Used Building Material Receipt: Receipt issued to end destination of materials designated for alternate disposal.
- .19 Weigh Bill: Receipt received from a recycling facility indicating the weight and content of each load/bin of material.

1.5 Documents

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

1.6 Use of Site and Facilities

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

1.7 Submittal

- .1 Submit requested submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 The WMC is responsible for the fulfilment of all reporting requirements.
- .3 Prepare and submit the following submittals prior to project

start-up:

- .1 Submit 2 copies of completed Waste Audit (WA):
Schedule A.
 - .2 Submit 2 copies of completed Waste Reduction
Workplan (WRW): Schedule B.
 - .3 Submit 2 copies of completed Demolition Waste
Audit (DWA): Schedule C.
 - .4 Submit 2 copies of Materials Source Separation
Program description.
- .4 Submit copies of receipts, scale tickets, waybills from
authorized disposal sites and reuse and recycling facilities for
all material removed from site to NCC Project Manager on a
weekly basis or upon request.
- .5 Submittals shall provide:
- Time and date of removal.
 - Description of materials.
 - Weight, volume or quantities of materials.
 - Container number and Licence Plate number.
 - Breakdown of reused, recycled or landfilled quantities
 - End destination of materials.

.6 Sample Submittal

3R's DEMOLITION WASTE REPORT		
		Report Number
00001		
DATE		% REUSE
TIME		% RECYCLE
MATERIAL		% LANDFILL
QUANTITY		
CONTAINER AND LICENCE PLATE NO.		
DESTINATION		
Waste Management Coordinator's Name (print)		
Hauler / Recipient's Name (print)		
Hauler / Recipient's Signature		

.6 Written authorization from NCC Project Manager is required to deviate from the haulers, facilities or receiving organizations listed in the Waste Reduction Workplan

1.8 Qualifications

- .1 Provide adequate workforce training through meetings and demonstrations.
- .2 Have someone on site with high recovery demolition/deconstruction experience throughout the project for consultation and supervision purposes.
- .3 All workers, haulers and subcontractors shall possess current, applicable Certificates of Approval and Licenses in accordance with all applicable federal and provincial regulations to remove, handle and dispose of wastes (hazardous and non-hazardous). Provide proof of compliance within 24 hours upon written request of NCC Project Manager.

-
- 1.9 Waste Audit
- .1 Conduct WA prior to project start-up.
 - .2 Prepare Waste Audit: Schedule A.
 - .3 Record, on Waste Audit - Schedule A, extent to which materials or products used consist of recycled or reused materials or products.
- 1.10 Waste Reduction Workplan
- .1 Prepare WRW prior to project start-up per the example at Appendix 1 to this section.
 - .2 Structure WRW to prioritize actions and follow 3R's hierarchy, with Reduction as first priority, followed by Reuse, then Recycle.
 - .3 Describes management of waste.
 - .4 Identify opportunities for reduction, reuse, and/or recycling (3Rs) of materials. Based on information acquired from WA.
 - .5 WRW should include but not limited to:
 - Destination of materials listed.
 - Deconstruction/disassembly techniques and sequencing.
 - Schedule for deconstruction/disassembly.
 - Location.
 - Security.
 - Protection.
 - Clear labelling of storage areas.
 - Details on materials handling and removal procedures.
 - Quantities for materials to be salvaged for reuse or recycled and materials sent to landfill.
 - .6 Post work plan or summary where workers at site are able to review its content.
- 1.11 Demolition Waste Audit
- .1 Prepare Demolition Waste Audit (DWA) prior to project start-up.
 - .2 Complete Demolition Waste Audit (DWA): Schedule C.
- 1.12 Materials Source Separation Program
- .1 Prepare MSSP and have ready for use prior to project start-up.

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

1.13 Waste Processing Sites

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

Quebec.

Reference MRC des Collines de l’Outaouais report, Table 7.1

<http://www.mrcdescollinesdeloutaouais.qc.ca/images/pdf/PGMR%20-%20Final.pdf> :

Centre de tri RMSO

815, rue Vernon Aylmer Qc J9H 5E1 Téléphone : (819) 772-9151 Télécopieur : (819) 772-9337

Ontario.

WM (Waste Management)

2383 Carp Rd., Carp Telephone: 800-665-1898 or

2301 Carp Rd., Carp Telephone: 800-267-7874

BFI Navan

3354 Navan Rd., Orleans Telephone: 613-824-7289

Wood Source (wood)

6178 Mitch Owens Manotick 613-822-6800

- 1.14 Disposal of Wastes .1 Burying of rubbish and waste materials is prohibited unless approved by NCC Project Manager.
- .2 Disposal of waste, volatile materials, mineral spirits, oil and paint thinner into waterways, storm, or sanitary sewers is prohibited.
- 1.15 Storage, Handling and Protection .1 Store, materials to be reused, recycled and salvaged in locations as directed by NCC Project Manager.
- .2 Unless specified otherwise, materials for removal become Contractor's property.
- .3 Protect, stockpile, store and catalogue salvaged items.
- .4 Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility.
- .5 Prevent contamination of materials to be salvaged and recycled and handle materials in accordance with requirements for acceptance by designated facilities.
- On site source separation is recommended.
 - Remove co-mingled materials to off-site processing facility for separation.
 - Provide waybills for separated materials.
- 1.16 Scheduling .1 Coordinate work with other activities at site to ensure timely and orderly progress of the work.

PART 2 - PRODUCTS

- 2.1 Not Used .1 Not Used.

PART 3 - EXECUTION

- 3.1 Application
 - .1 Do work in compliance with WRW.
 - .2 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.
- 3.2 Cleaning
 - .1 Remove tools and waste materials on completion of work, and leave work area in clean and orderly condition.
 - .2 Clean-up work area as work progresses.
- 3.3 Diversion of Materials
 - .1 From following list, separate materials from general waste stream and stockpile in separate piles or containers, to approval of NCC Project Manager, and consistent with applicable fire regulations. Mark containers or stockpile areas. Provide instruction on disposal practices.
 - .2 On-site sale of recyclable materials is not permitted.
 - .3 Demolition and Site Preparation Waste (table below)

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

- .4 Construction Waste (table below)

Material Type	Recommended Diversion	Actual Diversion
	%	%
Cardboard	[100]	[]
Plastic Packaging	[100]	[]
Metals	[100]	[]
Rubble	[100]	[]
Wood (uncontaminated)	[100]	[]
Soil (uncontaminated)	[100]	[]
Other		[]

3.4 Waste Audit .1 Schedule A

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

3.5 Waste Reduction
Workplan .1 Schedule B

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

3.6 Demolition Waste Audit .1 Demolition Waste Audit

(1) Material Description	(2) Quantity	(3) Unit	(4) Total	(5) Volume (m ³)	(6) Weight	(7) Remarks and Assumptions
Concrete						
Metals						
Timber						
Soil						
Other						

3.8 Canadian
Governmental
Departments Chief
Responsibility for
the Environment .1 Schedule E

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

END OF SECTION

1 Record Drawings

- .1 NCC Project Manager 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 Project Manager.
- .4 Record field information:
 - .1 Field changes of dimension and detail.
 - .2 Changes made by Change Order or Field Order.
 - .3 Depths of various elements.
 - .4 Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvement.
- .5 Other project record documents:
 - .1 Maintain a record of all other construction documents in an easily accessible (by NCC Project Manager) format such as:
 - testing results
 - product data
 - telephone and fax numbers of all suppliers, subcontractors and testing agencies and contact persons for each.
 - .2 Copies of material tickets for all items paid by unit weight or volume.
 - .3 Copies of all correspondence with utilities concerned.
 - .4 Updated schedule.
 - .5 All NCC Project Manager's written approvals issued as permission to use alternative equipment, etc.
- .6 Deliverable format – Electronic MSW and PDF

END OF SECTION

PART 1 - GENERAL

1.1 Description of Work

- .1 Work under this section includes the rebuilding of existing sections of dry stone masonry retaining wall including the supply and placement of all new stone masonry units, the supply and installation of geotextile fabric and the replacement of missing / damaged stone units all as required and in accordance with the Contract Documents.

1.2 Related Sections

- .1 Section 01 11 00 General Instructions
- .2 Section 31 23 10 Excavation, Trenching and Backfilling

1.3 References

- .1 Stone Masonry Units
 - .1 ASTM C568-89 (R-1996), Specification for Limestone Dimension Stone.
 - .2 Geotextile Fabric
 - .1 CAN/CGSB-148.1, Methods of Testing Geotextiles and Geomembranes.

1.4 Mock-ups

- .1 Construct 2.0 metre long mock-up section of new dry stone masonry retaining wall section in area as directed on site by NCC Project Manager.
- .2 Obtain written approval of mock-up section from NCC Project Manager prior to proceeding with any further work.
- .3 Contractor to rebuild mock-up section as required until written approval issued by NCC Project Manager.

1.5 Delivery, Storage, and Handling

- .1 Deliver, store and handle all stone units in a manner designed to prevent damage and staining to individual units.
- .2 Any damaged stone units shall be replaced by the Contractor at no cost to the Owner as requested by the NCC Project Manager.
- .3 Do not use salt or calcium-chloride to remove ice from stone surfaces.
- .4 During delivery and storage, protect geotextiles from direct sunlight, ultraviolet rays, excessive heat, mud, dirt, dust, debris and rodents.

1.6 Protection

- .1 The Contractor shall supply and install all temporary protection (bracing, shoring, etc.) to maintain the safety of workers and park users in accordance with the Occupational Health and Safety Act, all applicable regulations and the NCC Project Manager's instructions.
- .2 Prevent movement, settlement or damage of all adjacent structures, walks, adjacent grades and all surrounding trees. Provide bracing, shoring and underpinning as required. Repair all damage caused by rebuilding sections of retaining wall as directed by the NCC Project Manager.
- .3 Support all affected structures (including adjacent sections of retaining wall) and, if safety of structures appears to be endangered, take preventative measures and then cease operations and notify the NCC Project Manager.
- .4 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with governing authorities.
- .5 Protect all surrounding trees, plants and gardens on site. Any damage to surrounding trees, plants and gardens on site resulting from construction operation shall be repaired by the Contractor to the satisfaction of the NCC Project Manager at no extra cost to the NCC.
- .6 Cover or wet down dry materials and waste to prevent blowing dust and debris.
- .7 Should groundwater infiltrate the excavation, the contractor is responsible for all costs associated with pumping out water including necessary approvals.

1.7 Submissions

- .1 Submit supplier and source data and material information for all new stone units.
- .2 Material information shall include, but not necessarily limited to, the following:
 - .1 Compressive Strength
 - .2 Absorption
 - .3 Density
 - .4 Modulus of Rupture
 - .5 Flexural Strength
 - .6 Abrasion Resistance

- .3 Submit temporary protection shop drawings indicating all required enclosures, bracing, shoring, etc. at the pre-construction meeting. All shop drawings shall be signed and sealed by a Professional Engineer licensed in the Province of Ontario.
- .4 Submit supplier information and material information for geotextile fabric.

PART 2 – PRODUCTS

2.1 Materials

- .1 New stone units: to ASTM C568-89 (R-1996).
- .2 All new stone units to match existing stone units in type, colour, finish, etc. and as approved by the NCC Project Manager.
- .3 Geotextile fabric: Geotextile fabric to be non-woven, Class II with F.O.S. of 75 to 100 micrometres, conforming to CAN/CGSB-148.1.

PART 3 - EXECUTION

3.1 Construction

- .1 All new wall sections and sections of wall rebuilt at locations of missing stones shall be constructed to match existing wall sections in pattern and alignment.
- .2 Install geotextile membrane as indicated on the Contract Drawings. Geotextile fabric shall be installed as per manufacturer's recommendations.

END OF SECTION

PART 1 - GENERAL

- 1.1 Related Sections
- .1 Section 01 11 01 - Pay Item Descriptions
 - .2 Section 06 10 11 - Timber
- 1.2 Alternatives
- .1 Obtain NCC Representative's approval before changing manufacturer's brands, sources of supply, wood species, or wood grade.
- 1.3 References
- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM A307, Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60000 PSI Tensile Strength.
 - .2 Canadian Institute of Steel Construction (CISC)/Canadian Paint Manufacturers' Association (CPMP)
 - .1 CISC/CPMA 1-73a, A Quick Drying One-coat Paint for Use on Structural Steel.
 - .3 Canadian Standards Association (CSA International)
 - .1 CSA-G40.20)/G40.21, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
 - .2 CSA-O86 Consolidation, Engineering Design in Wood.
 - .3 CSA O121, Douglas Fir Plywood.
 - .4 CSA W59, Welded Steel Construction (Metal Arc Welding).
 - .4 National Lumber Grading Authority (NLGA)
 - .1 NLGA Standard Grading Rules for Canadian Lumber.
- 1.4 Submittals
- .1 When requested by NCC Representative, submit shop drawings to scale of metal, timber, splices, connections showing details of layout, materials, and construction.
 - .2 When requested by NCC Representative, provide invoices, purchase orders, and suppliers' certificates to prove that materials used in this contract meets requirements of specification.
- 1.5 Quality Assurance
- .1 Advise NCC Representative before ordering or purchasing materials.
 - .2 NCC Representative to examine and review materials prior to purchase by contractor.
 - .3 Allow free access to materials for examination by NCC

Representative before beginning work on site.

- .4 Mock-ups:
 - .1 Construct a full-size mock-up for review by NCC Representative of exterior cladding repair detail, splice repair detail, and new steel connection/strapping detail. Mock-up may be incorporated into finished work.

1.6 Qualifications

- .1 Contractors undertaking work in this section are required to be skilled craftspersons and to have a minimum of 10 years' experience in this field.

1.7 Delivery, Storage & Handling

- .1 Store materials in dry, well-ventilated area supported above ground and protected from rain, sun and snow.
- .2 Stack wood above ground or soil with spacer slats between layers to ensure adequate ventilation for air drying.
- .3 Protect adjacent finished surfaces from damage during work.

1.6 Ambient Conditions

- .1 Cover work exposed to weather with waterproof covering at end of each workday. Anchor covering securely in place.

PART 2 - PRODUCTS

2.1 Materials

- .1 Heavy timber framing:
 - .1 Use d-fir/hemlock/spf for structural timber wood repairs unless noted otherwise.
 - .2 Grade: No. 2 or better unless noted otherwise.
 - .3 Actual size: as required to match existing unless noted otherwise. Contractor to verify dimensions on site.
 - .4 Moisture content: kiln dry to 15%.
 - .5 Wedges: white oak or maples.
- .2 Dimension lumber:
 - .1 Blocking, strapping, exterior cladding: NLGA spruce, pine or fir (SPF) unless noted otherwise.
 - .2 Grade: No. 2 or better unless noted otherwise.
 - .3 Exterior cladding: eastern white or red pine.
- .3 Dowels, pegs and pins:
 - .1 Use white oak for all wood dowels, pegs and pins.
 - .2 Size: diameter to match existing bore holes, minimum 1/2" diameter.

- .4 Metal framing connections:
 - .1 Steel: to CSA-G40.20/G40.21, grade 300W, galvanized.
 - .2 Size: straps, plates and hangers from 6 mm thick sheet steel unless noted otherwise.
 - .3 Paint: Prime to CISC/CPMA 1-73a colour black.
- .5 Timber connections:
 - .1 Bolts: to ASTM A307, galvanized.
 - .2 Nails, spikes and staples: to CSA B111, galvanized.
- .6 Dampproofing:
 - .1 Roll roofing: asphalt impregnated 20kg felt.

PART 3 - EXECUTION

3.1 Site Verification of Conditions

- .1 Stop work and report immediately to NCC Representative conditions relevant to this contract not described in drawings: evidence of deficiencies, fungal or insect attack which may affect the scope of work or durability of the finished product.
- .2 Where timber connection details are not shown/drawn in these documents, refer to similar existing timber connections onsite. New/replacement connections shall be of similar construction methods and materials to the original period of construction. Alternates shall only be considered upon approval by the NCC Representative.

3.2 Construction

- .1 Damaged Wood Repair:
 - .1 Provide pre-engineered shoring to support the structure during the Work. Submit shoring shop drawings stamped by a provincially licensed engineer prior to erection.
 - .2 Cut back damaged or decayed wood to a point minimum 300 mm beyond the last evidence of decay, or to limits described in project drawings.
 - .3 Remove decayed wood with extreme care causing no disruption or damage to adjacent structure.
 - .4 Remove decayed wood from building site daily.
 - .5 Where the removal of damaged members is completed, provide new joinery to existing members as per item .2 below.
- .2 Joinery
 - .1 Create a cavity to match the existing joinery as necessary to receive wood laminates.

.2 Joints:

- .1 Lay out and cut joints. Contractor to inspect all joinery on site and where possible match existing layout.
- .2 Shape repair piece to match existing.
- .3 Trial fit joints before fastening in place. Adjust as necessary to ensure close accurate fit with adjacent surfaces, wedges and pegs.
- .4 Locate pegs for joints by splitting with axe. Largest outer diameter to be slightly larger than bored location hole. Bore location holes 5mm offset between adjoining members.

.3 Metal Connectors:

- .1 Trial fit the joint and metal connections before fastening in place. Adjust as necessary to ensure close accurate fit.

.3 Roof Framing:

- .1 At all beam repair and roof rafter replacement locations, seat/notch existing roof rafters or new roof rafters into new or existing top plate to ensure close, accurate fit.
- .2 Trial fit joint connections before fastening in place. Match fastening details with adjacent roof rafter connections. Adjust as necessary to ensure close accurate fit.

.4 Exterior Cladding

- .1 Coordinate with NCC Representative to identify all exterior cladding repair locations.
- .2 At all exterior cladding repair locations, remove and replace cladding boards as indicated during on site inspections. Use similar cladding board dimensions and finish to match adjacent boards. Provide new square box nails (typical to the construction period) fasteners to match adjacent layout and finish of existing cladding.

3.3 Protection

- .1 Cover completed work not enclosed or sheltered with waterproof covering. Anchor securely in position.

3.4 Cleaning

- .1 On completion of work, remove surplus material, tools, equipment, and debris from work area to satisfaction of NCC Representative.
- .2 On completion of work stack surplus material salvaged from

removals in an area approved by Owner.

END OF SECTION

Part 1 General

1.1 Related Sections

- .1 Section 01 33 00 – Submittal Procedures
- .2 Section 01 74 21 – Waste Management And Disposal
- .3 Section 01 61 00 – Common Product Requirements

1.2 Measurement Procedures

- .1 Materials and work to be included in lump sum price for supply and install of:
 - .1 New timber siding panels
 - .2 New timber top plates
 - .3 New timber log beams
 - .4 New timber door and window frame members
 - .5 New timber floor decking panels
 - .6 New timber plank sheathing
 - .7 New timber bracing
 - .8 New timber log rafters
 - .9 New timber columns

1.3 References

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

1.4 Quality Assurance

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

1.5 Submittals

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

Part 2 - Products

2.1 Lumber Material

- .1 All lumber shall be Hemlock, No. 1 / 2 as noted on the contract drawings.

2.2 Fasteners

- .1 Nails, bolts and threaded rods shall be of length and sizes per the contract drawings and CAN / CSA-S6-06. Grade of Bolts and threaded rods shall be ASTM A325.
- .2 Any other fasteners required shall be as specified elsewhere in the contract or as directed on Site by the Contract Administrator.
- .3 Use galvanized fasteners only (nails, bolts, threaded rods, clips, brackets). All nails shall be square box nails typical to the construction period.

Part 3 Execution

3.1 Construction

- .1 Comply with requirements of the CAN / CSA-S6-06.
- .2 Install all timber, fasteners and clips / brackets as indicated on the contract drawings.
- .3 Countersink bolts as indicated and where necessary to provide clearance for other work.
- .4 All exposed sides of the guardrail's top rail shall be sanded smooth.

END OF SECTION

PART 1 – GENERAL

- 1.1 Section Includes .1 Materials and installation for sheet metal roofing.
- 1.2 Related Sections
- .1 Section 07 62 00 – Sheet Metal Flashings
- .2 Section 06 03 15 – Heritage Carpentry
- 1.3 References
- .1 American Society for Testing and Materials International, (ASTM).
- .1 ASTM A653/A653M, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .2 Canadian General Standards Board (CGSB).
- .1 CAN/CGSB-51.32-[M77], Sheathing, Membrane, Breather Type.
- .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS).
- .1 Material Safety Data Sheets (MSDS).
- .4 National Research Council Canada (NRC)/Institute for Research in Construction (IRC) - Canadian Construction Materials Centre (CCMC).
- .1 CCMC, Registry of Product Evaluations.
- 1.4 Submittals
- .1 Submit proof of manufacturer's CCMC Listing and listing number to NCC Representative for review.
- .2 Manufacturer's Instructions: Provide to indicate special handling criteria, installation sequence, and cleaning procedures.
- .3 Submit WHMIS MSDS - Material Safety Data Sheets.
- .4 Submit product data sheets for roofing components. Include:
- .1 Product characteristics.
- .2 Performance criteria.
- .3 Limitations.
- .5 Submit shop drawings.
- .6 Submit 300 x 300mm samples of each sheet metal material.

PART 2 – PRODUCTS

- 2.1 Sheet Metal Materials
- .1 Zinc coated steel sheet: to ASTM A653/A653M, commercial quality, with Z275 coating, regular spangle surface, prefinish as specified, 26 Ga. thickness.
- .2 Standard of Material Acceptance/Profile Characteristics:
- .1 Ameri-Can by Ideal Roofing.
- .2 Or approved alternate.

- 2.2 Prefinished Steel Sheet .1 Prefinished steel with factory applied polyvinylidene fluoride.
- .1 Class F1S.
 - .2 Colour selected by Owner from manufacturer's standard range.
 - .3 Specular gloss: 25 units +/-5 to ASTM D523.
 - .4 Coating thickness: not less than 22 micrometers.
 - .5 Resistance to accelerated weathering for chalk rating of 8, colour fade 5 units or less and erosion rate less than 20% to ASTM D822 as follows:
 - .1 Outdoor exposure period 2500 hours.
 - .2 Humidity resistance exposure period 5000 hours.

- 2.3 Accessories .1 Roofing flashings & closures: Prefinished sheet metal to match roofing panels.
- .2 Plastic cement: to CAN/CGSB-37.5.
 - .3 Rubber-asphalt sealing compound: to CAN/CGSB-37.29.
 - .4 Fasteners: concealed, as per manufacturer's instructions.
 - .5 Washers: of same material as sheet metal, 1 mm thick with rubber packings.
 - .6 Touch-up paint: as recommended by sheet metal roofing manufacturer.

- 2.4 Fabrication .1 Form individual pieces in 2400 mm maximum lengths. Make allowances for expansion at joints.
- .2 Hem exposed edges on underside 12 mm, mitre and seal.
 - .3 Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.
 - .4 Apply minimum 0.2 mm dry film thickness coat of plastic cement to both faces of dissimilar metals in contact.
 - .5 Protect dissimilar metals against oxidization by backpainting with isolation coating where indicated.

Part 3 - Execution

- 3.1 Installation .1 Lap joints 150 mm in direction of flow.
- .2 Install sheet metal roof panels as per manufacturer's recommended fastener spacing.
 - .3 Stagger transverse seams in adjacent panels.
 - .4 Flash roof penetrations with material matching roof panels, and make watertight.
 - .5 Form seams in direction of water-flow and make watertight.

END OF SECTION

PART 1 – GENERAL

- 1.1 Related Sections .1 Section 06 03 15 – Historic Carpentry
- 1.2 General
- .1 Install all sheet metal valleys, flashings, roofing panels required to complete roofing repair.
- .2 Form to profiles to match existing or as required to suit site conditions.
- 1.3 Samples .1 Submit samples of sheet metal specified before proceeding, showing proposed method of shaping, forming, jointing and fastening.
- 1.4 Workmanship
- .1 Sheet metal work shall be carried out in accordance with the best standard practices; with joints locked, cleated, caulked as required and exposed edges hemmed. Ample allowance shall be made in all work for expansion and contraction.
- .2 Mitred corners shall be straight and true profiles, with flat surfaces free of distortion and free of face nailing.
- 1.5 References .1 Standard practices, unless otherwise noted herein, shall be deemed to constitute recommended procedures published in SMACNA Architectural Manual.
- 1.6 Warranty
- .1 Remedy all defects in the sheet metal installed hereunder, which appear within a period of two (2) years from the date of substantial performance.
- .2 Provide a written warranty confirming the above, issued on the corporate letterhead, and sealed by an authorized company official.

PART 2 – PRODUCTS

- 2.1 Metal Flashings .1 Metal flashings shall be 24 gauge (0.635mm) commercial galvanized to ASTM A653/A653M.
- 2.2 Caulking .1 Sealing compound to be a one (1) component polyurethane base caulking compound to CGSB 19.13- M87. Standard of Acceptance: Tremco Dymonic or Sikaflex 1a. Sealant compound to be installed in accordance with manufacturer's recommendations.
- 2.3 Starter Strip .1 Starter strips/drip edge to be manufactured from the same type of material used for all flashings, and shall be 24 gauge (0.635mm).

- 2.4 Accessories
- .1 Fastening cleats to be manufactured from the same type of material used for eave and wall flashings. For 24 gauge (0.71mm), space at 600mm o/c.
 - .2 Fasteners to be of same material as sheet metal, galvanized hex head, self-sealing roofing nails to CSA B111, of length and thickness suitable for metal flashing application.

Part 3 - Execution

- 3.1 Installation
- .1 Install sheet metal work in accordance with Canadian Roofing Contractor's Association FL series details.
 - .2 All free edges of metal shall be strengthened by a fold at least 13mm wide, set out slightly and presenting a straight line and neat finish. Form sheet metal in 2.4m lengths, making allowance for expansion.
 - .3 Metal shall be formed on a bending brake, shaping, trimmed and hard seaming shall be done on a bench, as far as practicable, with proper sheet metal working tools. Angles of bends and folds for interlocking metal shall be made with full regard to expansion and contraction to avoid buckling or fullness in service and to avoid damaging surfaces of metal.
 - .4 Dry joints are to be tight but not dented so as to permit slight adjustments of sheets and yet remain watertight.
 - .5 Lock seams at all corners.
 - .6 Form seams in direction of water-flow and make watertight.

- 3.2 Anchors & Fasteners
- .1 Space fasteners evenly and in an organized pattern. Where exposed to view, use metal fasteners of same material, colour, texture and finish. Obtain approval prior to installing any exposed fasteners.

- 3.3 Sealants
- .1 Install sealants in accordance with manufacturer's latest recommendations and guidelines.

- 3.4 Field Quality Control
- .1 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools, and equipment.
 - .2 Leave work areas clean, free from grease, finger marks, and stains.

END OF SECTION

PART 1 - GENERAL

- 1.1 Related Sections .1 Section 01 11 01 - Pay Item Descriptions
- 1.2 Measurement Procedures .1 For other work performed under this Section costs will be incidental to work in other Sections.
- 1.3 References .1 ASTM C117-13, Test Method for Material Finer Than 0.075 mm No. 200 Sieve in Mineral Aggregates by Washing.
.2 ASTM C136-14, Method for Sieve Analysis of Fine and Coarse Aggregates.
.3 ASTM D422-63 (2007), Method for Particle-Size Analysis of Soils.
.4 ASTM D698-12e2, Test Method for Laboratory Compaction Characteristics of soil Using Standard Effort (12,400 ft-lbf/ft) (600 kN-m/m).
.5 ASTM D1557—12e1, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft) (2,700 kN-m/m).
.6 ASTM D4318-10e1, Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
.7 CAN/CGSB-8.1-88, Sieves, Testing, Woven Wire, Inch Series.
.8 CAN/CGSB-8.2-M88, Sieves, Testing, Woven Wire, Metric.
.9 CAN/CSA-A23.1-14, Concrete Materials and Methods of Concrete Construction.
- 1.4 Definitions .1 Excavation classes:
.1 Common excavation: excavation of materials of whatever nature.
- 1.5 Existing Conditions .1 Examine soil report.
.2 Buried services:
.1 Before commencing work establish location of buried services on and adjacent to site.
.2 Arrange with appropriate authority for relocation of buried services that interfere with execution of work: pay costs of relocating services.
.3 Remove obsolete buried services within 2 m of foundations: cap cut-offs.
.4 Size, depth and location of existing utilities and

structures as indicated are for guidance only.

Completeness and accuracy are not guaranteed.

- .5 Prior to beginning excavation Work, notify applicable Departmental Representative authorities having jurisdiction establish location and state of use of buried utilities and structures. Departmental Representative authorities having jurisdiction to clearly mark such locations to prevent disturbance during Work.
 - .6 Confirm locations of buried utilities by careful test excavations.
 - .7 Maintain and protect from damage, water, sewer, gas, electric, telephone and other utilities and structures encountered as indicated.
 - .8 Where utility lines or structures exist in area of excavation, obtain direction of Departmental Representative before re-routing. Costs for such Work to be paid by Departmental Representative.
 - .9 Record location of maintained, re-routed and abandoned underground lines.
 - .10 Confirm locations of recent excavations adjacent to area of excavation.
- .3 Existing buildings and surface features:
- .1 Conduct, with Departmental Representative, condition survey of existing buildings, trees and other plants, lawns, fencing, service poles, wires, rail tracks, pavement, survey bench marks and monuments which may be affected by Work.
 - .2 Protect existing buildings and surface features from damage while Work is in progress. In event of damage, immediately make repair as directed by Departmental Representative.

1.6 Shoring, Bracing and Underpinning

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

PART 2 - PRODUCTS

- 2.1 Materials .1 Fill: selected material from excavation or other sources, approved by NCC Project Manager for use intended, unfrozen and free from rocks larger than 75 mm, cinders, ashes, sods, refuse or other deleterious materials.

PART 3 - EXECUTION

- 3.1 Site Preparation .1 Remove obstructions, ice and snow, from surfaces to be excavated within limits indicated.

- 3.2 Stripping of Topsoil .1 Strip topsoil to depths as directed by NCC Project Manager. Do not mix topsoil with subsoil.
- .2 Stockpile in locations as directed by NCC Project Manager.
- .3 Dispose of unused topsoil off site.

- 3.3 Stockpiling .1 Stockpile fill materials in areas designated by NCC Project Manager. Stockpile granular materials in manner to prevent segregation.
- .2 Protect fill materials from contamination.

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

- 3.5 Dewatering and Heave Prevention .1 Keep excavations free of water while work is in progress.
- .2 Submit for NCC Project Manager's review details of proposed dewatering or heave prevention methods, such as dikes, well points, and sheet pile cut-offs.
- .3 Avoid excavation below groundwater table if quick condition or heave is likely to occur. Prevent piping or bottom heave of excavations by groundwater lowering, sheet pile cut-offs, or other means.
- .4 Protect open excavations against flooding and damage due

to surface run-off or heavy rainfall.

- .5 Dispose of water in manner not detrimental to public and private property, or any portion of work completed or under construction.
- .6 Provide flocculation tanks, settling basins, or other treatment facilities to remove suspended solids or other materials before discharging to storm sewers, water courses, or drainage areas.

3.6 Excavation

- .1 Excavate soil to lines, grades, elevations and dimensions as indicated in contract drawings, as required for safe abutment construction, and as indicated by NCC Project Manager.
- .2 Excavation must not interfere with normal 45° splay of bearing from bottom of any footing.
- .3 Do not disturb soil within branch spread of trees or shrubs that are to remain. If excavating through roots, excavate by hand and cut roots with sharp axe or saw.
- .4 Dispose of surplus and unsuitable excavated material off site.
- .5 Do not obstruct flow of surface drainage or natural watercourses.
- .6 Earth bottoms of excavations to be undisturbed soil, level, free from loose, soft or organic matter.
- .7 Notify NCC Project Manager when bottom of excavation is reached.
- .8 Obtain NCC Project Manager approval of completed excavation.
- .9 Remove unsuitable material from trench bottom to extent and depth as directed by NCC Project Manager.
- .10 Correct unauthorized over-excavation as follows:
 - .1 Fill under bearing surfaces and footings with concrete specified for footings.
 - .2 Fill under other areas with fill compacted to not less than 95% of corrected maximum dry density.

- .11 Hand trim, make firm and remove loose material and debris from excavations. Where material at bottom of excavation is disturbed, compact foundation soil to density at least equal to undisturbed soil.

3.7 Bedding and Surround of Underground Services

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

3.8 Backfilling

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

3.9 Restoration

- .1 Upon completion of work, remove waste materials and debris, trim slopes, and correct defects as directed by NCC Project Manager.

END OF SECTION

PART 1 - GENERAL

- 1.1 Related Work
 - .1 Section 01 11 01 – Pay Item Descriptions
 - .2 Section 31 23 10 – Excavating, Trenching and Backfilling

- 1.2 Measurement Procedures
 - .1 Measurement for the work under this Section will be made per the Unit Price Table provided at Section 01 11 01.

- 1.3 References
 - .1 Article 12.3 du CCDG – Fondation de chaussée.
 - .2 La norme NQ 2560-114 – “Travaux de génie civil – Granulats”.

PART 2 - PRODUCTS

- 2.1 Materials
 - .1 Granular sub-base:
 - .1 Crushed, pit run or screened stone, gravel or sand consisting of hard durable 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. Sieve sizes to CAN/CGSB-8.1 rather than ASTM E 11.
 - .3 Table:

<u>Sieve Designation</u>	<u>% Passing</u>
75 mm	100
4.75 mm	25-85
0.425 mm	5-30
0.075 mm	0-10

 - .1 Granular base:
 - .1 Crushed stone or gravel: hard, durable, angular 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. Sieve sizes to CAN/CGSB-8.1 rather than ASTM E 11.
 - .3 Table:

<u>Sieve Designation</u>	<u>% Passing</u>
19 mm	[100]
12.5 mm	[70-100]
4.75 mm	[40-70]
2.00 mm	[23-50]
0.425 mm	[7-25]
0.075 mm	[3-8]

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 Sub-base .1 Granular sub-base material shall be placed to required elevation as per contract documents.
- .2 Place in layer of 150 mm compacted thickness. Compact layer to 95% Standard Density in accordance with ASTM D 698.
- 3.3 Granular Base .1 Granular base material minimum thickness: 100 mm as indicated in the contract documents.
- .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% Standard Density in accordance with ASTM D 698.

END OF SECTION

PART 1 – GENERAL

- 1.1 General .1 Topsoil shall be placed and NCC seed mixture employed in areas indicated in the contract drawings, and, where designated by the NCC Project Manager, in areas where vegetation has been disturbed or degraded through the Contractor's site activities.
- 1.2 Related Sections .1 Section 01 11 01 - Pay Item Descriptions
.2 Section 01 35 43 - Environmental Procedures
- 1.3 Measurement Procedures .1 Measurement for the work under this Section will be made per the Unit Price Table provided at Section 01 11 01.

PART 2 – PRODUCTS

- 2.1 Topsoil .1 Topsoil: mixture of particulates, micro-organisms and organic matter which provides suitable medium for supporting intended plant growth.
.1 Soil texture based on The Canadian System of Soil Classification, to consist of 60 to 70 % sand, minimum 8 % clay, and to contain 2 to 10 % organic matter by weight.
.2 Contain no toxic elements or growth inhibiting materials.
.3 Finished surface free from:
.1 Debris and stones over 50 mm diameter.
.2 Coarse vegetative material, 10 mm diameter and 100 mm length, occupying more than 2% of soil volume.
.4 Consistence: friable when moist.
- 2.2 Soil Amendments .1 Fertilizer:
.1 Fertility: major soil nutrients present in following amounts:
.2 Nitrogen (N): 20 to 40 micrograms of available N per gram of topsoil.
.3 Phosphorus (P): 40 to 50 micrograms of phosphate per gram of topsoil.
.4 Potassium (K): 75 to 110 micrograms of potassium per gram of topsoil.

- .5 Calcium, magnesium, sulfur and micro-nutrients present in balanced ratios to support germination and/or establishment of intended vegetation.
- .6 pH value: 6.5 to 7.5
- .2 Sand: washed coarse silica sand, medium to course textured.
- .3 Organic matter: composted organic matter, such as rotted manure, hay, straw, bark residue or sawdust, meeting the organic matter, stability and contaminant requirements. Salt content shall not exceed 1.0 ms/cm (millisiemens / cubic centimetre) and material shall be such as to support healthy plant development. Provide analysis and sample for NCC Project Manager's approval before delivery to site.
- .4 Limestone:
 - .1 Ground agricultural limestone.
 - .2 Gradation requirements: percentage passing by weight, 90% passing 1.0 mm sieve, 50% passing 0.125 mm sieve.
- .5 Fertilizer: industry accepted standard medium containing nitrogen, phosphorous, potassium and any other micro-nutrients suitable to the specific plant species or application or defined by the soil test.

2.3 Source Quality Control

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

PART 3 - EXECUTION

- 3.1 Preparation of Existing Grade
- .1 Verify that grades are correct. If discrepancies occur, notify NCC Project Manager and do not commence work until instructed by NCC Project Manager.
 - .2 Grade soil, eliminating uneven areas and low spots, ensuring positive drainage.
 - .3 Remove debris, roots, branches, stones in excess of 50 mm diameter and other deleterious materials. Remove soil contaminated with calcium chloride, toxic materials and petroleum products. Remove debris which protrudes more than 75 mm above surface. Dispose of removed material off site.
 - .4 Cultivate entire area which is to receive topsoil to minimum depth of 100 mm.
- 3.2 Placing and Spreading of Topsoil
- .1 Place topsoil after NCC Project Manager has accepted subgrade.
 - .2 Spread topsoil in uniform layers not exceeding 100mm.
 - .3 Spread topsoil to depth of 100mm at all areas disturbed by the work.
- 3.3 Soil Amendments
- .1 Apply and thoroughly mix soil amendments into full specified depth of topsoil at rates indicated by soil test.
- 3.4 Finish Grading
- .1 Grade to eliminate rough spots and low areas and ensure positive drainage. Prepare loose friable bed by means of cultivation and subsequent raking.
 - .2 Consolidate topsoil to required bulk density using equipment approved by NCC Project Manager. Leave surfaces smooth, uniform and firm against deep foot-printing.
- 3.5 NCC Seed Mixture
- .1 NCC Seed Mixture shall be placed on top of topsoil for all disturbed vegetated areas.
- 3.6 Acceptance
- .1 NCC Project Manager will inspect and test topsoil in place and determine acceptance of material, depth of

topsoil, finish grading and coverage of hydraulic seeding / mulch.

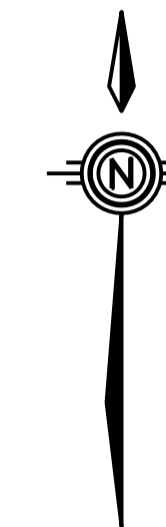
3.7 Surplus Material

- .1 Dispose of surplus materials where directed by NCC Project Manager.

END OF SECTION

NATIONAL CAPITAL COMMISSION

LA COMMISSION DE LA CAPITALE NATIONALE



LIST OF DRAWINGS / LISTE DES DESSINS:

- COVER SHEET / PAGE DE COUVERTURE
- 01. GENERAL ARRANGEMENT FIRST STOREY - PLAN
ARRANGEMENT GÉNÉRAL DU PREMIER ÉTAGE - PLAN
- 02. GENERAL ARRANGEMENT SECOND STOREY - PLAN
ARRANGEMENT GÉNÉRAL DU DEUXIÈME ÉTAGE - PLAN
- 03. GENERAL ARRANGEMENT ROOF - PLAN
ARRANGEMENT GÉNÉRAL DU TOIT - PLAN
- 04. GENERAL ARRANGEMENT EAST AND WEST ELEVATIONS
ARRANGEMENT GÉNÉRAL DES ÉLÉVATIONS EST ET OUEST
- 05. GENERAL ARRANGEMENT NORTH AND SOUTH ELEVATIONS
ARRANGEMENT GÉNÉRAL DES ÉLÉVATIONS NORD ET SUD
- 06. REHABILITATION DETAILS
DÉTAILS DE RÉHABILITATION

RESTORATION OF 139 MARCH ROAD,
OTTAWA, ON, ASSET #3491, ASSET #3493, ASSET #94458
RESTAURATION DU 139 MARCH ROAD, OTTAWA ON, ATOUT
#3491, ATOUT #3493, ATOUT #94458
CONTRACT No./ No. CONTRAT DC-XXXX-XX-XX



no.	description	date
	project	
	project	

issued or revised
émis ou révisé

RESTORATION OF
139 MARCH ROAD
RESTAURATION DU
139 MARCH ROAD

drawing
dessin

GENERAL ARRANGEMENTS
FIRST STOREY - PLAN
ARRANGEMENT GÉNÉRAL DU
PREMIER ÉTAGE - PLAN

approved by
approuvé par TASHI DWIVEDI

designed by
conçu par JAN PODLAK

drawn by
dessiné par M.Q.

date 11 OCTOBER 2017 scale
échelle AS SHOWN

NCC project no. sheet no.
no. du projet de la CCN no. de la feuille

0000176-01

SCOPE OF WORK:

- A MOBILIZE TO SITE / MOBILISER AU SITE
- B REMOVE EXISTING FLAT STONE FOOTING BELOW EXTERIOR WALLS OF EXISTING MAIN BARN BUILDING (STRUCTURE A, BUILDINGS 1 AND 2) AND CONSTRUCT NEW CONCRETE STRIP FOOTINGS; PROVIDE TEMPORARY SUPPORT FOR EXISTING STRUCTURE AS REQUIRED / RETIRER LES EMPATEMENT EXISTANTS EN PIERRE PLATE EN DESSOUS DE MURS EXTERIEURS DU BÂTIMENT PRINCIPAL EXISTANT (STRUCTURE A, BÂTIMENTS 1 ET 2) ET CONSTRUIRE DE NOUVELLES PIEDS EN BÉTON; FOURNIR UN SOUTIEN TEMPORAIRE À LA STRUCTURE EXISTANTE AU BESOIN
- C CONSTRUCT NEW CONCRETE ISOLATED FOOTING UNDER EXISTING TIMBER COLUMNS; PROVIDE TEMPORARY SUPPORT FOR EXISTING STRUCTURE AS REQUIRED / CONSTRUIRE DE NOUVELLES SEMELLES ISOLÉS EN BÉTONS SOUS LES COLONNES DE BOIS EXISTANTES; FOURNIR UN SOUTIEN TEMPORAIRE À LA STRUCTURE EXISTANTE AU BESOIN
- D REMOVE AND REPLACE SELECTED SECTIONS OF EXISTING TIMBER SILL BEAM ALONG PERIMETER OF STRUCTURE / ENLEVER ET REMPLACER LES SECTIONS CHOISIES DE POUTRES DE SEUIL DE BOIS EXISTANTES LE LONG DU PÉRIMÈTRE DE LA STRUCTURE
- E REMOVE AND REPLACE SELECTED SECTIONS OF EXISTING TIMBER BEAM / RETIRER ET REMPLACER LES SECTIONS CHOISIES DES POUTRES DE BOIS EXISTANTES LE LONG DU PÉRIMÈTRE DE LA STRUCTURE
- F REMOVE AND REPLACE SELECTED SECTIONS OF EXISTING TIMBER COLUMN / RETIRER ET REMPLACER LES SECTIONS CHOISIES DES COLONNES DE BOIS EXISTANTES LE LONG DU PÉRIMÈTRE DE LA STRUCTURE
- G REMOVE AND REPLACE SELECTED SECTIONS OF EXISTING TIMBER DOOR AND WINDOW FRAME MEMBERS IN KIND ALONG PERIMETER OF BARN / ENLEVER ET REMPLACER LES ÉLÉMENTS DE CADRE DE PORTE ET DE FENÊTRE EN BOIS VERTICAUX SÉLECTIONNÉS EN NATURE LE LONG DU PÉRIMÈTRE DES GRANGES
- H REMOVE AND REPLACE SELECTED EXISTING EXTERIOR TIMBER SIDING PANELS AND PAINT TO MATCH EXISTING / ENLEVEZ ET REMPLACEZ LES PANNEAUX DE PAREMENT EXTERIEURS EN BOIS SÉLECTIONNÉS ET PEINTUREZ LES PANNEAUX AFIN DE CORRESPONDRE À LA PEINTURE EXISTANTE
- I REMOVE AND SALVAGE METAL ROOF SHEATHING IN ORDER TO EXPOSE TIMBER PLANK SHEATHING. REPLACE SELECTED TIMBER PLANK SHEATHING MEMBERS, REINSTATE AND PAINT METAL ROOF SHEATHING WITH SALVAGED AND NEW MATERIAL AS REQUIRED / ENLEVER ET RETIRER LE REVÊTEMENT DE TOIT MÉTALLIQUE AFIN D'EXPOSER LE REVÊTEMENT DE PLANCHES DE BOIS. REMPLACER LES ÉLÉMENTS DE REVÊTEMENT DE PLANCHES DE BOIS SÉLECTIONNER, RÉINSTALLER ET PEINDRE LE REVÊTEMENT DE TOIT MÉTALLIQUE AVEC DES MATÉRIAUX RÉCUPÉRER ET NOUVEAUX AU BESOIN
- J REMOVE EXISTING DAMAGED METAL ROOF SHEATHING. SUPPLY AND INSTALL NEW METAL ROOF SHEATHING / ENLEVER LE REVÊTEMENT DE TOIT EN MÉTAL ENDOMMAGÉ EXISTANT, FOURNIR ET INSTALLER UN NOUVEAU REVÊTEMENT DE TOIT EN MÉTAL
- K REMOVE AND REPLACE SELECTED SECTIONS OF EXISTING TIMBER TOP PLATE ALONG PERIMETER OF BARN / RETIRER ET REMPLACER LES SECTIONS SÉLECTIONNÉES DE LA SABLÈRE EN BOIS EXISTANTE LE LONG DU PÉRIMÈTRE DES GRANGES
- L REMOVE AND REPLACE SELECTED EXISTING FLOOR DECKING MEMBERS / ENLEVER ET REMPLACER LES PANNEAUX DE PLANCHER EXISTANTS
- M REMOVE AND SALVAGE INTERIOR/ EXTERIOR SHEATHING AS REQUIRED TO EXPOSE POSTS, REINSTATE INTERIOR/EXTERIOR SHEATHING INCLUDING SUPPLY AND INSTALL NEW SHEATHING TO MATCH EXISTING AS REQUIRED / ENLEVER ET RETIRER LE REVÊTEMENT INTÉRIEUR / EXTÉRIEUR AU BESOIN POUR EXPOSER LES POSTES, RÉINSTALLER LE REVÊTEMENT INTÉRIEUR / EXTÉRIEUR INCLUANT L'ALIMENTATION ET INSTALLER UN NOUVEAU REVÊTEMENT POUR CORRESPONDRE AUX EXIGENCES REQUIS
- N SUPPLY AND INSTALL NEW TIMBER BRACING MEMBERS (100x100mm) / FOURNIR ET INSTALLER DE NOUVEAUX ÉLÉMENTS DE CONTREVENTEMENT EN BOIS (100x100mm)
- O SUPPLY AND INSTALL NEW PURLIN TIMBER BRACING MEMBERS (100x100mm) / FOURNIR ET INSTALLER DE NOUVEAUX ÉLÉMENTS DE CONTREVENTEMENT POUR LA PANNE INTERMÉDIAIRE (100x100mm)
- P SUPPLY AND INSTALL NEW TIMBER LOG RAFTERS / FOURNIR ET INSTALLER DE NOUVEAUX CHEVRONS EN BOIS ROND
- Q REMOVE LEAN-TO STRUCTURE, SALVAGE AND RE-USE MATERIALS AS REQUIRED ON OTHER STRUCTURES / ENLEVER LA STRUCTURE D'APPENTIS, RÉCUPÉRER ET RÉUTILISER LES MATÉRIAUX COMME REQUIS SUR D'AUTRES STRUCTURES

GENERAL NOTES / NOTES GÉNÉRALES:

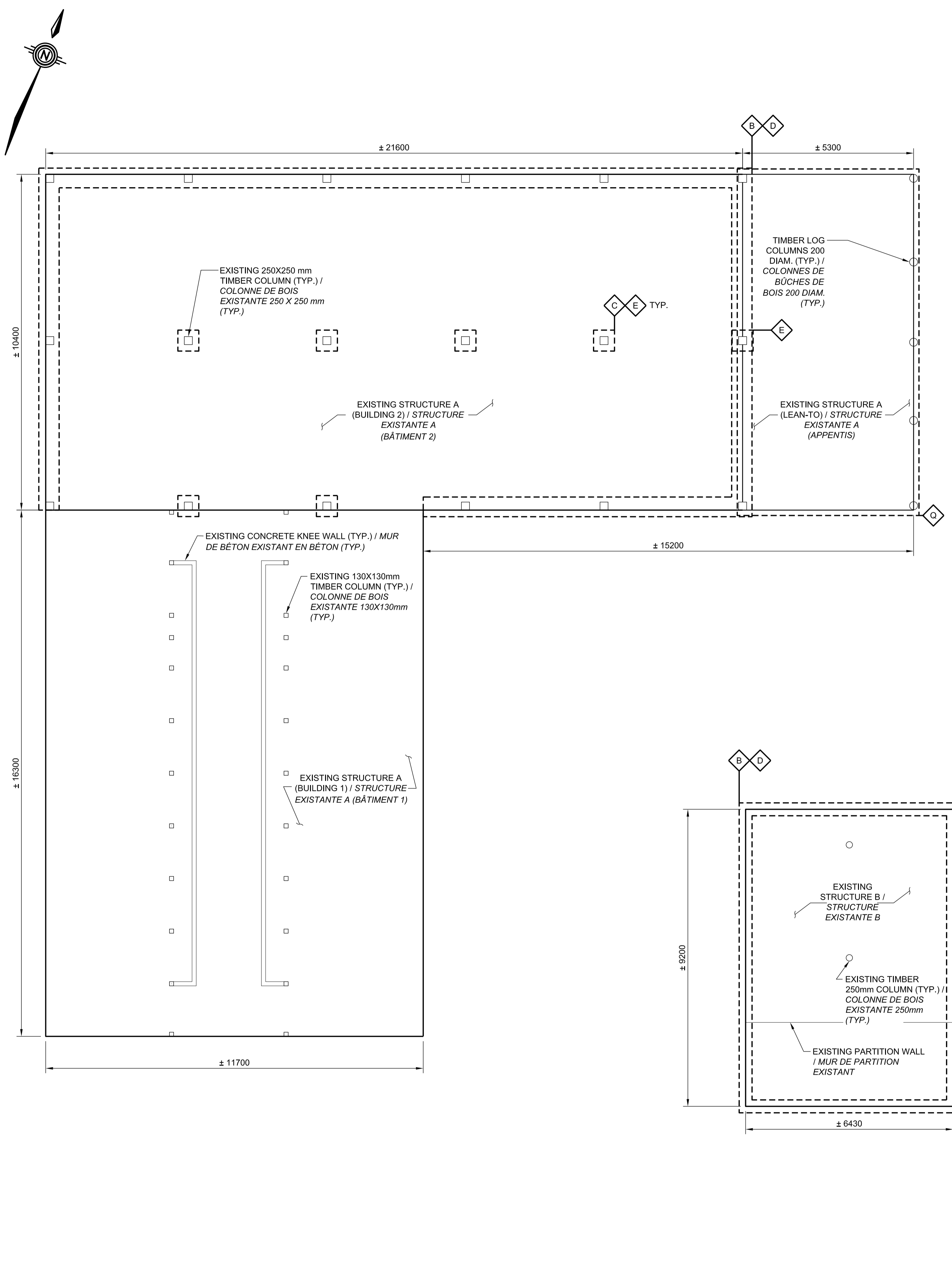
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED / TOUTES LES DIMENSIONS SONT EN MILLIMÈTRES SAUF A INDICATION CONTRAIRE.
- ALL MEASUREMENTS SHALL BE VERIFIED ON SITE AND ANY DISCREPANCIES IMMEDIATELY REPORTED TO THE DESIGN ENGINEER. / TOUTES LES MESURES DOIVENT ÊTRE VÉRIFIÉES SUR LE SITE ET TOUTE DIVERGENCES DOIVENT ÊTRE IMMÉDIATEMENT SIGNALÉES À L'INGÉNIEUR DE LA CONCEPTION.
- REFER TO DRAWING NO. 07 FOR FOUNDATION NOTES. / SE RÉFÉRER AU DESSIN NO. 07 POUR LES NOTES DE FONDATION.
- ALL REPLACED EXTERIOR TIMBER SURFACES OF THE BARN (NOT INCLUDING CORRUGATED STEEL ROOF PANELS AND ROOF FLASHING) SHALL BE PAINTED TO MATCH EXISTING COLOUR. / TOUTES LES SURFACES DE BOIS EXTERIEURES REMPLACÉES DE LA GRANGE (SAUF LES PANNEAUX DE TOIT EN ACIER ONDULÉ ET LES SOLIN DE TOIT) DOIVENT ÊTRE PEINTES AFIN DE CORRESPONDRE À LA COULEUR EXISTANTE.
- DESIGN SHOWN ON THIS DRAWING IS INTENDED TO PARTIALLY RESTORE THE STRUCTURE TO ITS ORIGINAL STATE AND PROVIDE EXTENDED SERVICE LIFE. HP ENGINEERING DID NOT REVIEW ANY EXISTING STRUCTURAL ELEMENTS OF THE MAIN BARN INCLUDING ITS FOUNDATIONS AND TIMBER FRAMES AND AS SUCH CANNOT CONFIRM CODE COMPLIANCE. / LA CONCEPTION FIGURANT SUR CE DESSIN EST DESTINÉE À RESTAURER PARTIELLEMENT LA STRUCTURE À SON ÉTAT D'ORIGINE ET À FOURNIR UNE VIE DE SERVICE PROLONGÉE. HP ENGINEERING N'A PAS EXAMINÉ D'ÉLÉMENTS STRUCTURAUX EXISTANTS DE LA GRANGE PRINCIPALE, Y COMPRIS SES FONDATIONS ET CADRES DE BOIS ET PAR CONSÉQUENT NE PEUT CONFIRMER LA CONFORMITÉ DU CODE.
- ALL TEMPORARY SHORING, BRACING AND SUPPORTS NEEDED TO SUPPORT EXISTING STRUCTURE IN ORDER TO PROPERLY COMPLETE THE SPECIFIED WORK SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS STAMPED BY LICENSED ENGINEER IN ONTARIO FOR REVIEW. / TOUTS LES ÉTAIEMENTS, CONTREVENTEMENT ET SUPPORT TEMPORAIRES NÉCESSAIRES AU SOUTIEN À LA STRUCTURE EXISTANTE AFIN DE COMPLÉTER CORRECTEMENT LES TRAVAUX SPÉCIFIÉS DOIVENT ÊTRE CONÇUS ET FOURNIS PAR L'ENTREPRENEUR. LE CONSTRUCTEUR FOURNIRA DES DESSINS D'ATELIER ÉTAMPÉ PAR L'INGÉNIEUR AUTORISÉ EN ONTARIO.

MOISTURE PROTECTION / PROTECTION D'HUMIDITÉ:

- MOISTURE BARRIER SHALL BE PROVIDED IN ALL AREAS WHERE WOOD IS IN CONTACT WITH CONCRETE. / LA BARRIÈRE CONTRE L'HUMIDITÉ DOIT ÊTRE FOURNIE OU LE BOIS EST EN CONTACT AVEC LE BÉTON.
- DRAINAGE: MAINTAIN EXISTING OVERALL SITE DRAINAGE AWAY FROM PERIMETER OF NEW CONCRETE FOUNDATIONS. / DRAINAGE: MAINTENIR LE DRAINAGE GÉNÉRAL DU SITE EXISTANT LOIN DU PÉRIMÈTRE DES NOUVELLES FONDATIONS DE BÉTON.
- FLASHING TO BE PRE-FINISHED METAL, APPLY AT EXPOSED DOOR AND WINDOW HEADS AND SILLS, WALL PENETRATIONS, AND ALONG SECTION OF WALLS AND ROOFS IN CONTACT WITH NEW ROOF OF SINGLE STOREY BARN ADDITION. / DRAINAGE: MAINTENIR LE DRAINAGE GÉNÉRAL DU SITE EXISTANT LOIN DU PÉRIMÈTRE DES NOUVELLES FONDATIONS DE BÉTON.
- ALL PRE-FINISHED METAL FLASHING SHALL BE 26 GAUGE, UNLESS OTHERWISE NOTED. / TOUS LES ÉCLATS MÉTALLIQUES PRÉ-FINIS DOIVENT ÊTRE DE 26 JAUGES, SAUF INDICATION CONTRAIRE.
- INSTALL CORRUGATED METAL ROOFING AS PER MANUFACTURER'S STANDARD DETAILS. / INSTALLER LA TOITURE MÉTALLIQUE ONDULÉE SELON LES DÉTAILS STANDARDS DU FABRICANT.

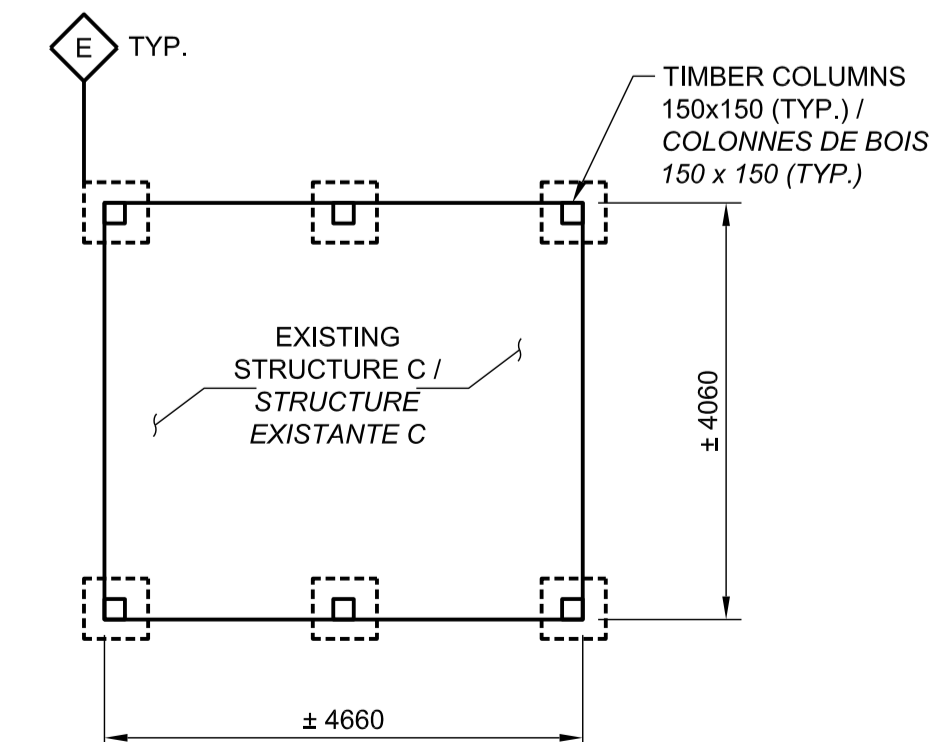
MATERIAL NOTES / NOTES MATÉRIELLES:

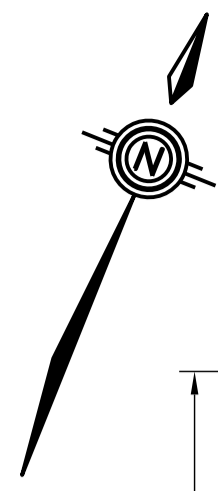
- CONCRETE / BÉTON
 - CONCRETE WORK SHALL COMPLY WITH CAN/CSA-A23.1-14 / LE BÉTON EST CONFORME À LA NORME CAN / CSA-A23.1-14
 - EXPOSURE CLASS OF CONCRETE SHALL BE A-2 (32 MPa) / CLASSE D'EXPOSITION DU BÉTON DOIT ÊTRE A-2 (32 MPa)
 - CLEAR COVER TO REINFORCING STEEL: 60 ± 10mm / COUVERTURE NET POUR ACIER RENFORCEMENT: 60 ± 10mm
 - CLEAR COVER OF UNDERSIDE OF FOOTING TO REINFORCING STEEL: 75 ± 10mm / COUVERTURE NET DU DESSOUS DE L'EMPATEMENT À L'ACIER: 75 ± 10mm
 - GRADE OF REINFORCING STEEL: GRADE 400 MPa / GRADE DE L'ACIER DE RENFORCEMENT: GRADE 400 MPa
- TIMBER / BOIS:
 - ALL TIMBER MEMBERS SPECIFIED SHALL BE SPECIES: SPF AND GRADE No.1/No.2 / TOUS LES MEMBRES EN BOIS SPÉCIFIÉS SONT DES ESPÈCES: SPF ET GRADE N° 1 / N° 2
 - ALL TIMBER FRAMING SHALL CONFORM TO N.B.C. STANDARDS / TOUS LES CADRES EN BOIS SE CONFORMENT AU NORMES N.B.C.
 - ALL SHEATHING SHALL BE FASTENED AS PER N.B.C. STANDARDS / TOUTES LES REVÊTEMENT SERONT FIXÉS SELON LES NORMES N.B.C.
 - TIMBER LOG BEAMS AND OTHER TIMBER MEMBERS SHALL BE REPLACED WITH NEW SIMILARLY DIMENSIONED TIMBER ELEMENTS / LES POUTRES EN BOIS ROND ET LES AUTRES PIÈCES DE BOIS DOIVENT ÊTRE REMPLACÉES PAR DE NOUVEAUX ÉLÉMENTS EN BOIS DE DIMENSION SIMILAIRES
 - NAILS: SQUARE BOX NAILS TYPICAL TO THE CONSTRUCTION PERIOD / CLOUS: CLOUS CARRÉS TYPIQUES À LA PÉRIODE DE CONSTRUCTION
 - CLASS OF BOLTS: ASTM A325 C/W MATCHING NUTS AND WASHERS; HOT DIPPED GALVANIZED TO ASTM A123 / CLASSE DE BOULONS: ASTM A325 C / W ECROUS ET RONDELLES; GALVANISÉ À CHAUD ET GALVANISÉ SELON L'ASTM A123
 - GALVANIZING: ALL FASTENERS SHALL BE GALVANIZED. GALVANIZING SHALL BE IN ACCORDANCE WITH ASTM A123M-17 / GALVANISATION: TOUS LES ATTACHES DOIVENT ÊTRE GALVANISÉES. LA GALVANISATION EST CONFORME À LA NORME ASTM A123M-17



PLAN - FIRST FLOOR
PLAN - PREMIER ÉTAGE

1:75





NOTES / NOTES :

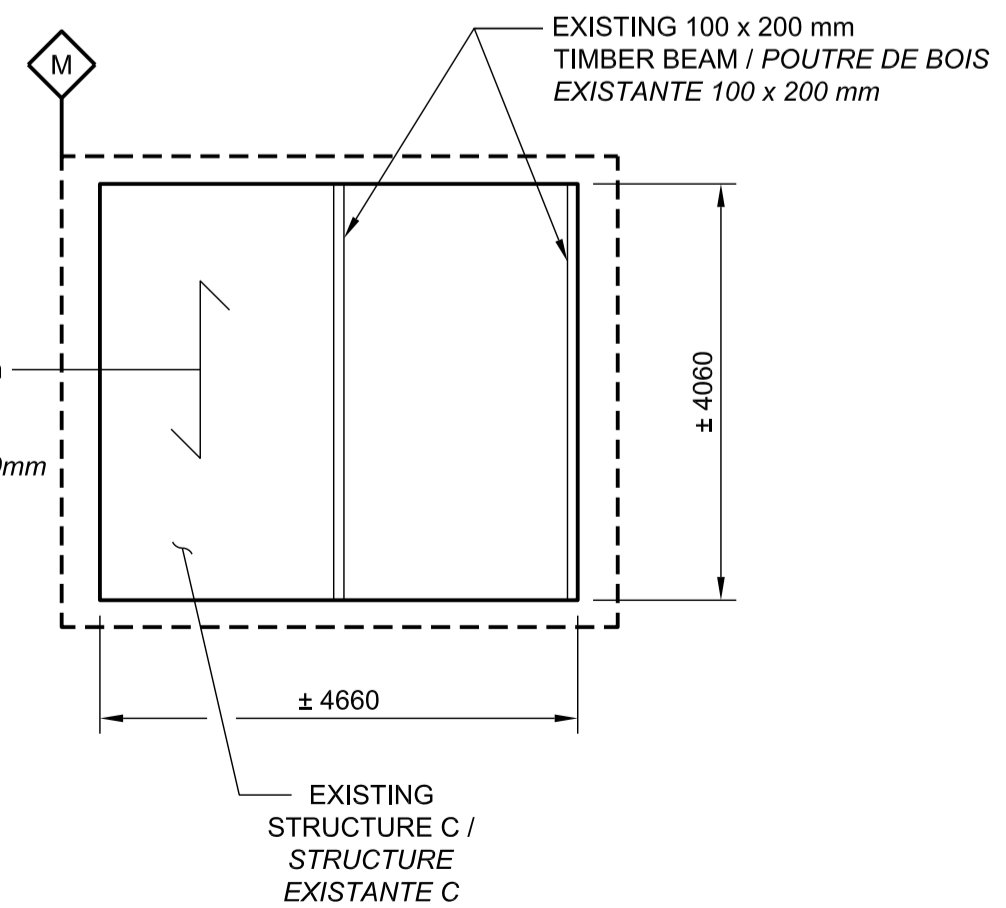
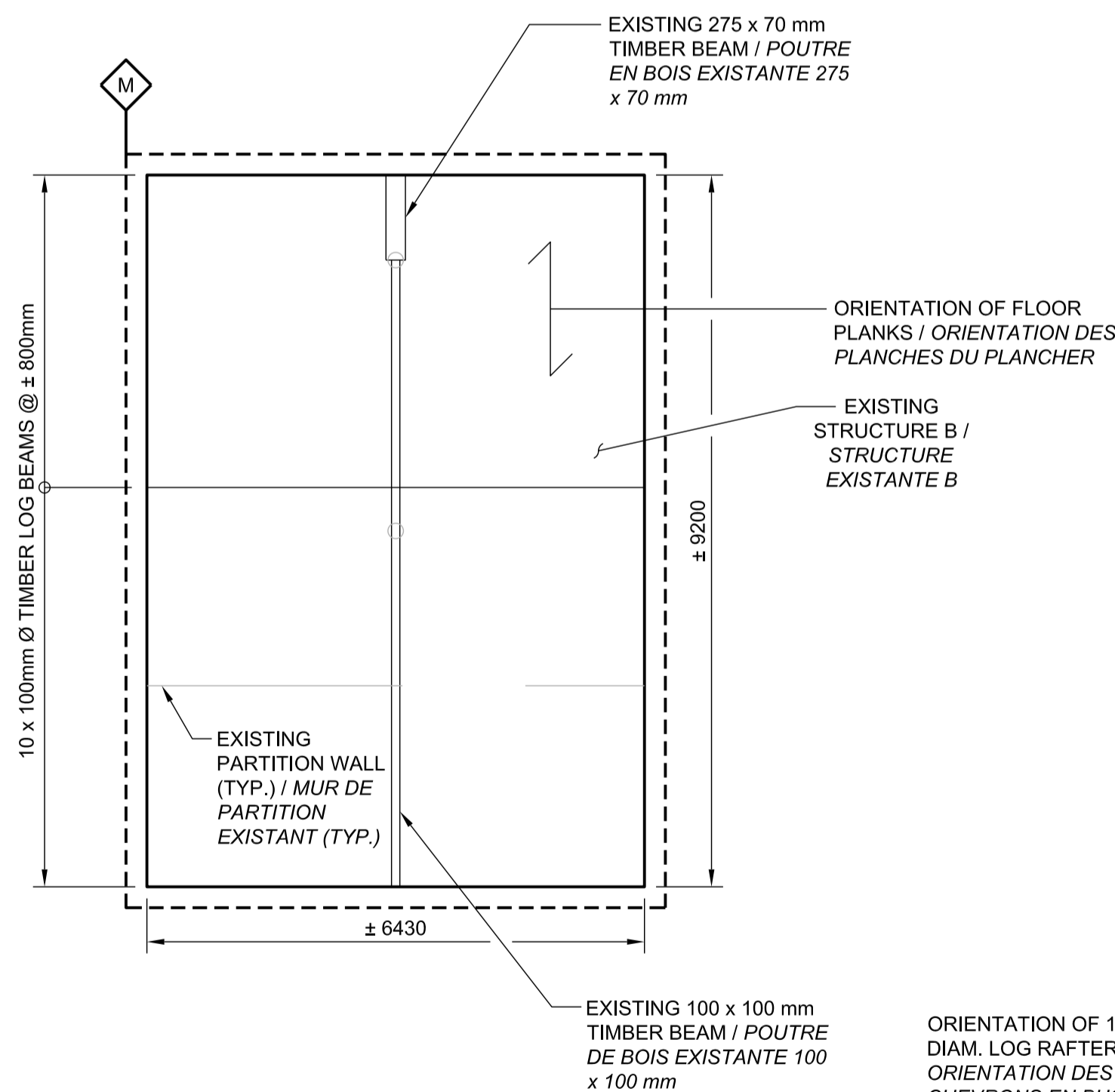
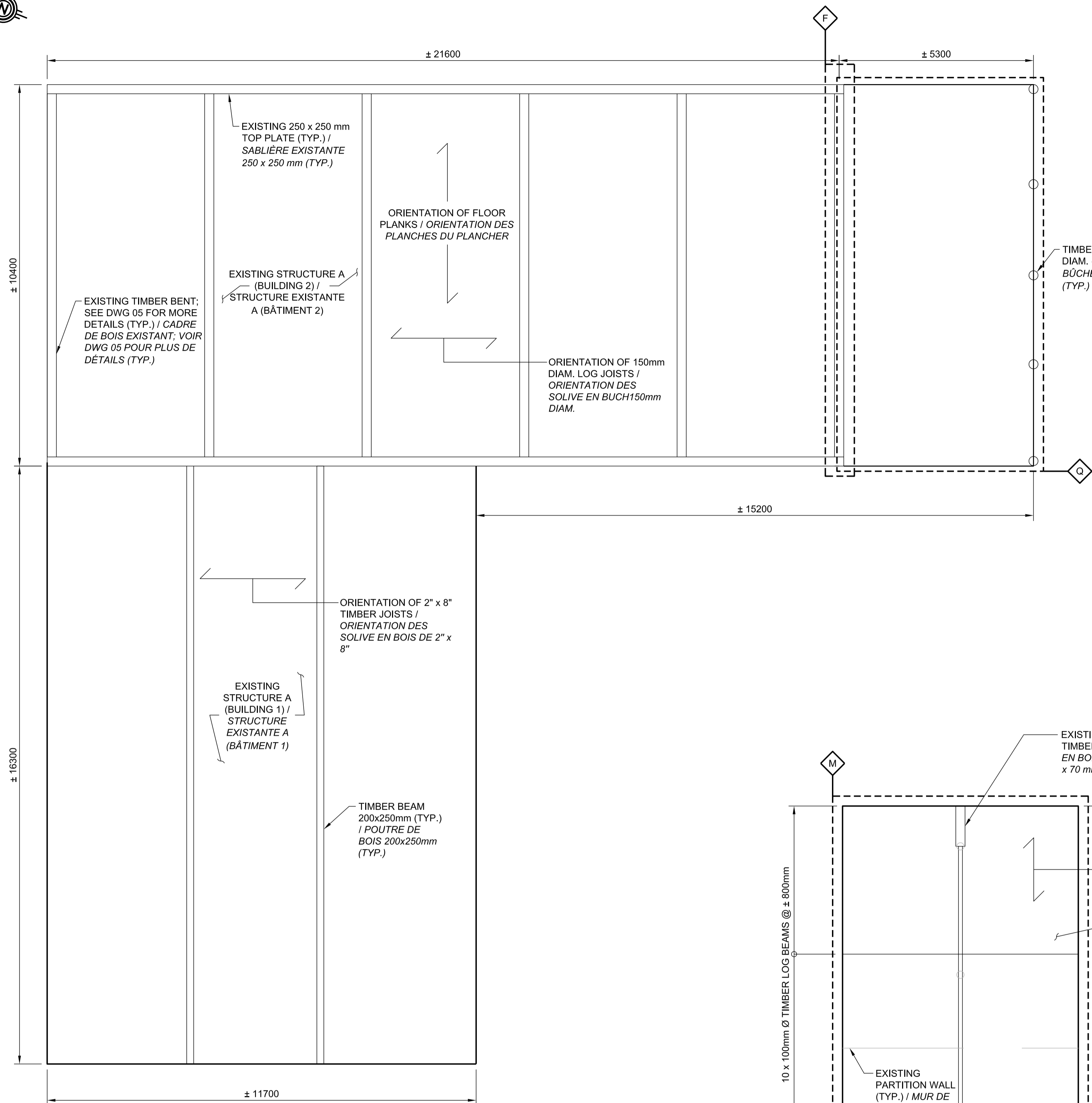
- 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED. / TOUTES LES DIMENSIONS SONT EN MILLIMÈTRES SAUF A INDICATION CONTRAIRE.
- 2. REFER TO DRAWING No. 2 FOR GENERAL NOTES. / SE RÉFÉRER AU DESSIN N ° 2 POUR LES NOTES GÉNÉRALES.
- 3. REFER TO DRAWING No. 7 FOR FOUNDATION NOTES. / SE RÉFÉRER AU DESSIN N ° 7 POUR LES NOTES DE FONDATION.

Real Estate Management, Design and Construction Branch
Direction de la gestion de l'immobilier, design et construction

Design and Construction Division
Division design et construction

director - Claude Robert - directeur

consultant
expert-conseil



PLAN - SECOND FLOOR
PLAN - DEUXIÈME ÉTAGE
1:75



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émis ou révisé

no.	description	date

project
projet

RESTORATION OF
139 MARCH ROAD

RESTAURATION DU
139 MARCH ROAD

drawing
dessin

GENERAL ARRANGEMENTS
SECOND STOREY - PLAN
ARRANGEMENT GÉNÉRAL DU
DEUXIÈME ÉTAGE - PLAN

approved by
approuvé par TASHI DWIVEDI

designed by
conçu par JAN PODLAK

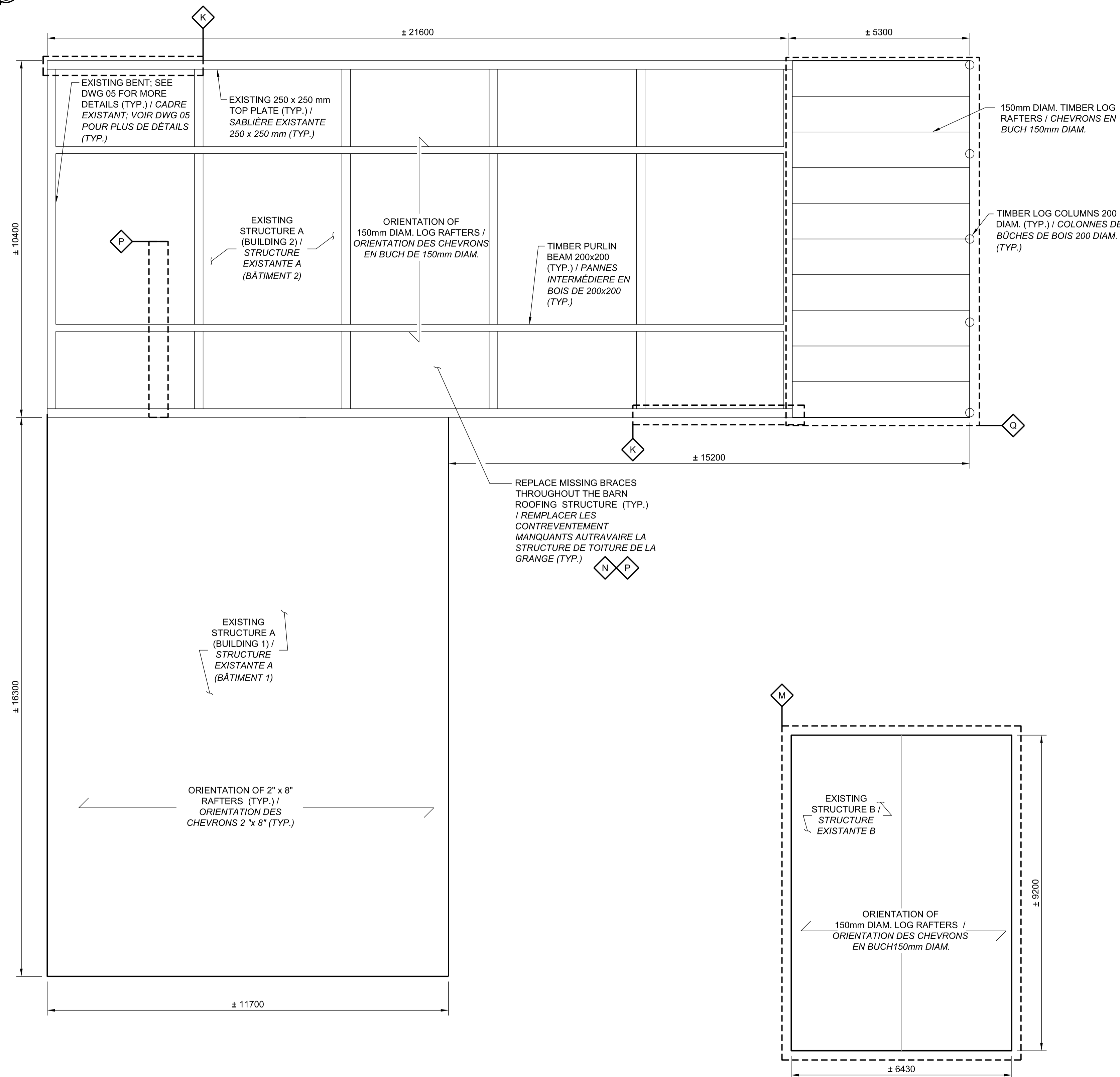
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dessiné par M.Q.

date 11 OCTOBER 2017 scale
échelle AS SHOWN

NCC project no. sheet no.
no. du projet de la CCN no. de la feuille

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3. REFER TO DRAWING No. 7 FOR FOUNDATION NOTES. / SE RÉFÉRER AU DESSIN N° 7 POUR LES NOTES DE FONDATION.



PLAN - ROOF
PLAN - TOIT
1:75



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issued or revised / émis ou révisé

project / projet

RESTORATION OF 139 MARCH ROAD
RESTAURATION DU 139 MARCH ROAD

drawing / dessin

GENERAL ARRANGEMENTS ROOF - PLAN
ARRANGEMENT GÉNÉRAL DU TOIT - PLAN

approved by / approuvé par TASHI DWIVEDI

designed by / conçu par JAN PODLAK

drawn by / dessiné par M.Q.

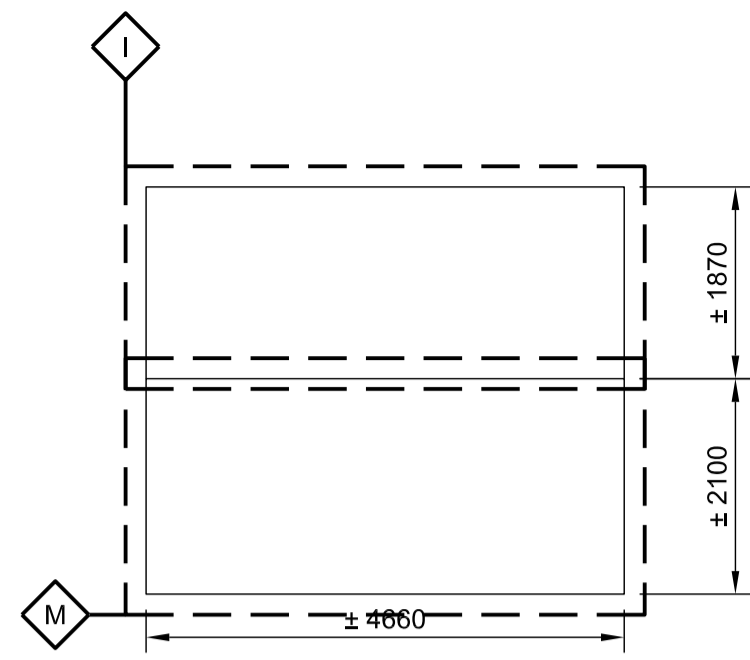
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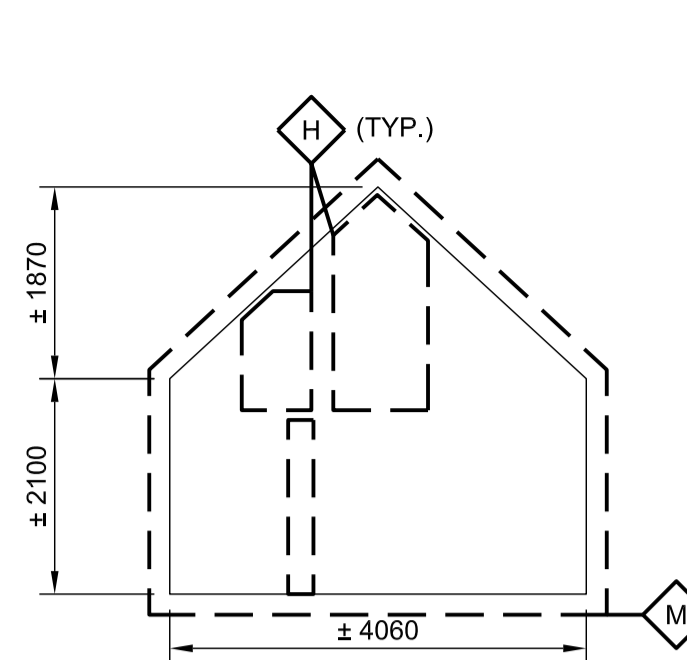
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3. REFER TO DRAWING No. 7 FOR FOUNDATION NOTES. / *SE RÉFÉRER AU DESSIN N ° 7 POUR LES NOTES DE FONDATION.*



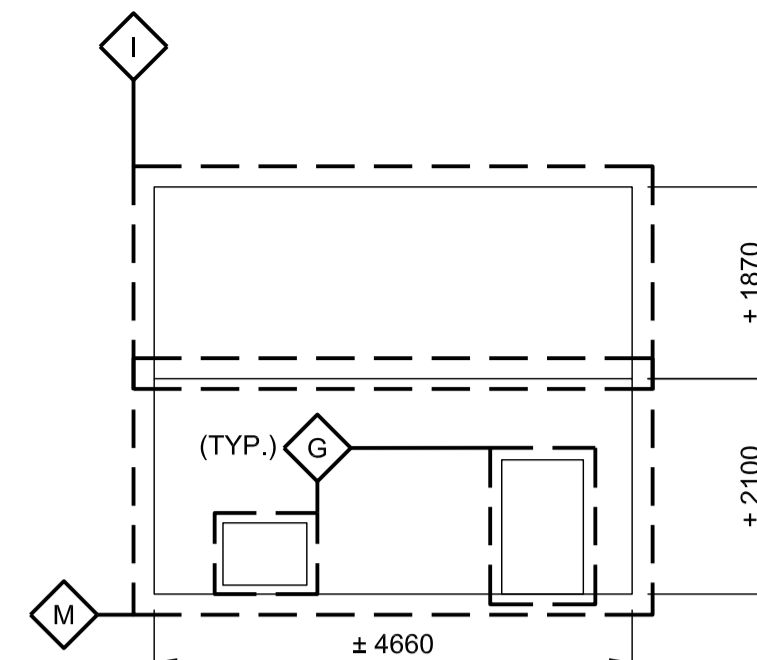
NORTH ELEVATION - STRUCTURE C
ÉLÉVATION NORD - STRUCTURE C

1:75



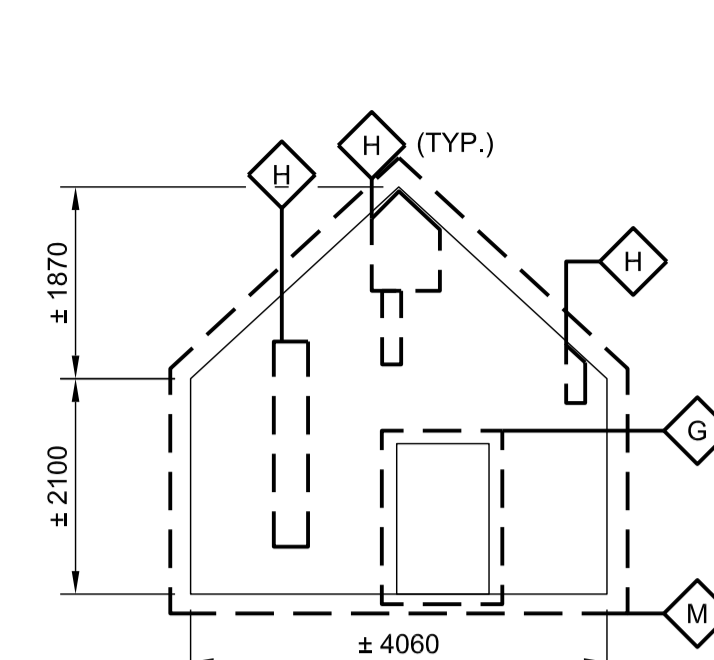
EAST ELEVATION - STRUCTURE C
ÉLÉVATION EST - STRUCTURE C

1:75



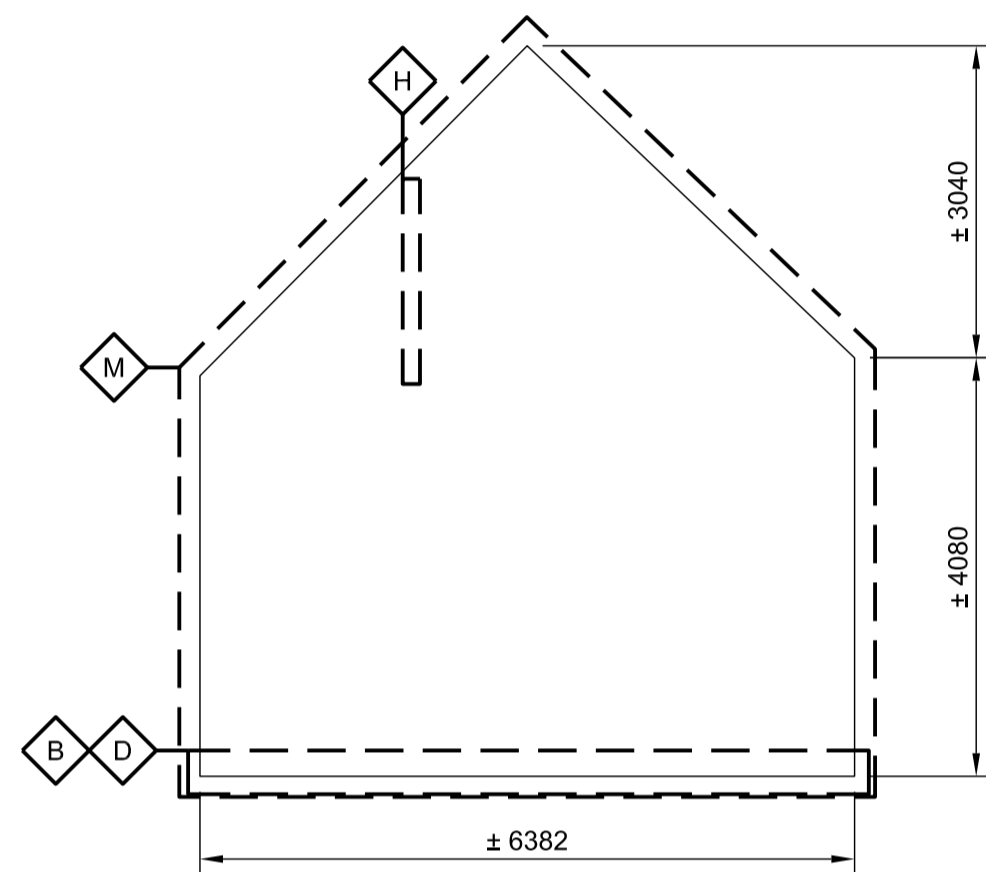
SOUTH ELEVATION - STRUCTURE C
ÉLÉVATION SUD - STRUCTURE C

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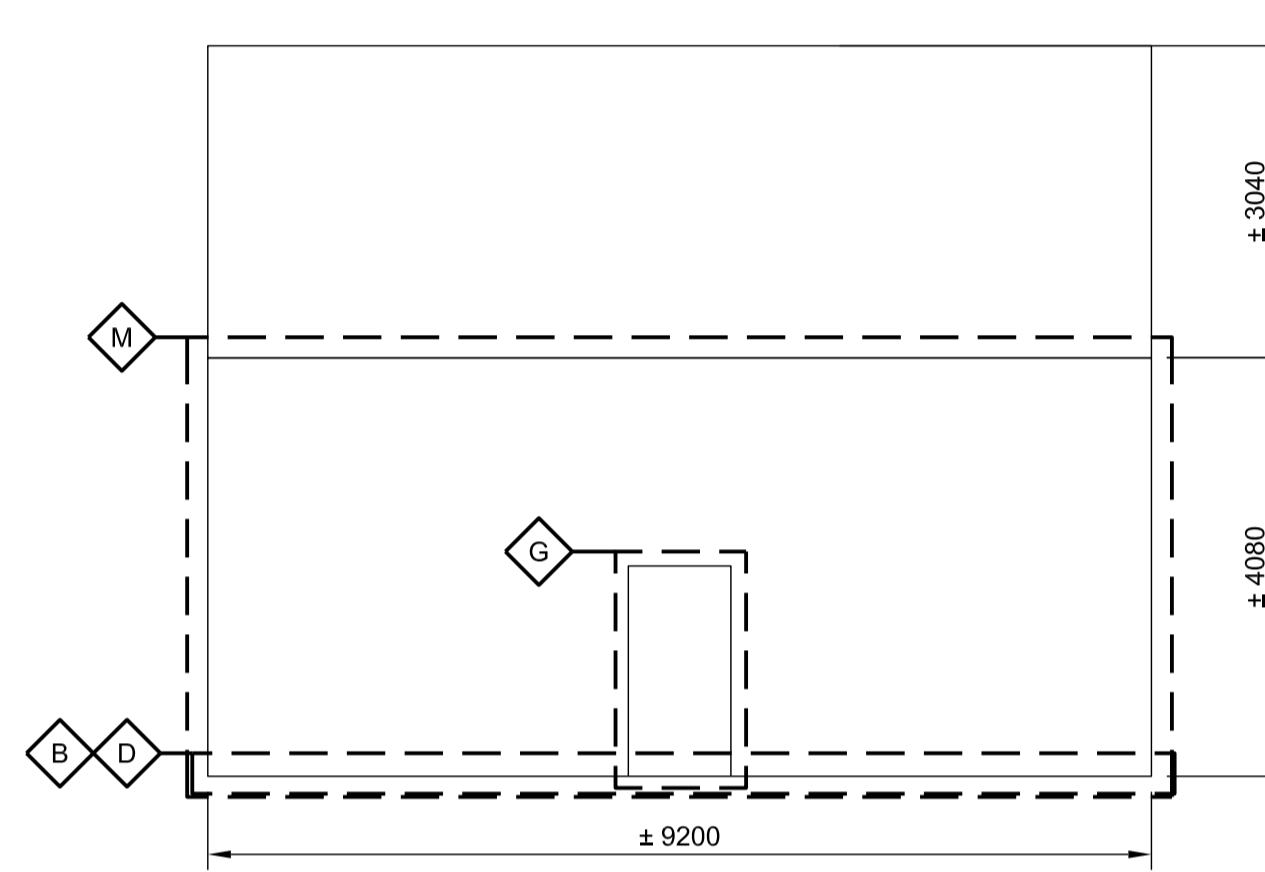
WEST ELEVATION - STRUCTURE C
ÉLÉVATION OUEST - STRUCTURE C

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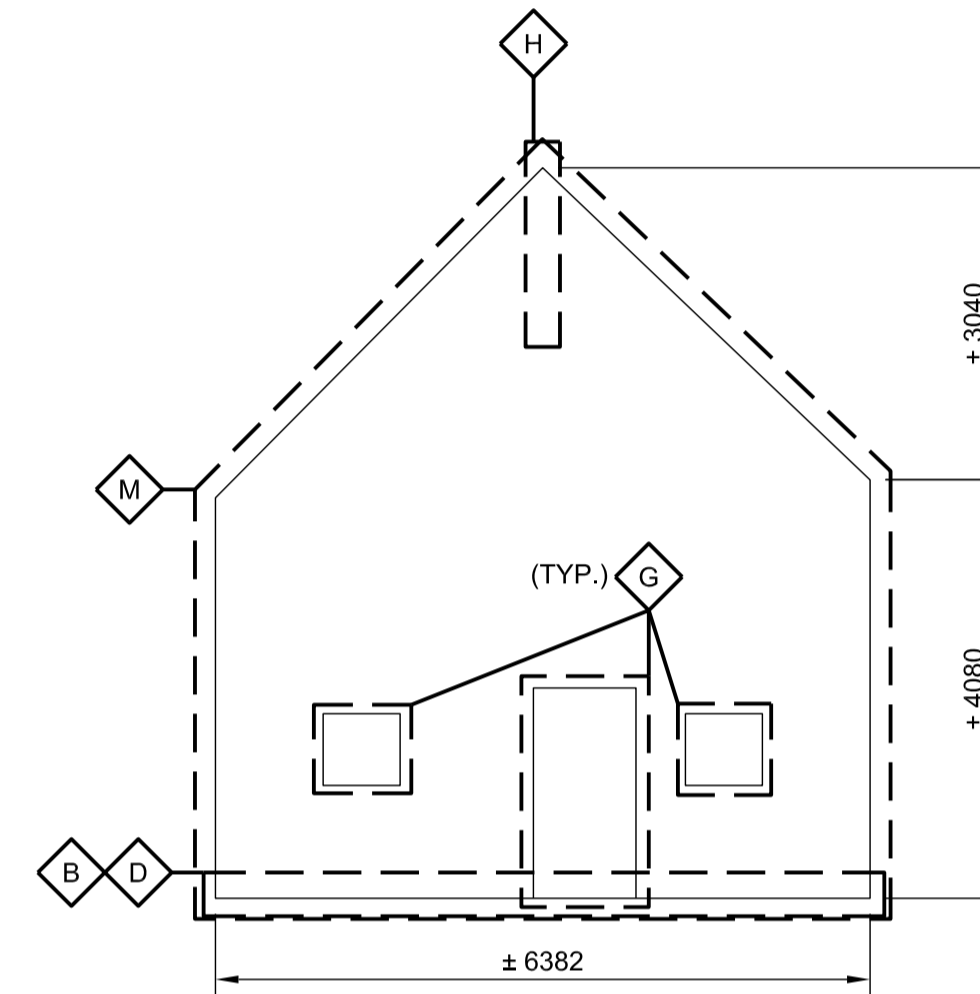
NORTH ELEVATION - STRUCTURE B
ÉLÉVATION NORD - STRUCTURE B

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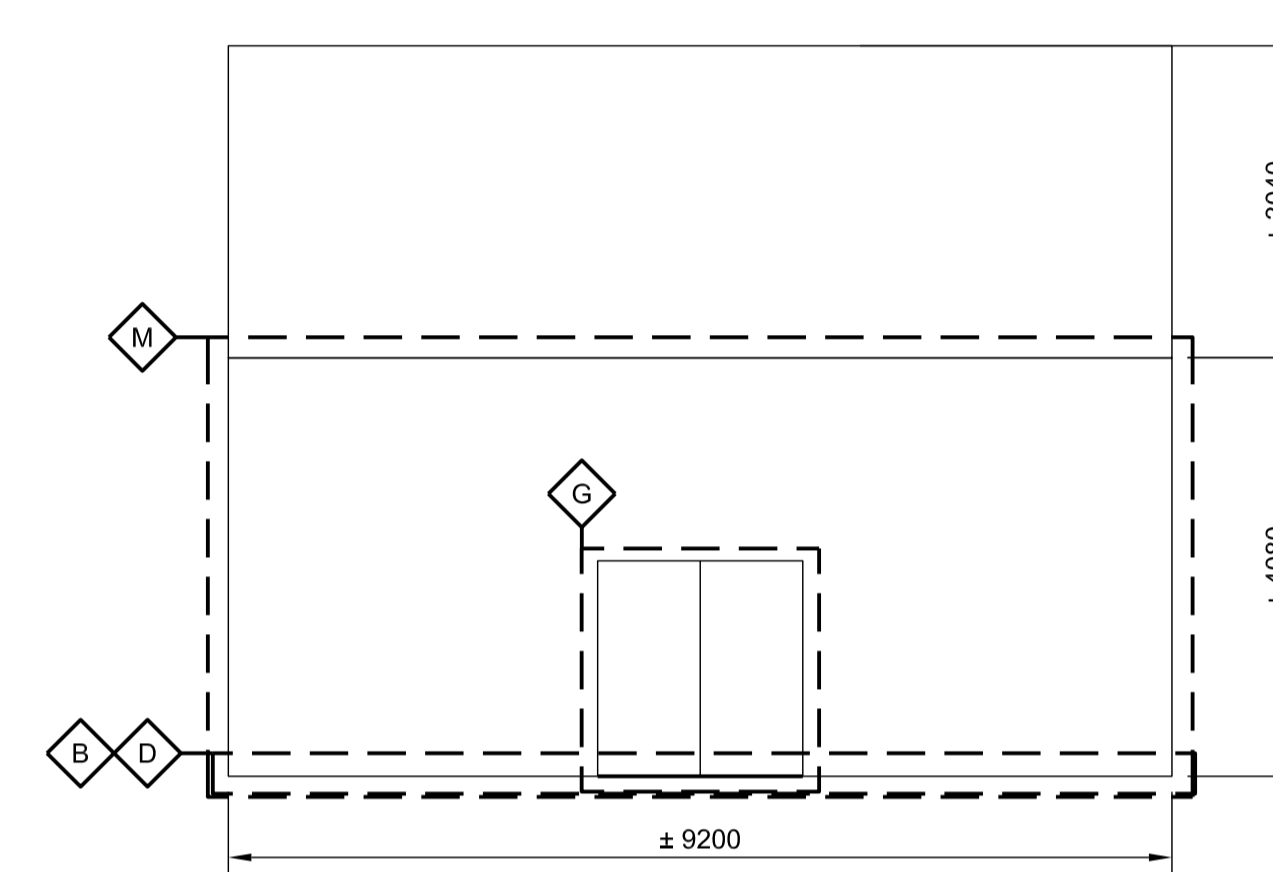
EAST ELEVATION - STRUCTURE B
ÉLÉVATION EST - STRUCTURE B

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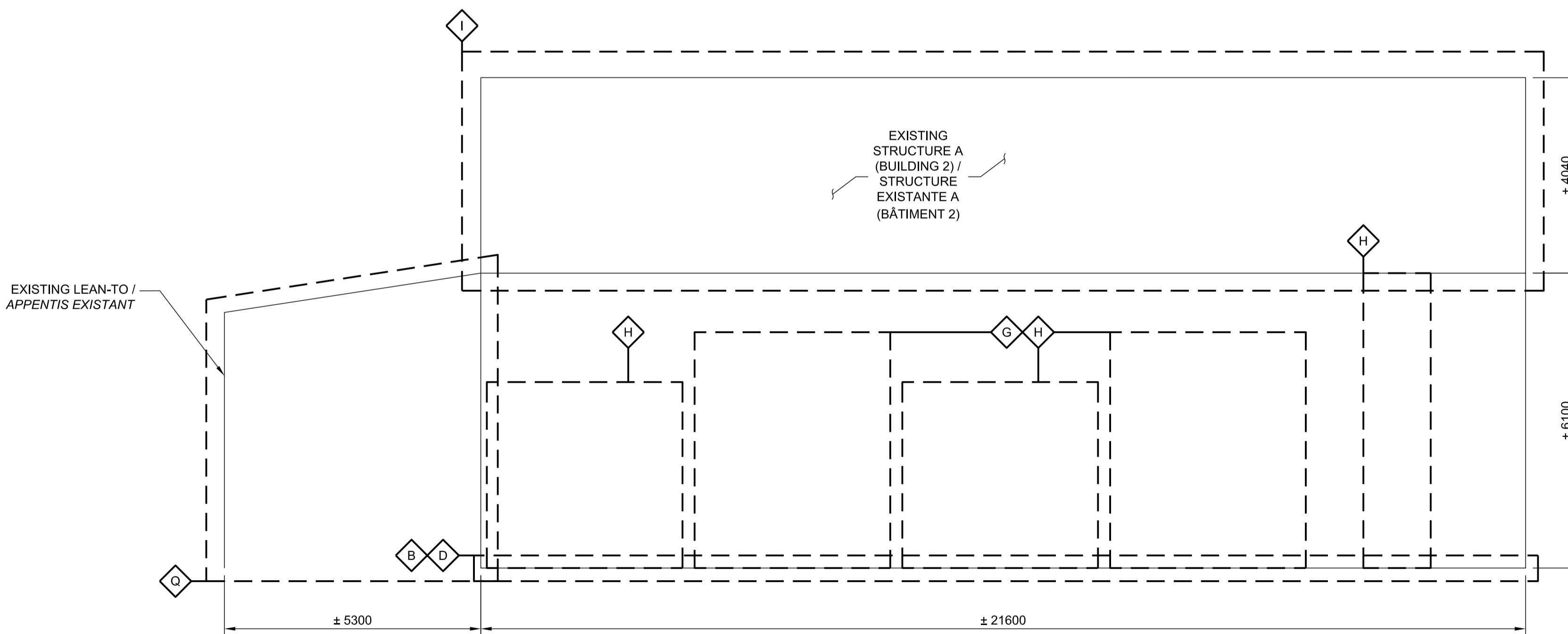
SOUTH ELEVATION - STRUCTURE B
ÉLÉVATION SUD - STRUCTURE B

1:75



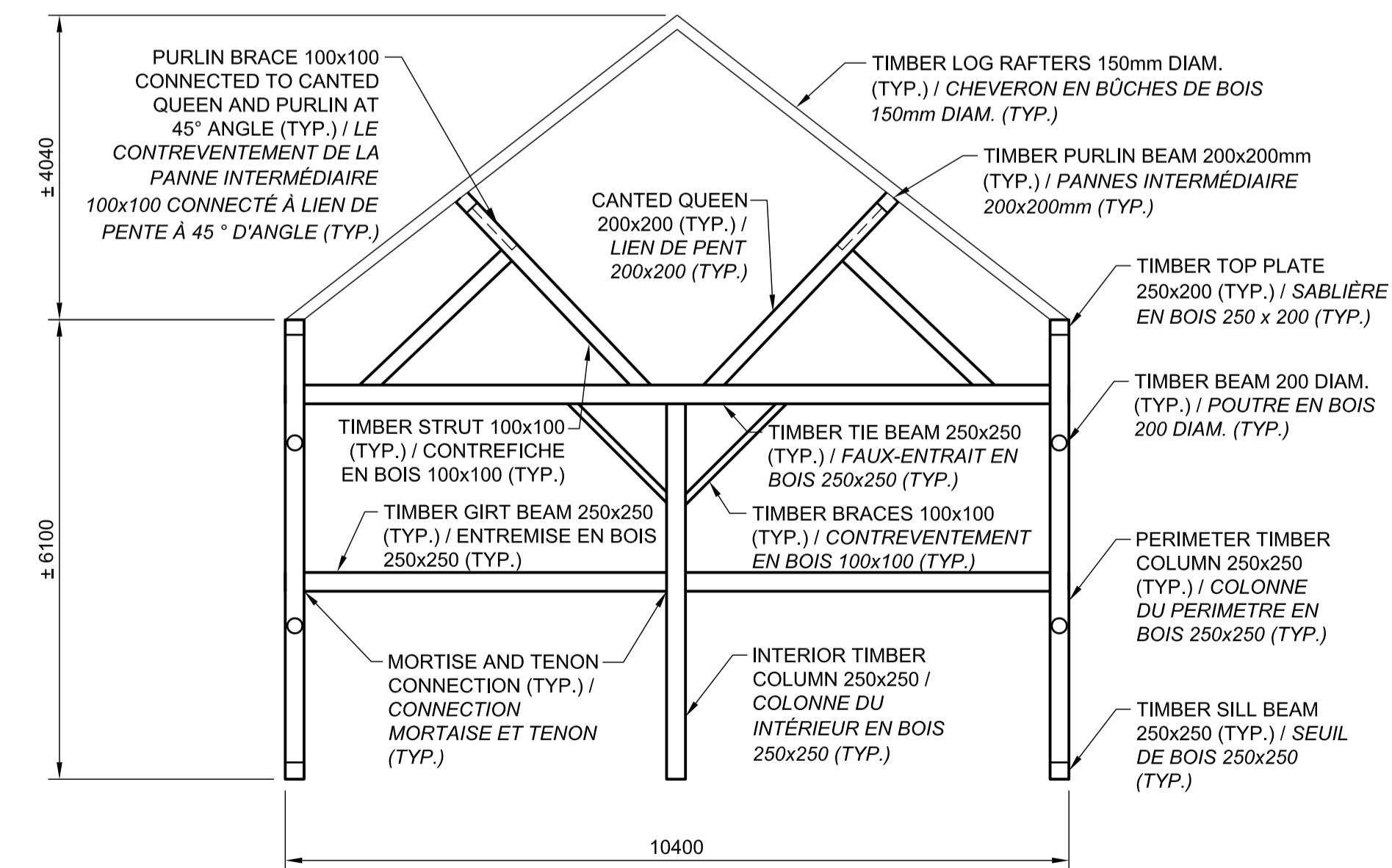
WEST ELEVATION - STRUCTURE B
ÉLÉVATION OUEST - STRUCTURE B

1:75



NORTH ELEVATION - STRUCTURE A
ÉLÉVATION NORD - STRUCTURE A

1:75



TYPICAL BENT ELEVATION - STRUCTURE A (BUILDING 2)
ÉLÉVATION TYPIQUE DE CADRE - STRUCTURE A (BÂTIMENT 2)

1:75

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no.	description	date

project
projet

**RESTORATION OF
139 MARCH ROAD**
**RESTAURATION DU
139 MARCH ROAD**

drawing
dessin

**GENERAL ARRANGEMENTS
EAST AND WEST ELEVATIONS**
**ARRANGEMENT GÉNÉRAL
ÉLÉVATIONS EST ET OUEST**

approved by
approuvé par TASHI DWIVEDI

designed by
conçu par JAN PODLAK

drawn by
dessiné par M.Q.

date 11 OCTOBER 2017 scale
échelle AS SHOWN

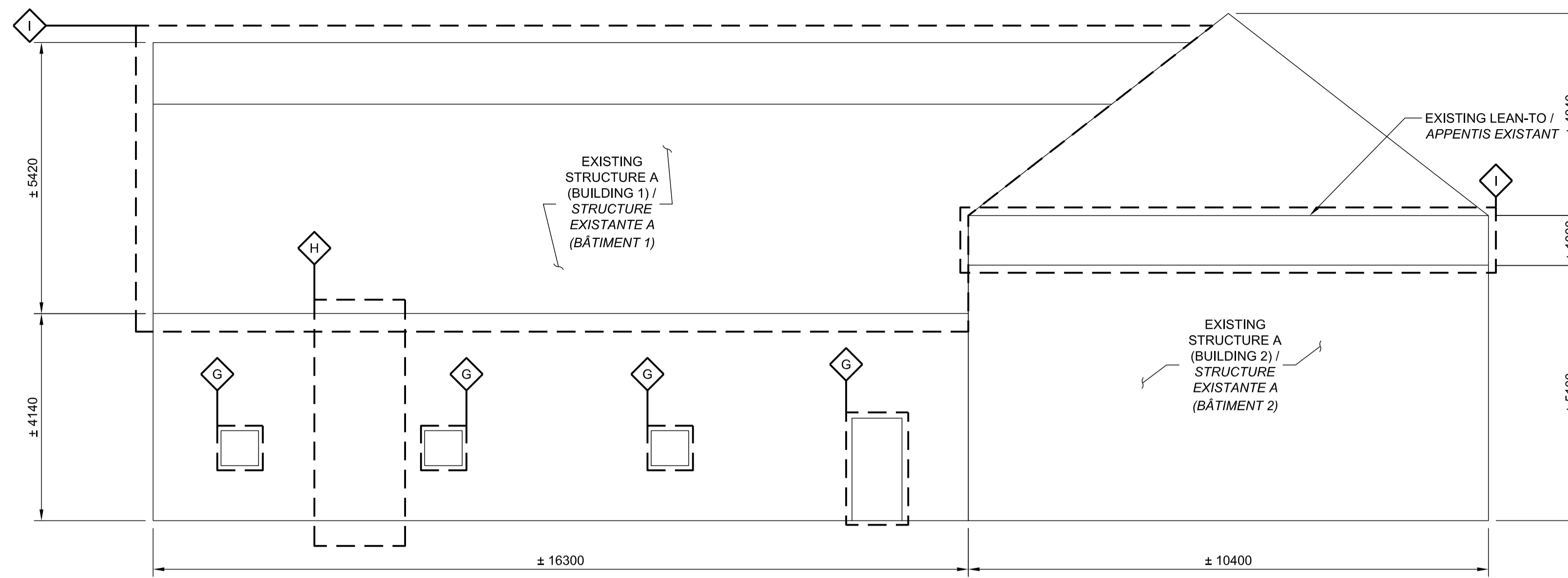
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no. du projet de la CCN no. de la feuille

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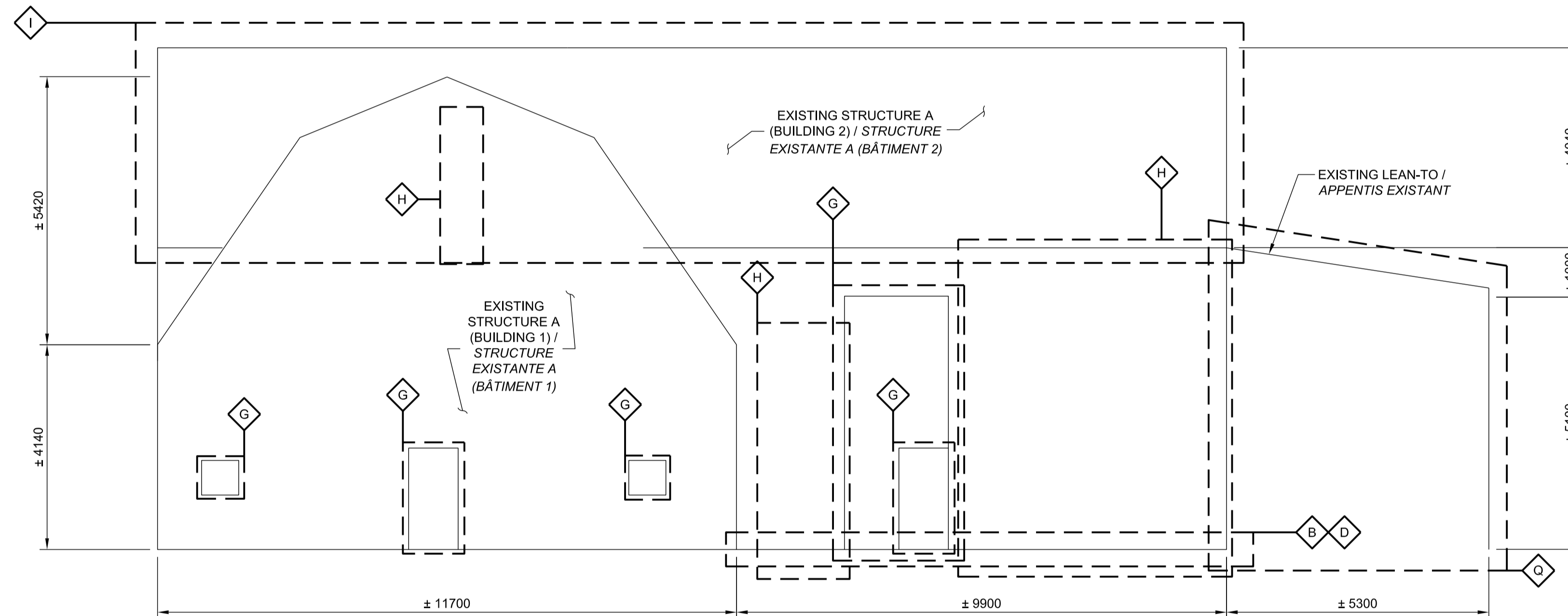
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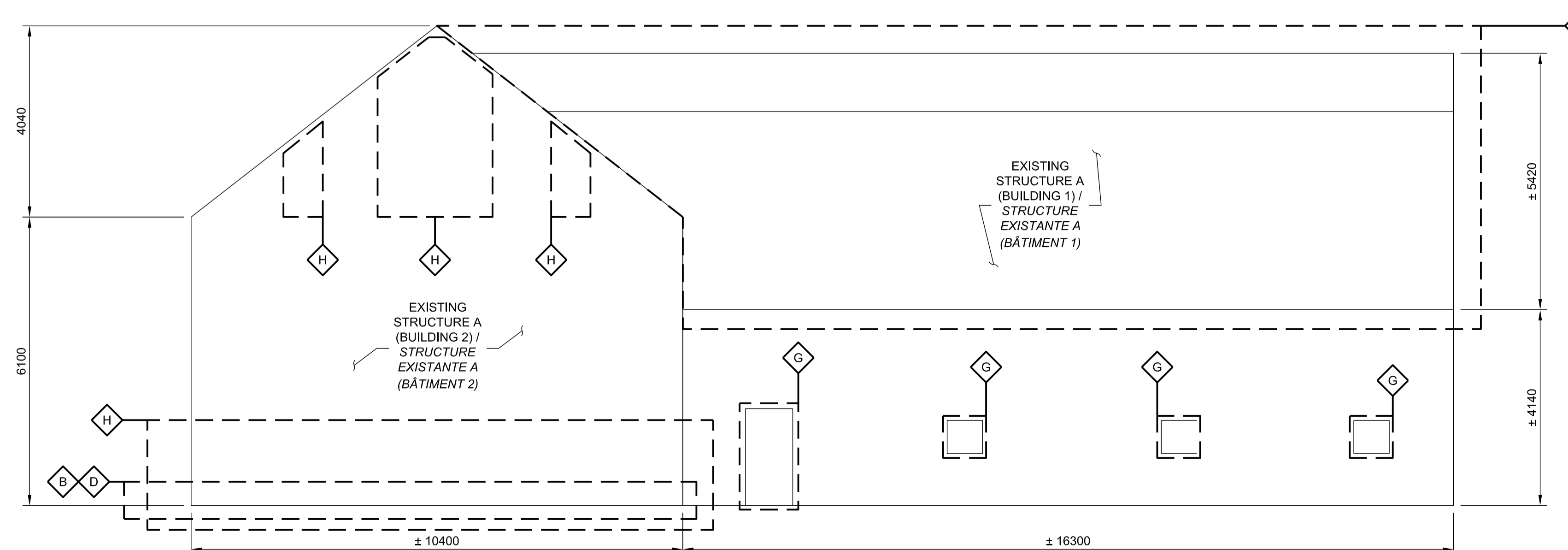
EAST ELEVATION - STRUCTURE A
ÉLÉVATION EST - STRUCTURE A

1:75



SOUTH ELEVATION - STRUCTURE A
ÉLÉVATION SUD - STRUCTURE A

1:75



WEST ELEVATION - STRUCTURE A
ÉLÉVATION OUEST - STRUCTURE A

1:75



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no.	description	date

project
projet

RESTORATION OF
139 MARCH ROAD

RESTAURATION DU
139 MARCH ROAD

drawing
dessin

GENERAL ARRANGEMENTS
NORTH AND SOUTH ELEVATIONS

ARRANGEMENT GÉNÉRAL
ÉLÉVATIONS NORD ET SUD

approved by
approuvé par TASHI DWIVEDI

designed by
conçu par JAN PODLAK

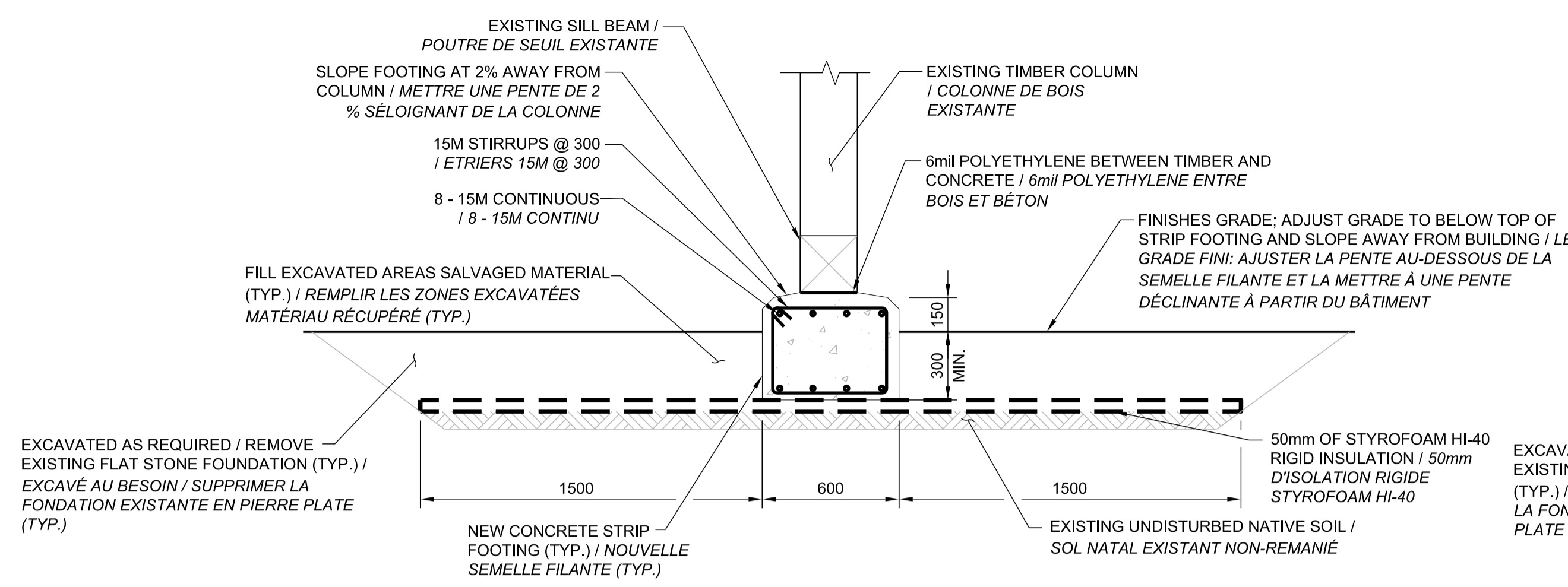
drawn by
dessiné par M.Q.

date 11 OCTOBER 2017 scale AS SHOWN
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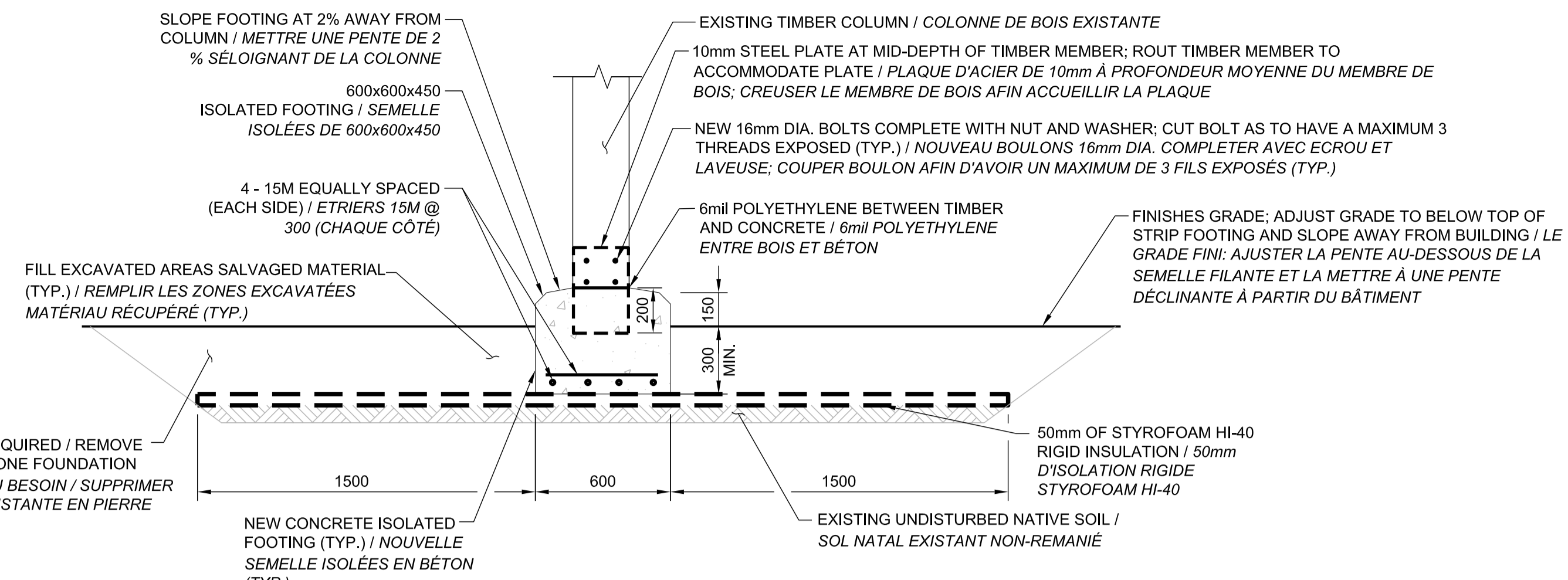
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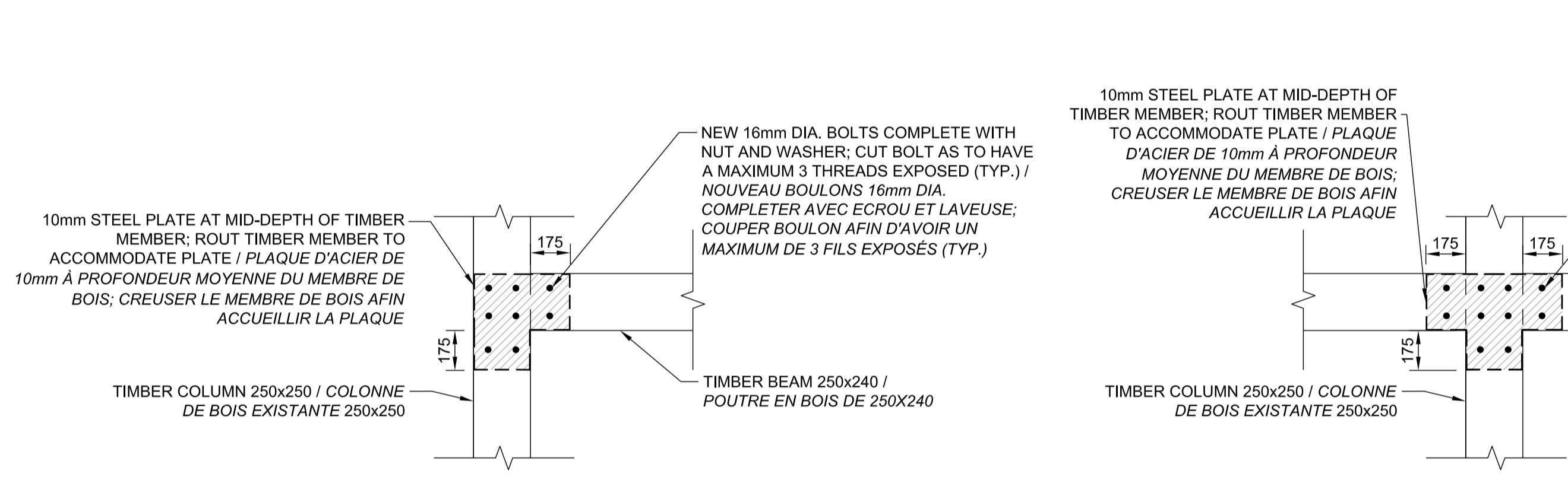
B STRIP FOOTING DETAIL
DÉTAIL SEMELLE FILANTE

1:20



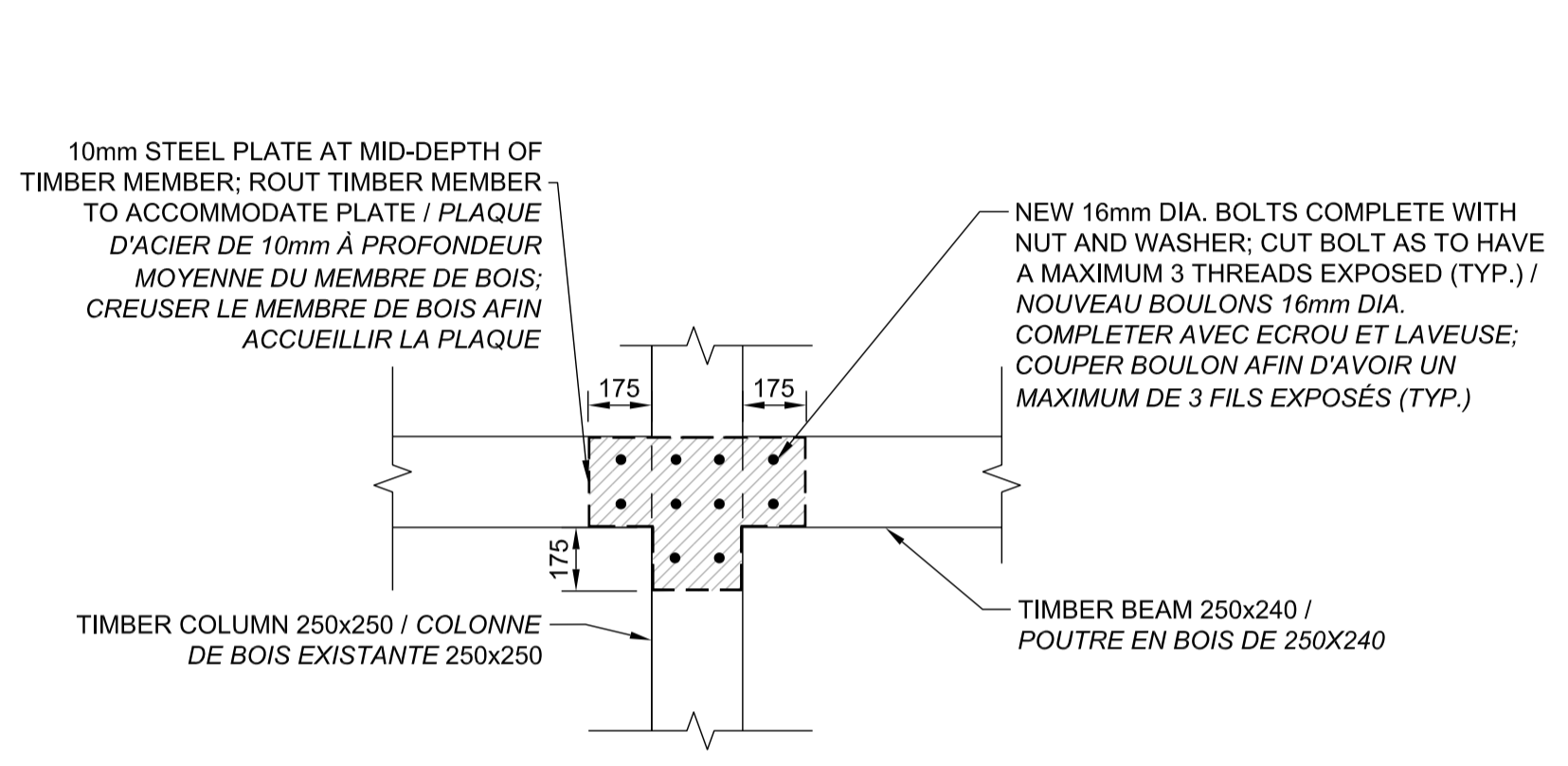
C ISOLATED FOOTING DETAIL
DÉTAIL SEMELLE ISOLÉE

1:20



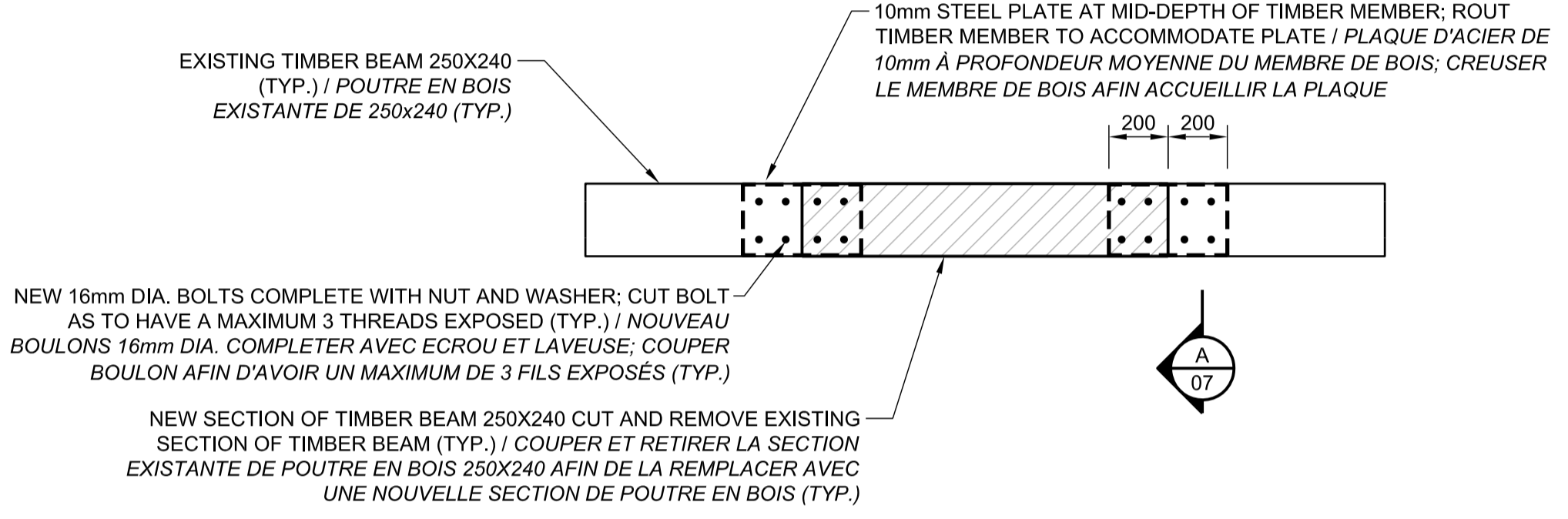
DEFK COLUMN AND BEAM CONNECTION DETAIL 1
DÉTAIL 1 DE CONNEXION DE POUTRE ET COLONNE

1:20



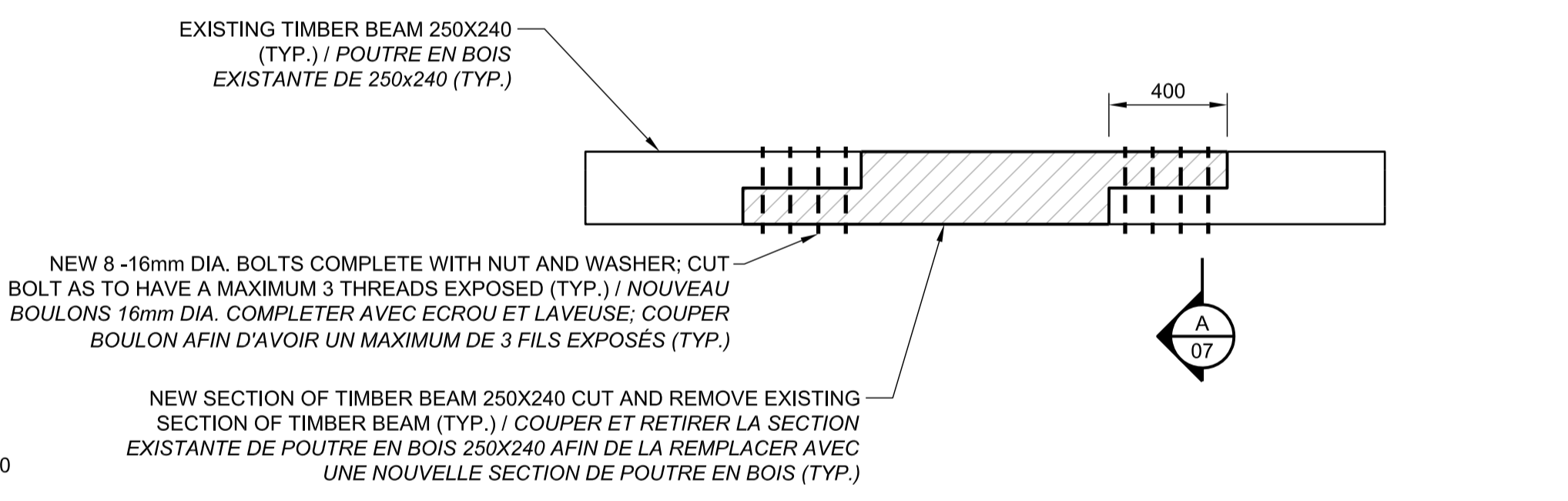
DEFK COLUMN AND BEAM CONNECTION DETAIL 2
DÉTAIL 2 DE CONNEXION DE POUTRE ET COLONNE

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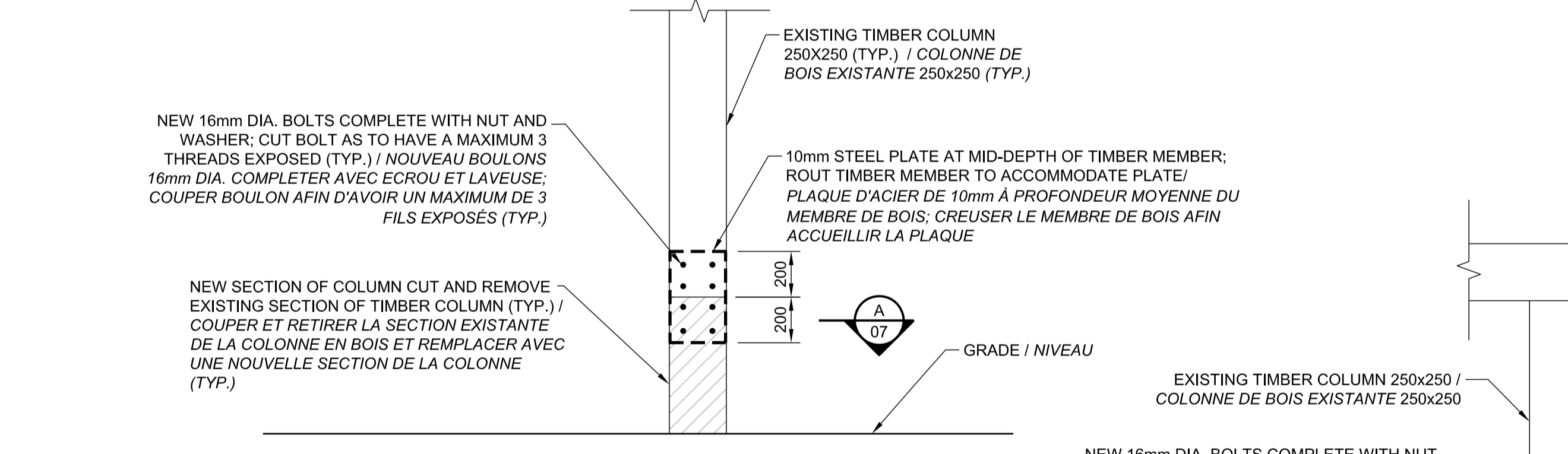
DEK TIMBER BEAM REPLACEMENT DETAIL A
DÉTAIL A DU REMPLACEMENT DE POUTRE EN BOIS

1:20



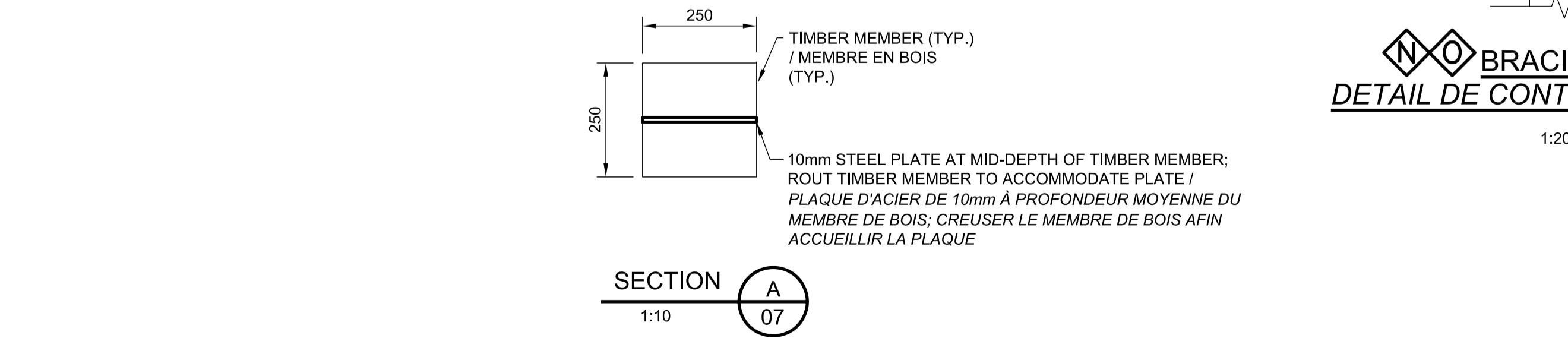
DEK TIMBER BEAM REPLACEMENT DETAIL B
DÉTAIL B DU REMPLACEMENT DE POUTRE EN BOIS

1:20



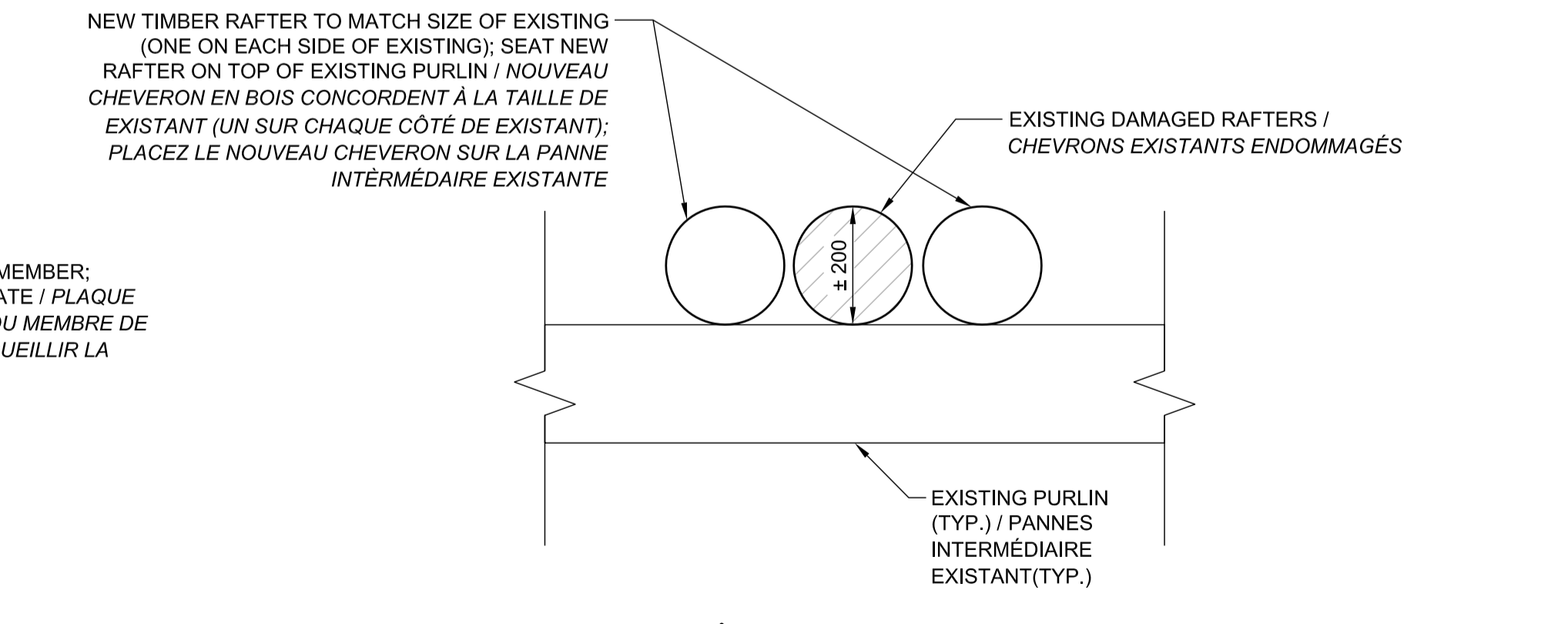
E COLUMN REPAIR DETAIL
DÉTAIL DE RÉPARATION DE COLONNE

1:20



NO BRACING DETAIL
DÉTAIL DE CONTREVENTEMENT

1:20



P RAFTER DETAIL
DÉTAIL DE CHEVRON

1:20



no.	description	date

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RESTORATION OF
139 MARCH ROAD
RESTAURATION DU
139 MARCH ROAD

drawing
dessin

REHABILITATION DETAILS
DÉTAILS DE RÉHABILITATION

approved by
approuvé par TASHI DWIVEDI

designed by
conçu par JAN PODLAK

drawn by
dessiné par M.O.

date
27 FEBRUARY 2018

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sheet no.
no. de la feuille

MMF: Basic Project Mitigation Measures Form

This template is meant to be used by Authorities in determining the significance of potential adverse environmental effects of a proposed basic project, as well as outlining the associated mitigation measures.

Section A: Project Identification

Project Title	Barn Rehabilitation and Restoration (18895)
Project Location	139 March Road, Nepean, ON, K2K 2Y2
Lead Authority	National Capital Commission (NCC)
Contact Name:	Tiera Zukerman
Title:	Junior Environmental Officer
Telephone No.	613-239-5678 x 55611
Email address:	Tiera.Zukerman@ncc-ccn.ca
Other Authority(ies)	N/A
Contact Information (if required)	N/A

Section B: Project Description and Description of the Environment

Project Description:	<p>The NCC plans to rehabilitate and restore three (3) structures located on the property of 139 March Road, Nepean (Appendix 1 and Appendix 2). The restoration of the barns supports the NCC’s Sustainable Agriculture and Food Strategy as well as the Barn Rehabilitation Strategy.</p> <p>The Works are required to inhibit further deterioration and restore the existing structures, as well as resolve health and safety concerns resulting from the observed failure and collapse of structural members (Appendix 3). If the Works are not completed, further deterioration, potential injury, and the possible complete loss of the NCC assets may occur. The Works include following rehabilitation activities (Appendix 4):</p> <p>Barn A1:</p> <ul style="list-style-type: none"> - Replacing 5-10 m² of exterior cladding; - Repairing windows and doors are required; - Painting roof; and - No interior work or foundation work. <p>Barn A2:</p> <ul style="list-style-type: none"> - Replacing 100 m² exterior cladding; - Interior structural repair; - Removal of lean-to structure (dismantled wood components are to be salvaged and reused on other sections of the barns); - Repair and painting roof; and - Installation of a foundation. <p>Shed C:</p> <ul style="list-style-type: none"> - Replacing 5-10 m² of exterior cladding;
-----------------------------	--

- Repairing windows and doors as required;
- Painting roof; and
- No interior or foundation work.

Description of the Environment (if applicable):

The subject property is a rectangular shaped parcel of land located on the east side of March Road, within the NCC Greenbelt. Adjacent land use includes the following:

- West of the subject property is March Road with residential beyond;
- North of the subject property are undeveloped lands (predominantly graminoid forb meadows);
- East of the subject property are undeveloped lands (predominantly graminoid forb meadows), followed by Watts Creek, Pedestrian paths, and agricultural lands beyond, and;
- South of the property are undeveloped lands (predominantly graminoid forb meadows), followed by Corkstown Road and Hwy. 417

Barn A (asset #3491) is described as a large, L-shaped, two-storey structure that was constructed in two phases: the first being a stable barn circa 1905 and the second a cattle barn addition circa 1940. Barn B (asset #94458) is described as a small rectangular, 1 ½ storey structure constructed of horizontal dovetailed square-end logs with a gable roof, built between 1860 and 1890, and thus represents an earlier phase of construction in comparison to the adjacent large barn. Shed C (asset #3493) is described as a small, rectangular, single storey gable-roofed building constructed of vertical milled boards, built in the late 19th century.

Neither the barns nor the shed are designated by FHBRO. The structures are excellent examples of the specific barn typology which they represent.

Tenants, who lease the structures from the NCC, typically use the barns for farming practices, however the current tenant has largely unoccupied the structures to date.

The subject property is designated as Agricultural Resource Area in Schedule B – Urban Policy Plan (March, 2013), of the City of Ottawa Official Plan and designated as Greenbelt Rural and Natural Environment Areas located within the Shirley’s Bay Sector (Greenbelt Master Plan, 2013). General Urban Areas are located west of the subject property (Schedule B – Urban Land Use, City of Ottawa Official Plan, 2013)

The surrounding areas are covered by grassland and shrubs with little overlap between the strata. Shrubs are most abundant close to the structures where mowing does not seem to occur as frequently as in the more open areas. The surveyed flora is typical of fallow or abandoned fields. The most abundant native shrub species is Red elderberry (*Sambucus racemose* subsp. *pubens* var. *pubens*). Vines, such as Riverbank grape (*Vitis riparia*) and Virginia creeper (*Parthenocissus quinquefolia*), are also abundant along some of the buildings walls. The dominant native herbaceous species are Smooth brome (*Bromus inermis*) and Tufted vetch (*Vicia cracca*).

Four (4) species of invasive species are present within the area. Five (5) patches of Manitoba maple (*Acer negundo*) are present around both barns. A patch of Glossy buckthorn (*Frangula alnus*) is present within the north-east section of the Barn A and Common reed (*Phragmites australis* subsp. *australis*) is located near the south-east section of the same barn. Lastly, Reed canary grass (*Phalaris arundinacea*) is also a dominant herbaceous species found around the structures (SMi, 2017).

Between the barns and shed, the ground has been reworked and appears to be composed of embankments as indicated by the presence of compact gravel. The soils within the surrounding fields are made of clay with moderate drainage (SMi, 2017).

Barn swallows (*Hirundo rustica*) are active within the two barns. In total, twenty-one (21) barn swallow nests have been identified on February 1st, 2018; twenty (20) nests located in Barn A2 and one (1) nest located in Barn B (Appendix 5) A Barn swallow compensation structure exists between Barn A1 and Barn B.

Bat surveys found guano within Barn A1. An acoustic survey later confirmed the presence of Big brown bat (*Eptesicus fuscus*), Hoary bat (*Lasiurus cinereus*) and Silver-haired bat (*Lasionycteris noctivagans*) within the area, none of which are species at risk. The sound pattern of five recordings was not characteristic enough to allow bat species identification. The barn has many holes and constant air flow causing varying temperatures, making it unsuitable for either maternity roost or hibernaculum. It is therefore assumed that bats utilize the barn as day roosts during their active season. Guano was not found in the other barn or shed, in which the potential presence of bats was deemed low (SMi, 2017).

Eastern milksnake (*Lampropeltis triangulum*) is listed as a species of special concern under the *Species at Risk Act*. No snakes were observed within the area during an ecological characterization survey however, the agriculture surrounding the structures has a high potential for snake presence (SMi, 2017).

Section C: Resources

Resources consulted

1. **External Expertise :**
 - Environment Canada, Canadian Wildlife Services (CWS)

2. **NCC Internal Expertise :**
 - Camille Tremblay, Biologist
 - Heather Thompson, Heritage
 - Ian Bagley, Archaeology
 - Valerie, Senior Environmental Officer

Section D: Mitigation Measures Requirement

Check the following box if no mitigation measures are required. If mitigation measure are required, proceed to section E.

<input type="checkbox"/>	No mitigation measures are required as one or more of the following conditions apply.
<input type="checkbox"/>	Potential impacts are limited to the interior of a building
<input type="checkbox"/>	There are no potential adverse biophysical and/or socio economic effects
<i>Continue to Section F. Do not complete Section E.</i>	

Section E: Identify Environmental Effects & Mitigation Measures

Summarize the potential adverse environmental effects as well as any corresponding effective and established mitigation measures which will be implemented should the project proceed. Establish if the environmental effect is

biophysical (B.P.) and/or socio-economic (S.E.) by checking the corresponding box for each completed row. Consult Step 3a of the Guide for help determining what constitutes biophysical and socio-economic effects. Add rows as needed.

Environmental Effect	B.P.	S.E.	Effective and Established Mitigation Measure
Improper waste management may result in environmental impacts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> - Green demolition practices will be incorporated into the project: <ul style="list-style-type: none"> o The Contractor will recover, sort, re-use and recycle all demolition materials to the extent practicable o The foundation and floor slab of the building will be crushed and reused as fill in the cavity of the demolished buildings or sent to a recycling facility o The Contractor will ensure that a 100 mm depression is left following removal of the foundation for the final top soil and seeding. o The Contractor will be required to submit a detailed report documenting the volume and type of all materials separated, recovered, recycled, reused and salvaged and that report must be forwarded to NCC's Environmental Services (ESS). During site works, nearby wells that are judged to be at risk may be subject to a monitoring program to ensure that groundwater quantities are not affected by demolition activities. o All unsalvageable and unrecyclable materials must be disposed of at a licensed facility in accordance with provincial and federal standards.
Working without obtaining permits may result in environmental protection non-compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> - The Contractor shall obtain all permits required to complete the Work and submit evidence to the NCC PM. - The Contractor is to inform the NCC Construction PM of the project schedule.
Injuries to public and workers arising from project activities	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> - The Contractor shall take all reasonable steps to ensure the working site does not adversely affect the safety and security of the public and/or workers. - Contractor shall develop and maintain a site specific Health and Safety Policy, including making readily available the directions to the nearest hospital by posting such information in a visible and accessible location. - Existing access roads shall be used to access the site. - The Contractor will install temporary bilingual warning signage and access restrictions (i.e. fencing) on access road in order to prevent access by the public. - The Contractor will maintain the signage in place during construction hours until the completion of site reinstatement. - Prior to commencement of the work, the location and condition of underground and aboveground utility lines will be established and confirmed and care shall be taken not to expose and/or come in contact with utilities. - Heavy machinery must have a backup alarm. - When not in use, turn off all motorized equipment used at the sites.
Increased ambient noise level from construction activity residents and can cause	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> - Working hours of the project will be in compliance with the municipal Bylaw - Speed limits shall be respected and the speed of vehicles on the

<p>permanent hearing loss/damage to construction workers</p>			<p>work site shall be limited.</p> <ul style="list-style-type: none"> - Motorized equipment and other noisy equipment must be equipped with mufflers, acoustic enclosures or other noise-control devices - If necessary, the contractor will provide suitable personal hearing protectors as well as proper instruction in their use to construction workers so that exposed workers can perform their work in a manner which is safe and without risk to their health and safety.
<p>Dust and exhaust emissions from project activities may affect air quality</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> - Use equipment in good working condition and do not allow equipment to idle for extensive periods - Application of water or dust control agent, approved at the provincial level and federal level, using watering trucks, on unpaved surfaces exposed to wind and erosion, in order to minimize dust by keeping the soil wet - Demolition activities that have the potential to release airborne particles will be avoided during extended periods of drought and high winds - Movement of machinery on exposed soil will be minimized - Disturbed areas will be rehabilitated as soon as possible, within the growing season, in order to reduce the duration of soil exposure - Fine materials being transported or stored should be covered with dust suppressing fabric to avoid wind erosion - Fire and garbage burning is strictly prohibited at all time in the construction zone and in the surrounding area
<p>Fuel, oil, lubricant and coolant spills can contaminate soils, surface and groundwater.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> - Fuel or oil storage will be allowed onsite - The Contractor shall develop a response plan familiar to the employer and workers and shall ensure that an emergency spill kit is available at the site at all times in case of accidental spill. - In the event of a spill, the Contractor will immediately clean-up the affected area. The Contractor must contact the NCC 24-hour emergency number 613-239-5353, and the NCC PM. If required, remove and dispose contaminated materials at an appropriately licensed facility. - Ensure that machinery is clean and leak-free on arrival at the work site and subsequently maintain the machinery in this condition by carrying out regular inspections. Place a tarp under the machinery during refuelling. Machinery shall not be washed at the site.
<p>Demolition activity can damage vegetation and soil</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> - The Construction PM and Contractor will view site conditions prior to commencement of work to determine actual site conditions and to photograph structures to be demolished, to delineate work area with construction fencing and to ensure construction and site reinstatement are implemented according to contract conditions. - Protectors will be installed around all trees susceptible to being damaged, at their dripline. - All trees within 2 meters of equipment in operation shall be protected. - Special attention will be made to avoid damaging five (5) Gray birch (<i>Betula populifolia</i>) trees located south of the barns. - If pruning is required it will be done according to the following

			<p>guidelines:</p> <ul style="list-style-type: none"> o Prune approximately 2-3 cm from the base of the branch to avoid pruning flush with main branch/trunk o Use pruning shears, loppers or pruning saw to avoid damaging bark o Cut at an angle to prevent water from entering or accumulating in the cut o Section branches in the adjoining forest, taking care not to damage the understory vegetation, to allow the organic matter to decompose <ul style="list-style-type: none"> - No tree shall be cut without prior authorization from the NCC Environmental Services. - The Contractor will be responsible for replacing all trees (with DBH higher than 10 cm) that have been approved for cutting, or have been badly damaged during the demolition at a 2:1 ratio with native species approved by the NCC Urban Lands Biologist. - Seeding of disturbed area around the construction site will be undertaken using NCC approved seed mixture such as the Ministry of Transportation Ontario (MTO) "Old field mix": <ul style="list-style-type: none"> o Flat-topped Aster – <i>Aster umbellatus</i> o New England Aster – <i>Aster novae angliae</i> o Purple-stemmed Aster – <i>Aster punicens</i> o Canada Goldenrod – <i>Solidago Canadensis</i> o Panicked Aster – <i>Aster simplex/lanceolatus</i> o Heath Aster – <i>Aster ericoides</i> o Grass-leaved Goldenrod – <i>Solidago nemoralisse</i> - Keep soil disturbance to a minimum and the site should be reinstated to its original conditions, or better, including the restoration of both topsoil and native vegetation. Seed mixtures are to follow the NCC portfolio of approved seeding, sodding and mulch. - The Contractor will be held responsible for the appropriate re-establishment of grasses as indicated in the contract.
<p>Inappropriate handling and disposal of designated substances or hazardous building materials can pollute the environment, specifically;</p> <ul style="list-style-type: none"> - Asbestos found within transite cement panels; - Grey wall paint containing lead; - Mercury present in fluorescent light tubes; - Polychlorinated biphenyls (PCBs) potentially present within fluorescent light ballasts; - Silica present in concrete materials, transite cement paneling; and 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> - A Designated Substance Survey (DSS) must be made available to the contractor before the start of the Project. - Any hazardous or designated substances shall be removed from the demolition site by a licensed contractor prior to the demolition taking place. - The hazardous or designated substances shall be sent to an appropriately licensed facility in accordance with provincial and federal standards - The Contractor must provide a copy of receipts to the NCC PM as proof of disposal at a licensed facility. The NCC PM will forward the receipts to NCC Environmental Officer - Asbestos containing materials should be handled and disposed of in accordance with O. Reg. 278/05 following R. R. O. 347/09. - Should grey wall paint be removed, a leachate test will be required for disposal purposes and Hazardous Waste Information Network (HWIN) number will be required to be submitted to the NCC. - Lead containing materials should be handled in accordance with Ministry of Labour's Guidelines (MOL) – Lead on Construction

<ul style="list-style-type: none"> - Bird, bat and other animal feces present throughout the barn. 			<p>Projects (MOL, 2011).</p> <ul style="list-style-type: none"> - Fluorescent light tubes containing mercury must be carefully removed and containerized for disposal in accordance with O. Reg. 347/09. - Fluorescent light ballasts potentially containing PCBs should be separated from the light fixtures, containerized, and removed in accordance with <i>PCB Regulations</i> (2008), SOR/2008-273. - Silica containing materials (concrete and transite cement paneling) should be handled and disposed of in accordance with the MOL – Silica on Construction Projects (MOL, 2011) - To Contractor should be informed of the present of animal feces within the barns. Appropriate PPE should be worn during the renovations to ensure that exposure to animal feces is limited.
<p>Disturbance to potential soil contaminants</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> - If, during excavation activities or soil disturbance, contamination is observed or suspected (i.e. evidence of staining, odours, presence of deleterious materials including ashes, cinders, refuse, glass, bricks, metal, etc.), work must immediately stop and the NCC must be contacted for further instruction.
<p>Traditional use with respect to health and socio-economic conditions, physical and cultural heritage, the current use of lands and resources for traditional purposes, or any structure, site or thing that is of historical, archaeological, paleontological or architectural significance.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> - No concerns relating to traditional use with respect to health and socio-economic conditions, physical and cultural heritage, the current use of lands and resources for traditional purposes were identified by the NCC.
<p>Discovery of archaeological resources</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> - The proposed location has a low potential for pre-contact archaeological resources and confirmed potential for historical archaeological resources. The excavation work must be monitored by the NCC's archaeologist; therefore no excavation work shall take place without the NCC's archaeologist present. - If any archaeological resources or human remains are discovered during demolition work, all work at the location concerned must be halted immediately, and the NCC Heritage Program must be notified forthwith at Archaeology-Archeologie@ncc-ccn.ca and the NCC PM responsible for contacting appropriate authorities. Work shall not be resumed at that location until measures for the protection of those resources or remains have been put in place.
<p>Loss of heritage due to demolition and renovations</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> - A basic heritage recording to document the property will be conducted prior to any work commencing, which will include: <ul style="list-style-type: none"> o A site plan and ground floor plan; and o A photographic record of the barns including main elevations and any notable elements.
<p>Not cleaning and removing the debris at the end of the work could result in dispersion of contaminants in soil, groundwater, surface water and wildlife injury and</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> - The Contractor will remove all debris and solid waste left on site, and if applicable, fencing and signs after completion of the demolition and renovations, before the closing of the site. - The Contractor along with the NCC PM will make a final site inspection of the site to verify that site reinstatement requirements and all building requirements have been completed.

mortality.			
Disturbance to animals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> - Workers will avoid willfully disturbing any wildlife at the site. - Workers must keep the work site clean and must not leave behind garbage or food scraps that may attract animals or alter their behavior. - A Wildlife Protocol¹ (Appendix 6) must be developed and remain on site throughout the entire construction phase of the project. <ul style="list-style-type: none"> o The Wildlife Protocol must include identification tips for potential species at risk (SAR) including: <ul style="list-style-type: none"> • Eastern milksnake (<i>Lampropeltis Triangulum</i>) • Barn swallow (<i>Hirundo rustica</i>) • Bats (<i>Myotis spp.</i>)
Disturbance to migratory birds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> - As per the <i>Migratory Bird Regulations</i> of the 1994 <i>Migratory Birds Convention Act</i>, no person shall (a) disturb, destroy or take a nest, egg, nest shelter, eider duck shelter or duck box of migratory bird, or (b) have in his possession a live migratory bird, or carcass, skin, nest or egg of a migratory bird. - The Works shall take place outside of the nesting period (April 12th – August 28th) - If an active nest of a bird is observed, contact the NCC Environmental Services (ES). The NCC ES will determine whether the nest belongs to a migratory bird and will determine the established mitigation measures to be put in place.
Potential destruction of inactive Barn swallow nests	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> - No harm or destruction is anticipated to affect any of the twenty-one (21) Barn swallow nests located within the barn structures.
The Works may limit access or deter bat species during construction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> - The barns and shed do not meet the ideal conditions to support a maternity roost or hibernaculum. Bat species therefore are assumed to the use Barn A as shelter during the active bat season (early March to October). - The Works are to take place outside of the active bat season (after October 1st) to avoid disturbing bat species, excluding Barn B and Shed C which were deemed low for potential presence of bats. - Should the presence of bat species be found within structures, construction will stop and NCC ES will be contacted for further instructions.
Potential disturbance to snakes, specifically Eastern milksnake	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> - Foundation work on Barn B must be completed prior to October 1st, 2018 to prevent snakes from hibernating under foundation concrete slabs. - Workers will be trained to recognize Eastern milksnake. Should an Eastern milksnake be observed, contact the NCC Environmental Services (ES) for further instruction.
Propagation of invasive plant species through uncleaned machinery and incorrect invasive vegetation removal and disposal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> - The Ontario Invasive Plant Council's (OIPC) best management practices for Glossy buckthorn, Manitoba maple and Common reed should be implemented: <ul style="list-style-type: none"> o On site personnel should know how to identify invasive species or the NCC Biologist shall identify them o Glossy buckthorn, Manitoba maple and Common reed should be removed from the site and set to an approved facility (landfill). Ensure crown root is removed. A weight receipt should be provided the NCC ES. o Clothing, vehicles and equipment should be inspected

			<p>(for dirt, plant material and seeds) and cleaned prior to moving machinery between properties or areas of the site where invasive species are present in one area but not another (Appendix 7).</p> <ul style="list-style-type: none"> o Cleaning of equipment should be done in an area where potential for contamination and seed spread is limited (i.e., gravel or hard surface at least 30 m away from natural vegetation areas) (Appendix 7). o Inspection and cleaning of equipment should be done in accordance with the OIPC Clean Equipment Protocol for Industry (Appendix 7).
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Section F: Determination

Taking into account implementation of mitigation measures outlined in the analysis, this project:

<input checked="" type="checkbox"/>	Is not likely to cause significant adverse environmental effects
<input type="checkbox"/>	Requires further analysis. Complete an Environmental Effects Evaluation (Step 3b)

Section G: Sign-off and Approval

Completed and Implemented by:

Comments: The NCC Construction Supervisor agrees to ensure that the mitigation measures listed in this MMF will be enforced and respected.		
Colin Enright Construction Supervisor National Capital Commission		
	Signature	Date:

Revised by:

Comments: N/A		
Tiera Zukerman Junior Environmental Officer National Capital Commission		
	Signature	Date:

Sign-off and Approval by:

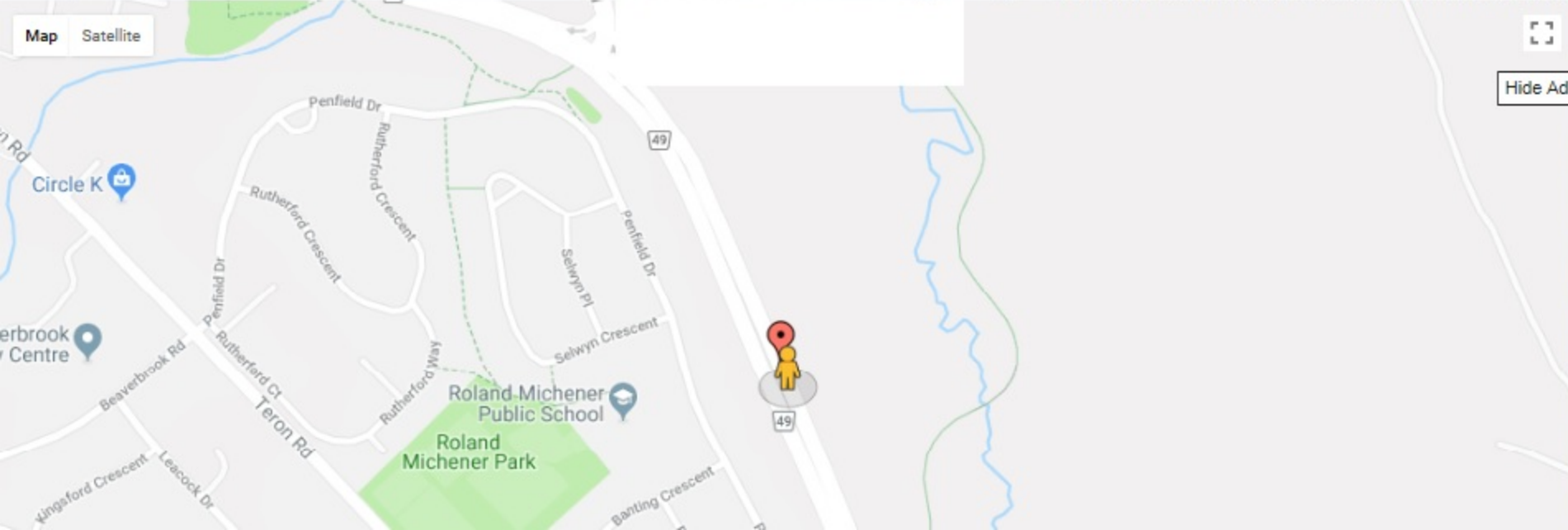
Comments: Taking into account implementation of mitigation measures outlined in this document, the NCC has made the decision that this project is not likely to cause significant adverse environmental effects.		
Valerie Blazeski Senior Environmental Officer The National Capital Commission		
	Signature	Date:

Annex: Resources & References

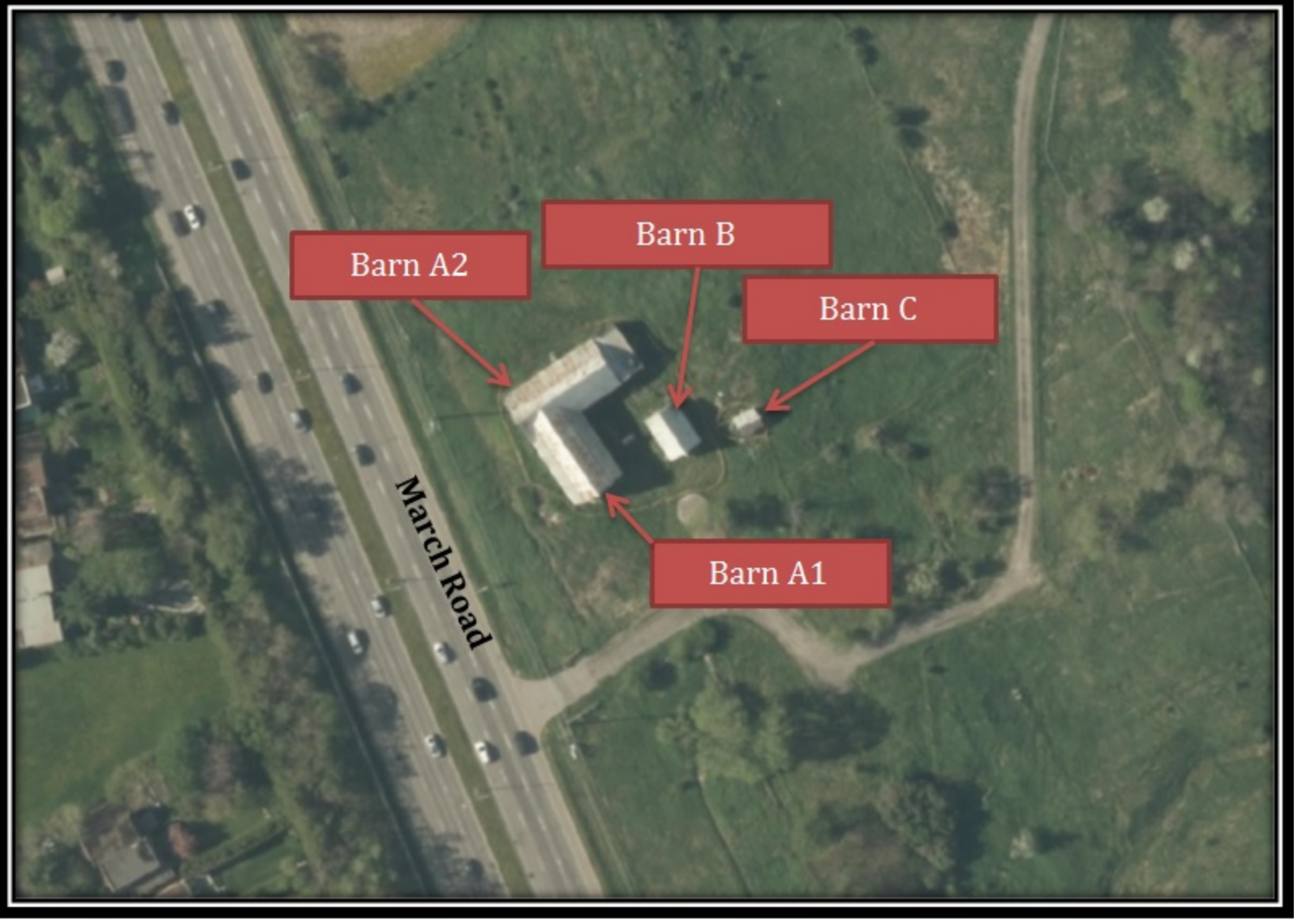
ⁱ City of Ottawa, "Protocol for Wildlife Protection during Construction".
<http://ottwatch.ca/meetings/file/309612/ Document 1 Protocol for Wildlife Protection During Construction pdf Item PROTOCOL FOR WILDLIFE PROTECTION DURING CONSTRUCTION UPDATED Meeting Planning Committee Date 2015 09 22 09 30 00>

APPENDIX 1 – PROJECT LOCATION

March Rd
Ottawa, Ontario
[View on Google Maps](#)



APPENDIX 2 – BUILDING IDENTIFIERS



Barn A2

Barn B

Barn C

Barn A1

March Road

APPENDIX 3 – PROJECT LOCATION PHOTOS













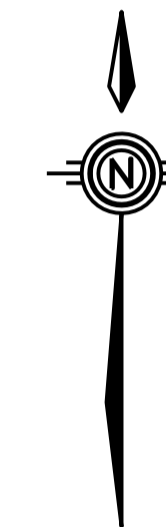




APPENDIX 4 – PROJECT DRAWINGS

NATIONAL CAPITAL COMMISSION

LA COMMISSION DE LA CAPITALE NATIONALE



LIST OF DRAWINGS / LISTE DES DESSINS:

- COVER SHEET / PAGE DE COUVERTURE
- 01. GENERAL ARRANGEMENT FIRST STOREY - PLAN
ARRANGEMENT GÉNÉRAL DU PREMIER ÉTAGE - PLAN
- 02. GENERAL ARRANGEMENT SECOND STOREY - PLAN
ARRANGEMENT GÉNÉRAL DU DEUXIÈME ÉTAGE - PLAN
- 03. GENERAL ARRANGEMENT ROOF - PLAN
ARRANGEMENT GÉNÉRAL DU TOIT - PLAN
- 04. GENERAL ARRANGEMENT EAST AND WEST ELEVATIONS
ARRANGEMENT GÉNÉRAL DES ÉLÉVATIONS EST ET OUEST
- 05. GENERAL ARRANGEMENT NORTH AND SOUTH ELEVATIONS
ARRANGEMENT GÉNÉRAL DES ÉLÉVATIONS NORD ET SUD
- 06. REHABILITATION DETAILS
DÉTAILS DE RÉHABILITATION

RESTORATION OF 139 MARCH ROAD,
OTTAWA, ON, ASSET #3491, ASSET #3493, ASSET #94458
RESTAURATION DU 139 MARCH ROAD, OTTAWA ON, ATOUT
#3491, ATOUT #3493, ATOUT #94458
CONTRACT No./ No. CONTRAT DC-XXXX-XX-XX



no.	description	date

issued or revised
émis ou révisé

project
projet

RESTORATION OF
139 MARCH ROAD
RESTAURATION DU
139 MARCH ROAD

drawing
dessin

GENERAL ARRANGEMENTS
FIRST STOREY - PLAN
ARRANGEMENT GÉNÉRAL DU
PREMIER ÉTAGE - PLAN

approved by
approuvé par TASHI DWIVEDI

designed by
conçu par JAN PODLAK

drawn by
dessiné par M.Q.

date 11 OCTOBER 2017 scale
échelle AS SHOWN

NCC project no. sheet no.
no. du projet de la CCN no. de la feuille

0000176-01 02

GENERAL NOTES / NOTES GÉNÉRALES:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED. / TOUTES LES DIMENSIONS SONT EN MILLIMÈTRES SAUF A INDICATION CONTRAIRE.
- ALL MEASUREMENTS SHALL BE VERIFIED ON SITE AND ANY DISCREPANCIES IMMEDIATELY REPORTED TO THE DESIGN ENGINEER. / TOUTES LES MESURES DOIVENT ÊTRE VÉRIFIÉES SUR LE SITE ET TOUTE DIVERGENCES DOIVENT ÊTRE IMMÉDIATEMENT SIGNALÉES À L'INGÉNIEUR DE LA CONCEPTION.
- REFER TO DRAWING NO. 07 FOR FOUNDATION NOTES. / SE RÉFÉRER AU DESSIN NO. 07 POUR LES NOTES DE FONDATION.
- ALL REPLACED EXTERIOR TIMBER SURFACES OF THE BARN (NOT INCLUDING CORRUGATED STEEL ROOF PANELS AND ROOF FLASHING) SHALL BE PAINTED TO MATCH EXISTING COLOUR. / TOUTES LES SURFACES DE BOIS EXTÉRIEURES REMPLACÉES DE LA GRANGE (SAUF LES PANNEAUX DE TOIT EN ACIER ONDULÉ ET LES SOLIN DE TOIT) DOIVENT ÊTRE PEINTES AFIN DE CORRESPONDRE À LA COULEUR EXISTANTE.
- DESIGN SHOWN ON THIS DRAWING IS INTENDED TO PARTIALLY RESTORE THE STRUCTURE TO ITS ORIGINAL STATE AND PROVIDE EXTENDED SERVICE LIFE. HP ENGINEERING DID NOT REVIEW ANY EXISTING STRUCTURAL ELEMENTS OF THE MAIN BARN INCLUDING ITS FOUNDATIONS AND TIMBER FRAMES AND AS SUCH CANNOT CONFIRM CODE COMPLIANCE. / LA CONCEPTION FIGURANT SUR CE DESSIN EST DESTINÉE À RESTAURER PARTIELLEMENT LA STRUCTURE À SON ÉTAT D'ORIGINE ET À FOURNIR UNE VIE DE SERVICE PROLONGÉE. HP ENGINEERING N'A PAS EXAMINÉ D'ÉLÉMENTS STRUCTURAUX EXISTANTS DE LA GRANGE PRINCIPALE, Y COMPRIS SES FONDATIONS ET CADRES DE BOIS ET PAR CONSÉQUENT NE PEUT CONFIRMER LA CONFORMITÉ DU CODE.
- ALL TEMPORARY SHORING, BRACING AND SUPPORTS NEEDED TO SUPPORT EXISTING STRUCTURE IN ORDER TO PROPERLY COMPLETE THE SPECIFIED WORK SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS STAMPED BY LICENSED ENGINEER IN ONTARIO FOR REVIEW. / TOUTES LES ÉTAIEMENTS, CONTREVENTEMENT ET SUPPORTS TEMPORAIRES NÉCESSAIRES AU SOUTIEN À LA STRUCTURE EXISTANTE AFIN DE COMPLÉTER CORRECTEMENT LES TRAVAUX SPÉCIFIÉS DOIVENT ÊTRE CONÇUS ET FOURNIS PAR L'ENTREPRENEUR. LE CONSTRUCTEUR FOURNIRA DES DESSINS D'ATELIER ÉTAMPÉS PAR L'INGÉNIEUR AUTORISÉ EN ONTARIO.

MOISTURE PROTECTION / PROTECTION D'HUMIDITÉ:

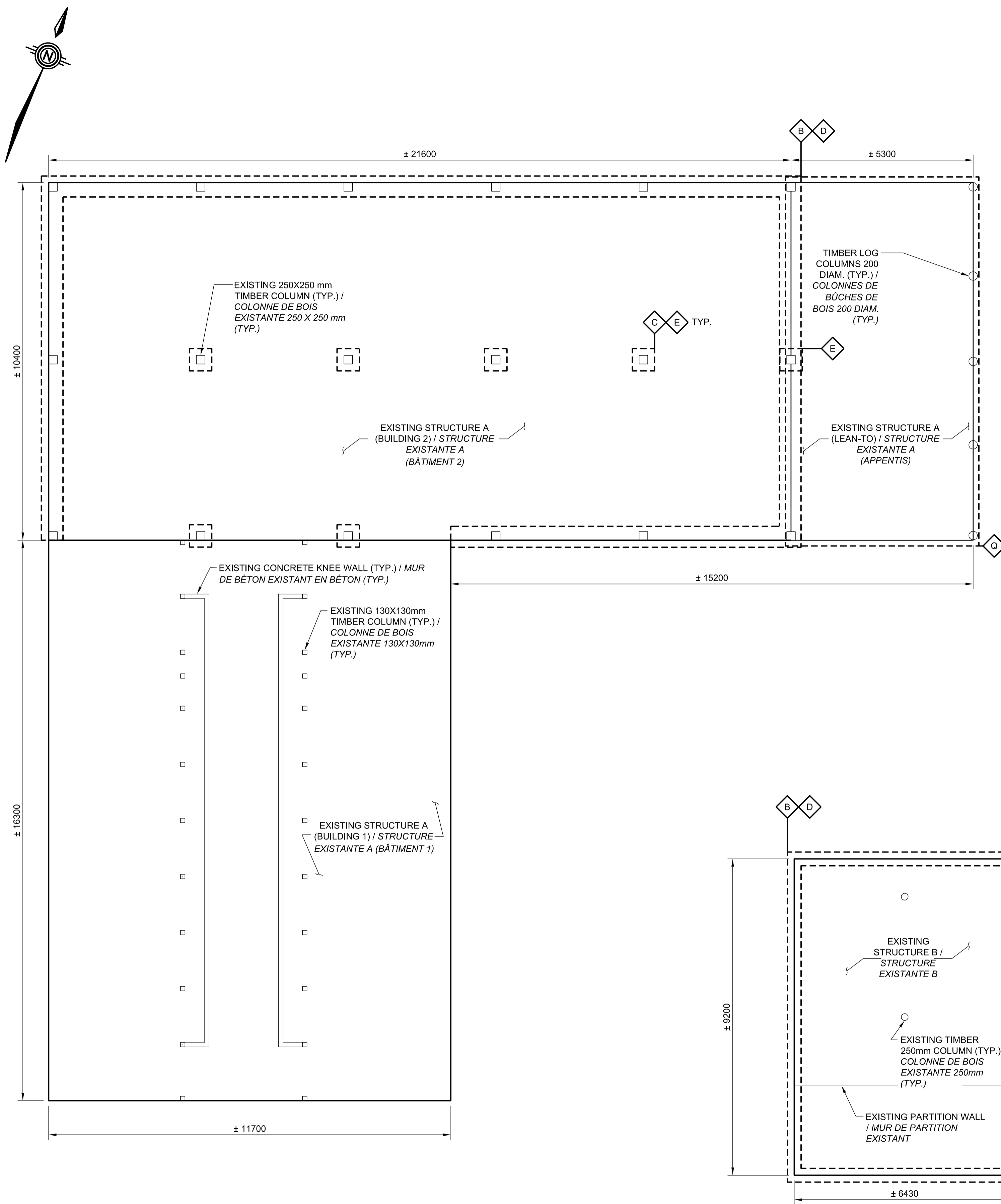
- MOISTURE BARRIER SHALL BE PROVIDED IN ALL AREAS WHERE WOOD IS IN CONTACT WITH CONCRETE. / LA BARRIÈRE CONTRE L'HUMIDITÉ DOIT ÊTRE FOURNIE OU LE BOIS EST EN CONTACT AVEC LE BÉTON.
- DRAINAGE: MAINTAIN EXISTING OVERALL SITE DRAINAGE AWAY FROM PERIMETER OF NEW CONCRETE FOUNDATIONS. / DRAINAGE: MAINTENIR LE DRAINAGE GÉNÉRAL DU SITE EXISTANT LOIN DU PÉRIMÈTRE DES NOUVELLES FONDATIONS DE BÉTON.
- FLASHING TO BE PRE-FINISHED METAL, APPLY AT EXPOSED DOOR AND WINDOW HEADS AND SILLS, WALL PENETRATIONS, AND ALONG SECTION OF WALLS AND ROOFS IN CONTACT WITH NEW ROOF OF SINGLE STOREY BARN ADDITION. / DRAINAGE: MAINTENIR LE DRAINAGE GÉNÉRAL DU SITE EXISTANT LOIN DU PÉRIMÈTRE DES NOUVELLES FONDATIONS DE BÉTON.
- ALL PRE-FINISHED METAL FLASHING SHALL BE 26 GAUGE, UNLESS OTHERWISE NOTED. / TOUS LES ÉCLATS MÉTALLIQUES PRÉ-FINIS DOIVENT ÊTRE DE 26 JAUGES, SAUF INDICATION CONTRAIRE.
- INSTALL CORRUGATED METAL ROOFING AS PER MANUFACTURER'S STANDARD DETAILS. / INSTALLER LA TOITURE MÉTALLIQUE ONDULÉE SELON LES DÉTAILS STANDARDS DU FABRICANT.

MATERIAL NOTES / NOTES MATÉRIELLES:

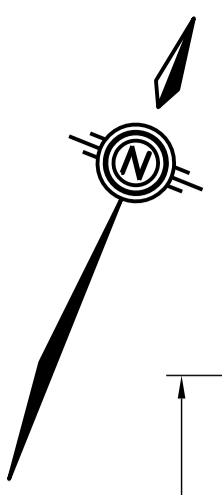
- CONCRETE / BÉTON
 - CONCRETE WORK SHALL COMPLY WITH CAN/CSA-A23.1-14 / LE BÉTON EST CONFORME À LA NORME CAN / CSA-A23.1-14
 - EXPOSURE CLASS OF CONCRETE SHALL BE A-2 (32 MPa) / CLASSE D'EXPOSITION DU BÉTON DOIT ÊTRE A-2 (32 MPa)
 - CLEAR COVER TO REINFORCING STEEL: 60 ± 10mm / COUVERTURE NET POUR ACIER RENFORCEMENT: 60 ± 10mm
 - CLEAR COVER OF UNDERSIDE OF FOOTING TO REINFORCING STEEL: 75 ± 10mm / COUVERTURE NET DU DESSOUS DE L'EMPALEMENT À L'ACIER: 75 ± 10mm
 - GRADE OF REINFORCING STEEL: GRADE 400 MPa / GRADE DE L'ACIER DE RENFORCEMENT: GRADE 400 MPa
- TIMBER / BOIS:
 - ALL TIMBER MEMBERS SPECIFIED SHALL BE SPECIES: SPF AND GRADE No.1/No.2 / TOUS LES MEMBRES EN BOIS SPÉCIFIÉS SONT DES ESPÈCES: SPF ET GRADE N° 1 / N° 2
 - ALL TIMBER FRAMING SHALL CONFORM TO N.B.C. STANDARDS / TOUS LES CADRES EN BOIS SE CONFORMENT AU NORMES N.B.C.
 - ALL SHEATHING SHALL BE FASTENED AS PER N.B.C. STANDARDS / TOUTES LES REVÊTEMENTS SERONT FIXÉS SELON LES NORMES N.B.C.
 - TIMBER LOG BEAMS AND OTHER TIMBER MEMBERS SHALL BE REPLACED WITH NEW SIMILARLY DIMENSIONED TIMBER ELEMENTS / LES POUTRES EN BOIS ROND ET LES AUTRES PIÈCES DE BOIS DOIVENT ÊTRE REMPLACÉES PAR DE NOUVEAUX ÉLÉMENTS EN BOIS DE DIMENSION SIMILAIRES
 - NAILS: SQUARE BOX NAILS TYPICAL TO THE CONSTRUCTION PERIOD / CLOUS: CLOUS CARRÉS TYPÉTIQUES À LA PÉRIODE DE CONSTRUCTION
 - CLASS OF BOLTS: ASTM A325 C/W MATCHING NUTS AND WASHERS; HOT DIPPED GALVANIZED TO ASTM A123 / CLASSE DE BOULONS: ASTM A325 C / W ECROUS ET RONDELLES; GALVANISÉ À CHAUD ET GALVANISÉ SELON L'ASTM A123
 - GALVANIZING: ALL FASTENERS SHALL BE GALVANIZED. GALVANIZING SHALL BE IN ACCORDANCE WITH ASTM A123M-17 / GALVANISATION: TOUS LES ATTACHES DOIVENT ÊTRE GALVANISÉES. LA GALVANISATION EST CONFORME À LA NORME ASTM A123M-17

SCOPE OF WORK:

- A** MOBILIZE TO SITE / MOBILISER AU SITE
- B** REMOVE EXISTING FLAT STONE FOOTING BELOW EXTERIOR WALLS OF EXISTING MAIN BARN BUILDING (STRUCTURE A, BUILDINGS 1 AND 2) AND CONSTRUCT NEW CONCRETE STRIP FOOTINGS; PROVIDE TEMPORARY SUPPORT FOR EXISTING STRUCTURE AS REQUIRED / RETIRER LES EMPATEMENT EXISTANTS EN PIERRE PLATE EN DESSOUS DE MURS EXTÉRIEURS DU BÂTIMENT PRINCIPAL EXISTANT (STRUCTURE A, BÂTIMENTS 1 ET 2) ET CONSTRUIRE DE NOUVELLES PIÈDES EN BÉTON; FOURNIR UN SOUTIEN TEMPORAIRE À LA STRUCTURE EXISTANTE AU BESOIN
- C** CONSTRUCT NEW CONCRETE ISOLATED FOOTING UNDER EXISTING TIMBER COLUMNS; PROVIDE TEMPORARY SUPPORT FOR EXISTING STRUCTURE AS REQUIRED / CONSTRUIRE DE NOUVELLES SEMELLES ISOLÉS EN BÉTONS SOUS LES COLONNES DE BOIS EXISTANTES; FOURNIR UN SOUTIEN TEMPORAIRE À LA STRUCTURE EXISTANTE AU BESOIN
- D** REMOVE AND REPLACE SELECTED SECTIONS OF EXISTING TIMBER SILL BEAM ALONG PERIMETER OF STRUCTURE / ENLEVER ET REMPLACER LES SECTIONS CHOISIES DE POUTRES DE SEUIL DE BOIS EXISTANTES LE LONG DU PÉRIMÈTRE DE LA STRUCTURE
- E** REMOVE AND REPLACE SELECTED SECTIONS OF EXISTING TIMBER COLUMNS OF STRUCTURE / RETIRER ET REMPLACER LES SECTIONS CHOISIES DES COLONNES DE BOIS EXISTANTES LE LONG DU PÉRIMÈTRE DE LA STRUCTURE
- F** REMOVE AND REPLACE SELECTED SECTIONS OF EXISTING TIMBER BEAM / RETIRER ET REMPLACER LES SECTIONS CHOISIES DES POUTRES DE BOIS EXISTANTES LE LONG DU PÉRIMÈTRE DE LA STRUCTURE
- G** REMOVE AND REPLACE SELECTED VERTICAL TIMBER DOOR AND WINDOW FRAME MEMBERS IN KIND ALONG PERIMETER OF BARN / ENLEVER ET REMPLACER LES ÉLÉMENTS DE CADRE DE PORTE ET DE FENÊTRE EN BOIS VERTICAUX SÉLECTIONNÉS EN NATURE LE LONG DU PÉRIMÈTRE DES GRANGES
- H** REMOVE AND REPLACE SELECTED EXISTING EXTERIOR TIMBER SIDING PANELS AND PAINT TO MATCH EXISTING / ENLEVER ET REMPLACER LES PANNEAUX DE PAREMENT EXTÉRIEURS EN BOIS SÉLECTIONNÉS ET PEINTURER LES PANNEAUX AFIN DE CORRESPONDRE À LA PEINTURE EXISTANTE
- I** REMOVE AND SALVAGE METAL ROOF SHEATHING IN ORDER TO EXPOSE TIMBER PLANK SHEATHING. REPLACE SELECTED TIMBER PLANK SHEATHING MEMBERS, REINSTATE AND PAINT METAL ROOF SHEATHING WITH SALVAGED AND NEW MATERIAL AS REQUIRED / ENLEVER ET RETIRER LE REVÊTEMENT DE TOIT MÉTALLIQUE AFIN D'EXPOSER LE REVÊTEMENT DE PLANCHES DE BOIS. REMPLACER LES ÉLÉMENTS DE REVÊTEMENT DE PLANCHES DE BOIS SÉLECTIONNÉS, RÉINSTALLER ET PEINDRE LE REVÊTEMENT DE TOIT MÉTALLIQUE AVEC DES MATÉRIELLES RÉCUPÉRÉS ET NOUVEAUX AU BESOIN
- J** REMOVE EXISTING DAMAGED METAL ROOF SHEATHING. SUPPLY AND INSTALL NEW METAL ROOF SHEATHING / ENLEVER LE REVÊTEMENT DE TOIT EN MÉTAL ENDOMMAGÉ EXISTANT, FOURNIR ET INSTALLER UN NOUVEAU REVÊTEMENT DE TOIT EN MÉTAL
- K** REMOVE AND REPLACE SELECTED SECTIONS OF EXISTING TIMBER TOP PLATE ALONG PERIMETER OF BARN / RETIRER ET REMPLACER LES SECTIONS SÉLECTIONNÉES DE LA SABLIERE EN BOIS EXISTANTE LE LONG DU PÉRIMÈTRE DES GRANGES
- L** REMOVE AND REPLACE SELECTED EXISTING FLOOR DECKING MEMBERS / ENLEVER ET REMPLACER LES PANNEAUX DE PLANCHER EXISTANTS
- M** REMOVE AND SALVAGE INTERIOR/ EXTERIOR SHEATHING AS REQUIRED TO EXPOSE POSTS, REINSTATE INTERIOR/EXTERIOR SHEATHING INCLUDING SUPPLY AND INSTALL NEW SHEATHING TO MATCH EXISTING AS REQUIRED / ENLEVER ET RETIRER LE REVÊTEMENT INTÉRIEUR / EXTÉRIEUR AU BESOIN POUR EXPOSER LES POSTES, RÉINSTALLER LE REVÊTEMENT INTÉRIEUR / EXTÉRIEUR INCLUANT L'ALIMENTATION ET INSTALLER UN NOUVEAU REVÊTEMENT POUR CORRESPONDRE AUX EXIGENCES REQUIS
- N** SUPPLY AND INSTALL NEW TIMBER BRACING MEMBERS (100x100mm) / FOURNIR ET INSTALLER DE NOUVEAUX ÉLÉMENTS DE CONTREVENTEMENT EN BOIS (100x100mm)
- O** SUPPLY AND INSTALL NEW PURLIN TIMBER BRACING MEMBERS (100x100mm) / FOURNIR ET INSTALLER DE NOUVEAUX ÉLÉMENTS DE CONTREVENTEMENT POUR LA PANNE INTERMÉDIAIRE (100x100mm)
- P** SUPPLY AND INSTALL NEW TIMBER LOG RAFTERS / FOURNIR ET INSTALLER DE NOUVEAUX CHEVRONS EN BOIS ROND
- Q** REMOVE LEAN-TO STRUCTURE, SALVAGE AND RE-USE MATERIALS AS REQUIRED ON OTHER STRUCTURES / ENLEVER LA STRUCTURE D'APPENTIS, RÉCUPÉRER ET RÉUTILISER LES MATÉRIELLES COMME REQUIS SUR D'AUTRES STRUCTURES



PLAN - FIRST FLOOR
PLAN - PREMIER ÉTAGE
1:75



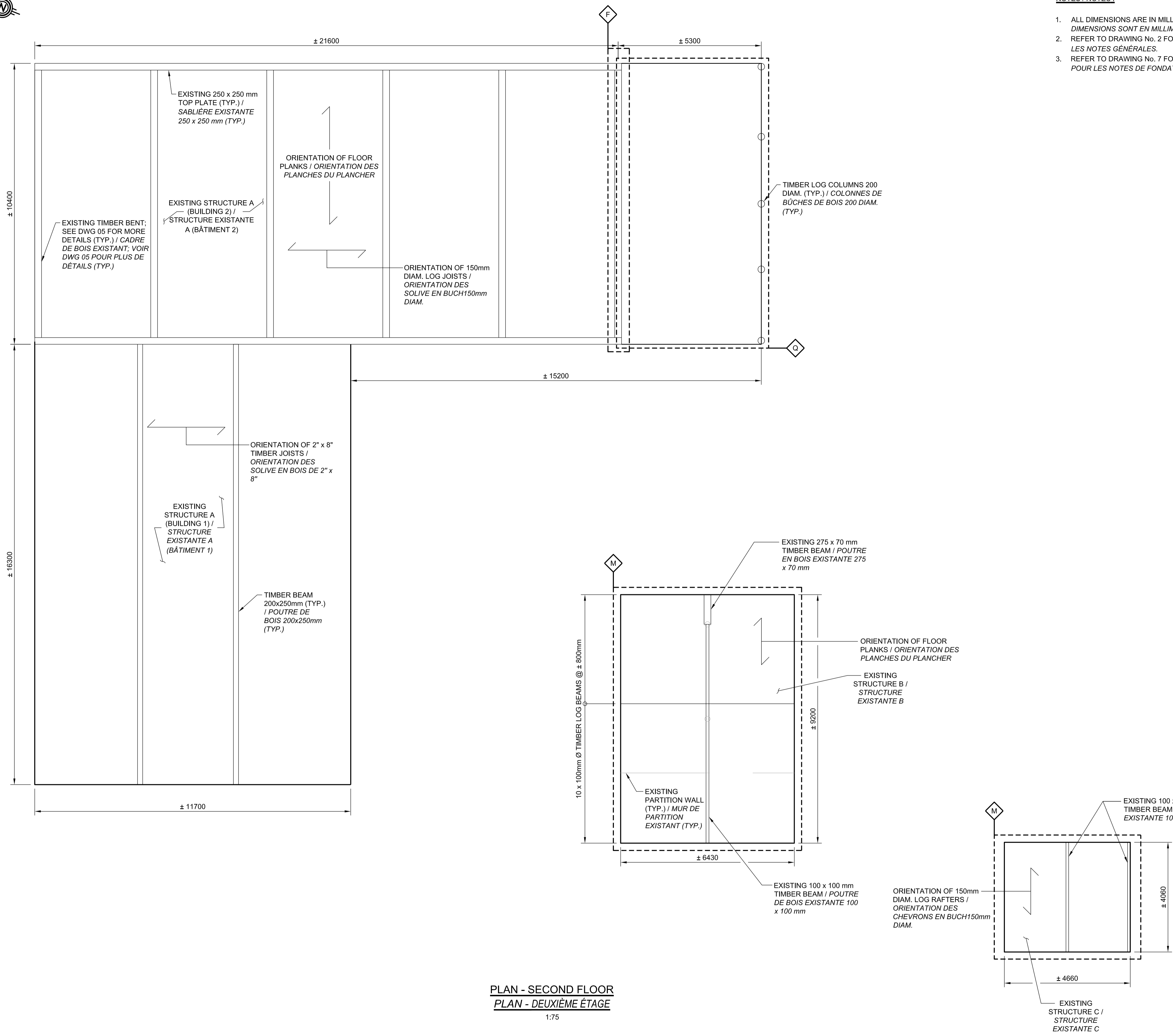
- NOTES / NOTES :**
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 3. REFER TO DRAWING No. 7 FOR FOUNDATION NOTES. / *SE RÉFÉRER AU DESSIN N ° 7 POUR LES NOTES DE FONDATION.*

Real Estate Management, Design and Construction Branch
Direction de la gestion de l'immobilier, design et construction

Design and Construction Division
Division design et construction

director - Claude Robert - directeur

consultant
expert-conseil



**PLAN - SECOND FLOOR
PLAN - DEUXIÈME ÉTAGE**
1:75

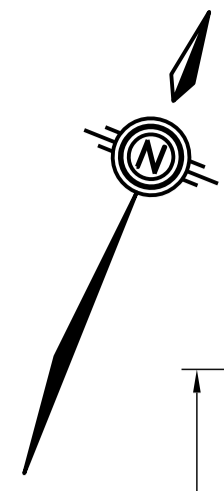


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**RESTORATION OF
139 MARCH ROAD
RESTAURATION DU
139 MARCH ROAD**

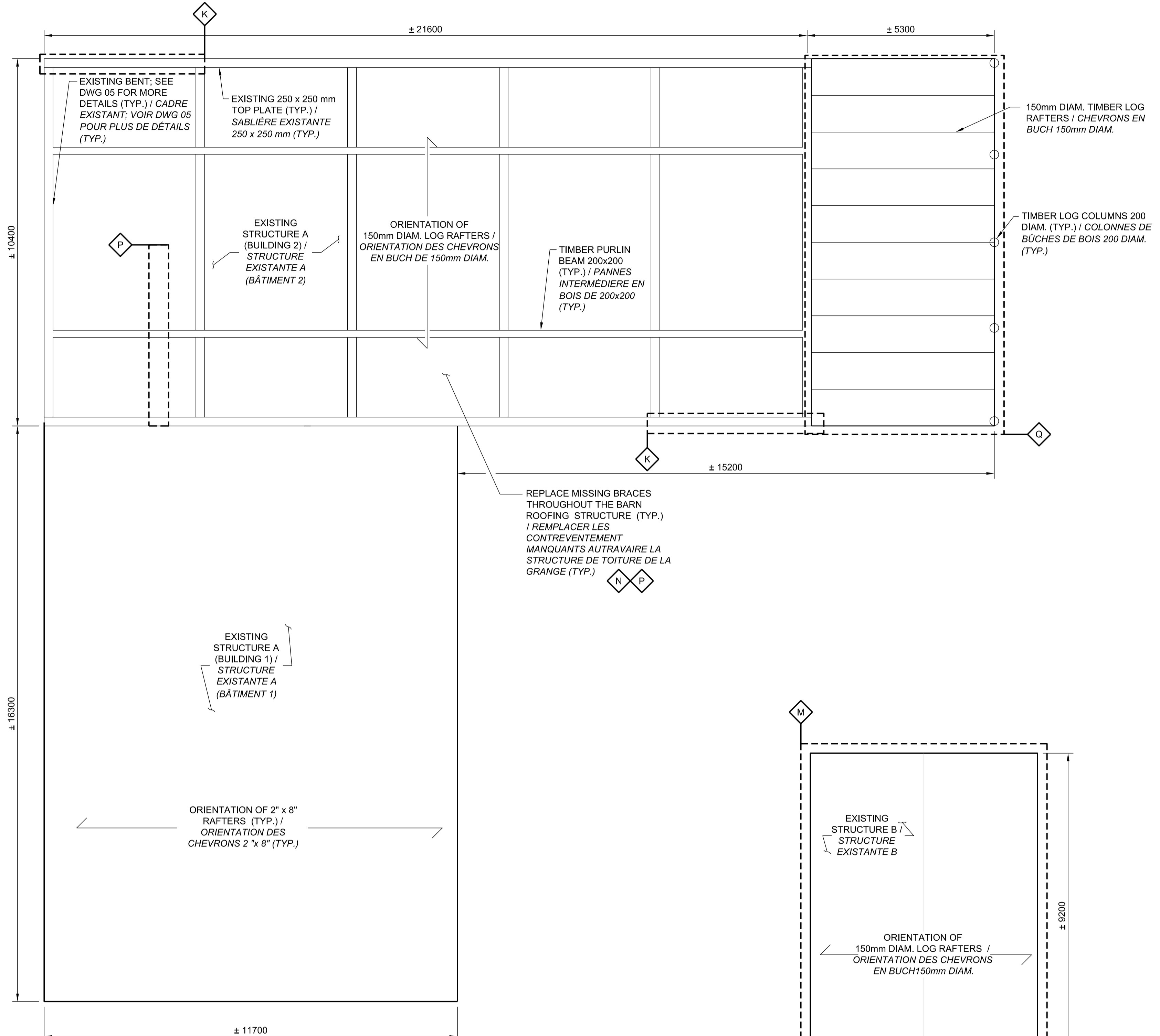
drawing / dessin
**GENERAL ARRANGEMENTS
SECOND STOREY - PLAN
ARRANGEMENT GÉNÉRAL DU
DEUXIÈME ÉTAGE - PLAN**

approved by / approuvé par TASHI DWIVEDI
designed by / conçu par JAN PODLAK
drawn by / dessiné par M.Q.
date 11 OCTOBER 2017 scale / échelle AS SHOWN
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PLAN - ROOF
PLAN - TOIT

1:75



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project
projet

RESTORATION OF
139 MARCH ROAD

RESTAURATION DU
139 MARCH ROAD

drawing
dessin

GENERAL ARRANGEMENTS
ROOF - PLAN

ARRANGEMENT GÉNÉRAL DU
TOIT - PLAN

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approuvé par TASHI DWIVEDI

designed by
conçu par JAN PODLAK

drawn by
dessiné par M.O.

date 11 OCTOBER 2017 scale AS SHOWN
échelle

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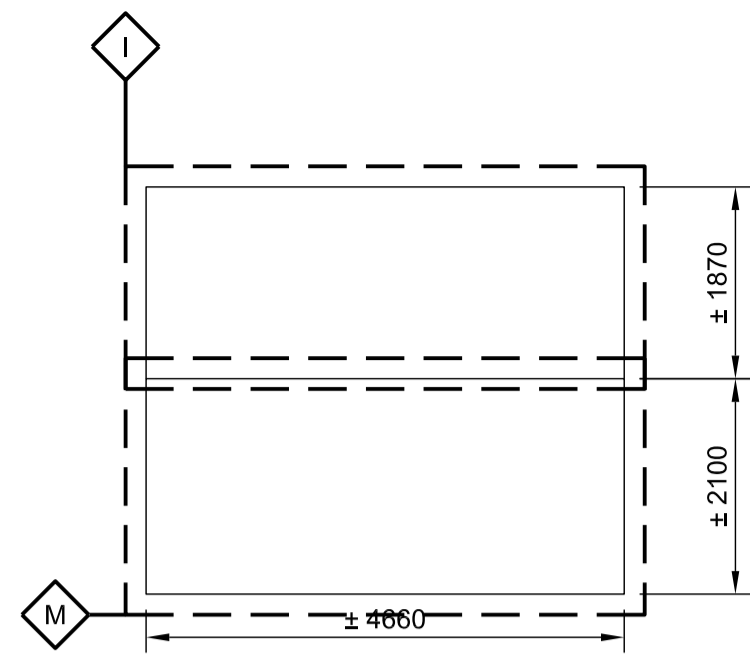
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17144-03 (139 march) (2017) (dwg)

20/04/2018

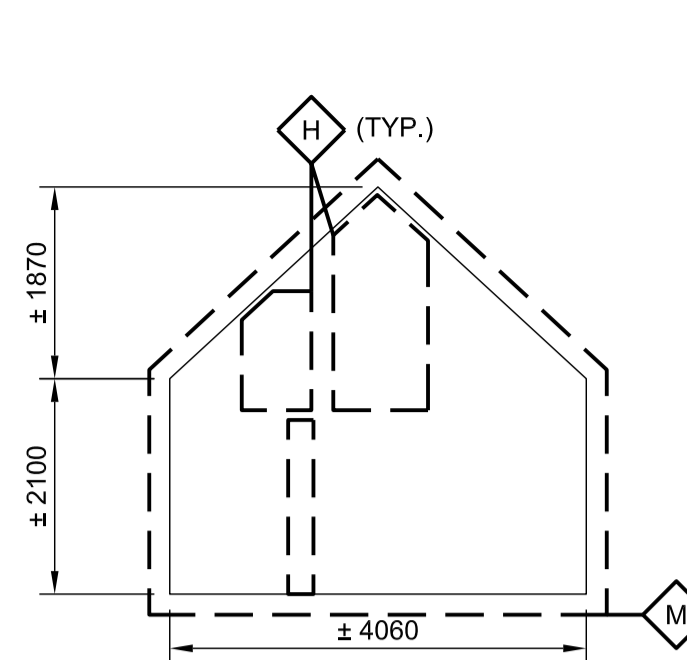
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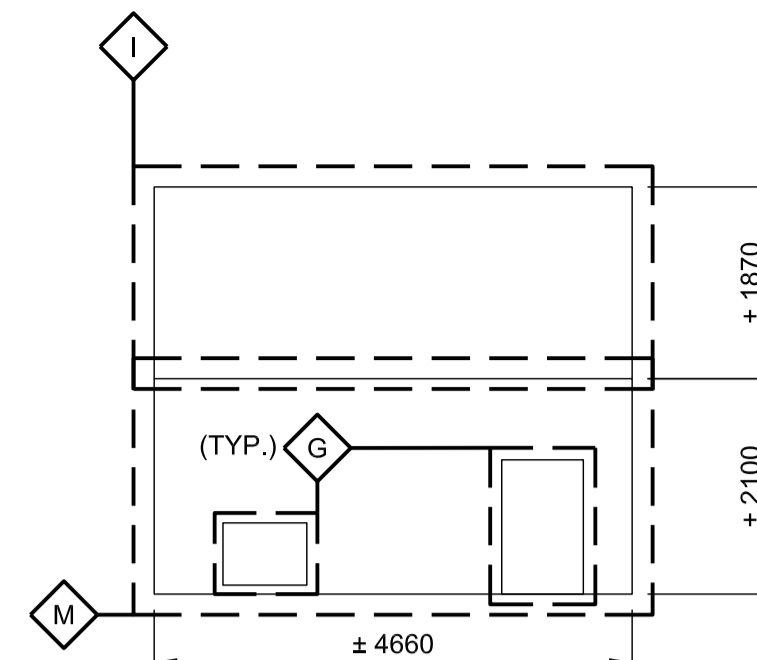
NORTH ELEVATION - STRUCTURE C
ÉLÉVATION NORD - STRUCTURE C

1:75



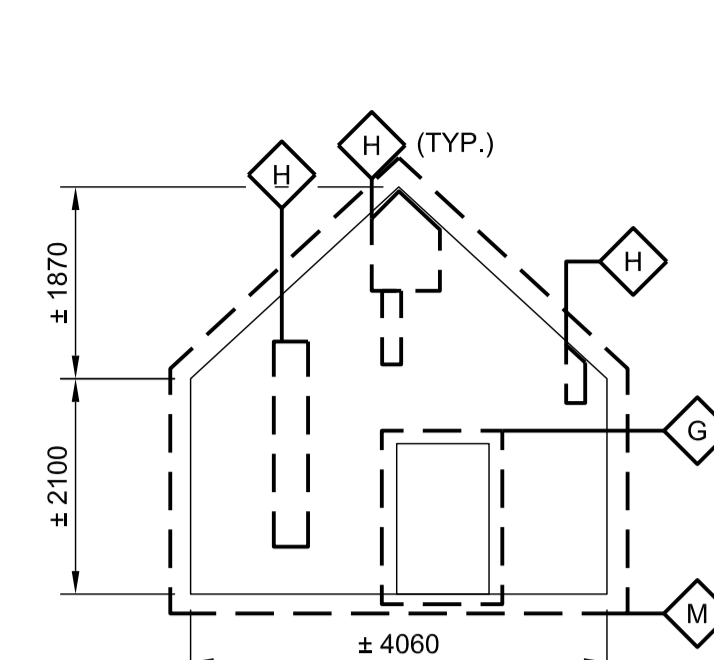
EAST ELEVATION - STRUCTURE C
ÉLÉVATION EST - STRUCTURE C

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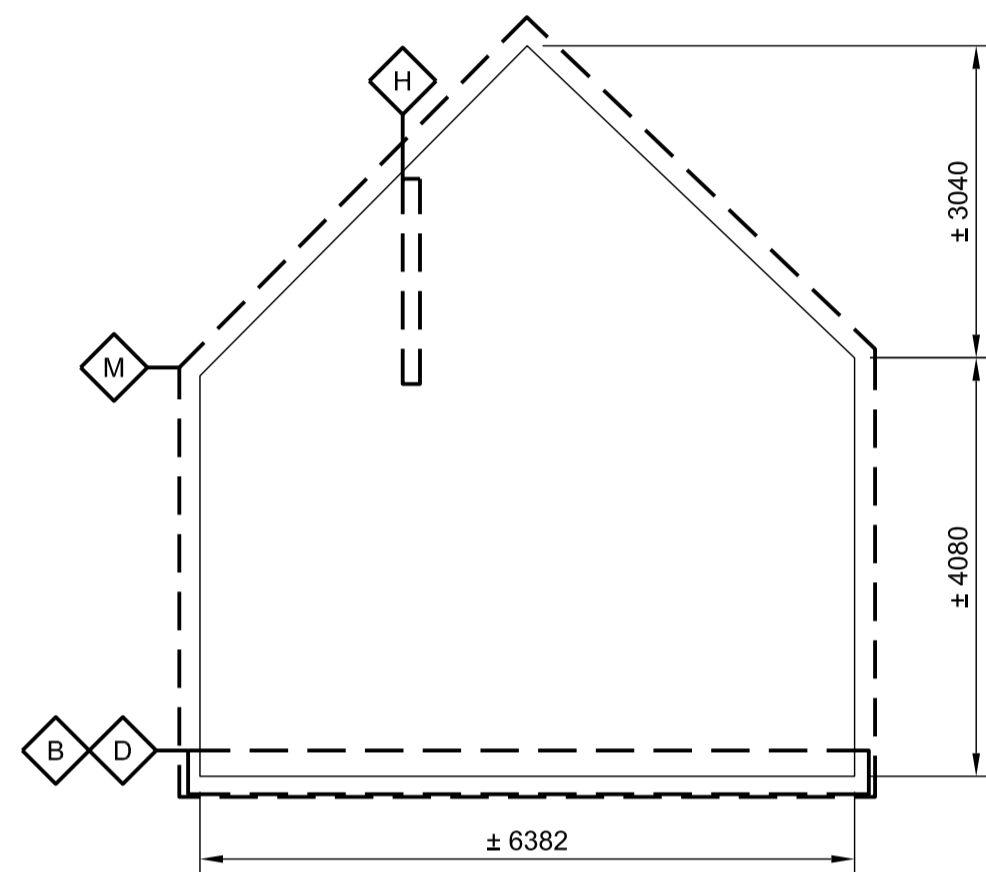
SOUTH ELEVATION - STRUCTURE C
ÉLÉVATION SUD - STRUCTURE C

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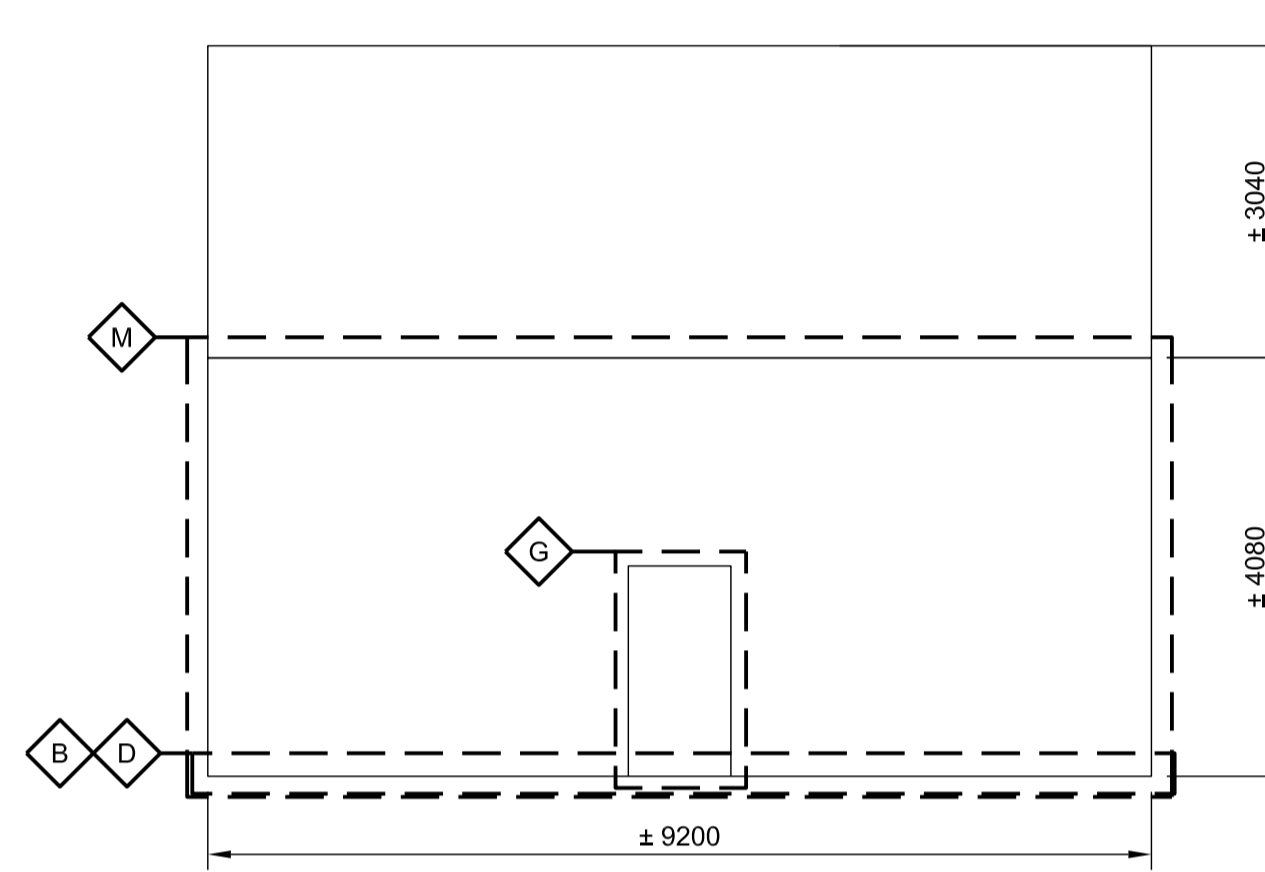
WEST ELEVATION - STRUCTURE C
ÉLÉVATION OUEST - STRUCTURE C

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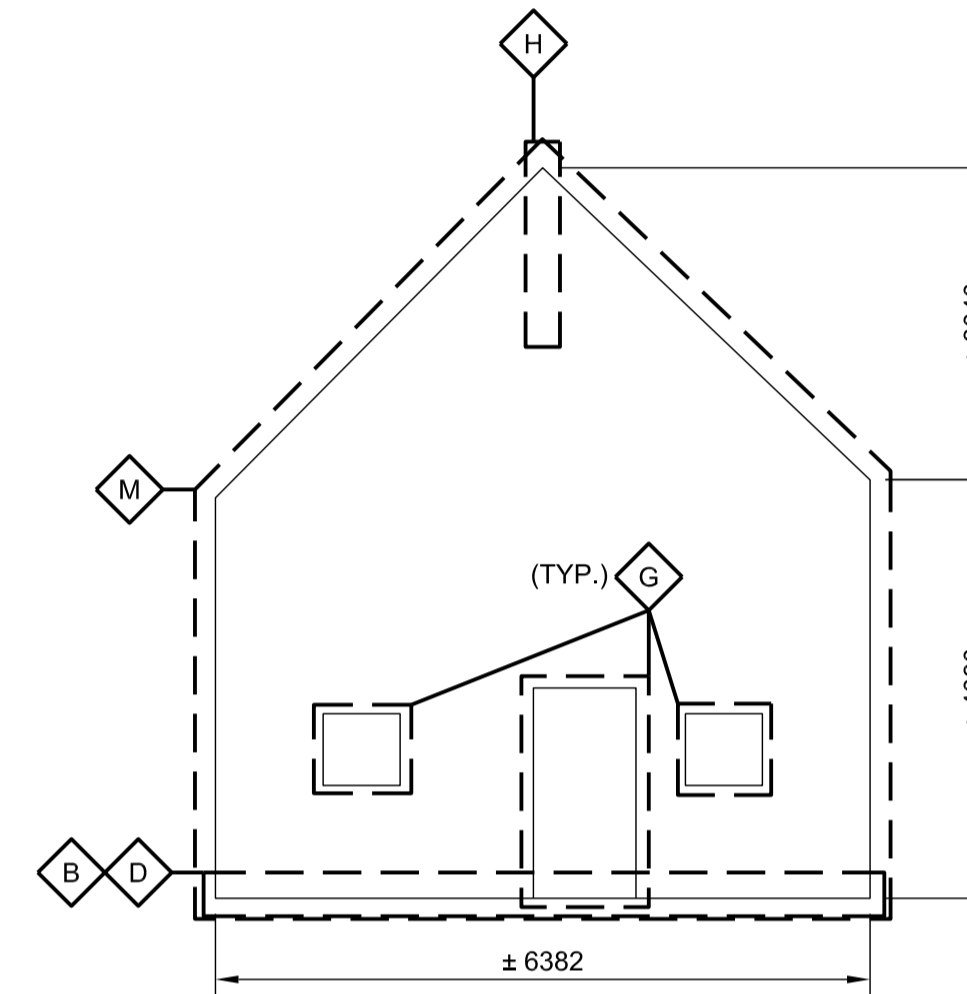
NORTH ELEVATION - STRUCTURE B
ÉLÉVATION NORD - STRUCTURE B

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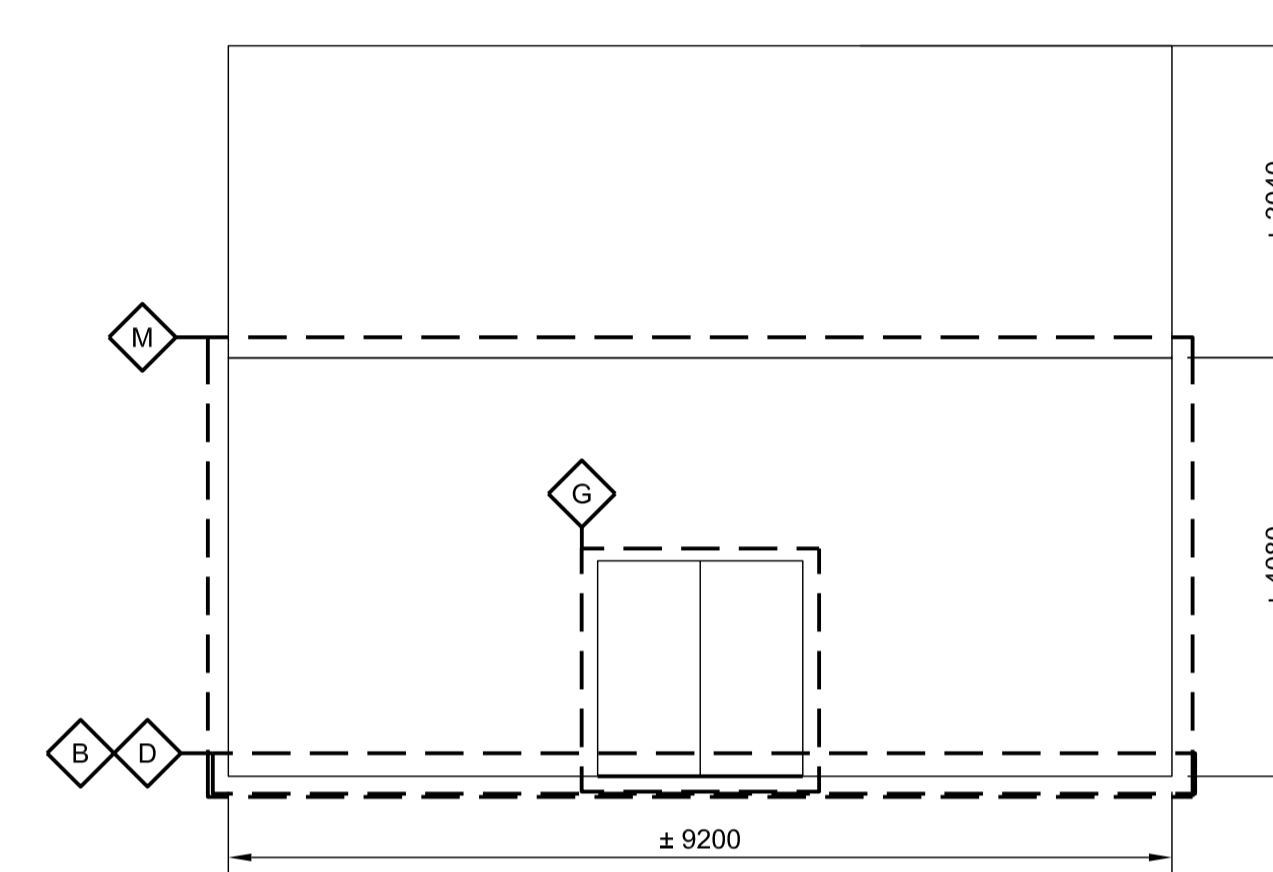
EAST ELEVATION - STRUCTURE B
ÉLÉVATION EST - STRUCTURE B

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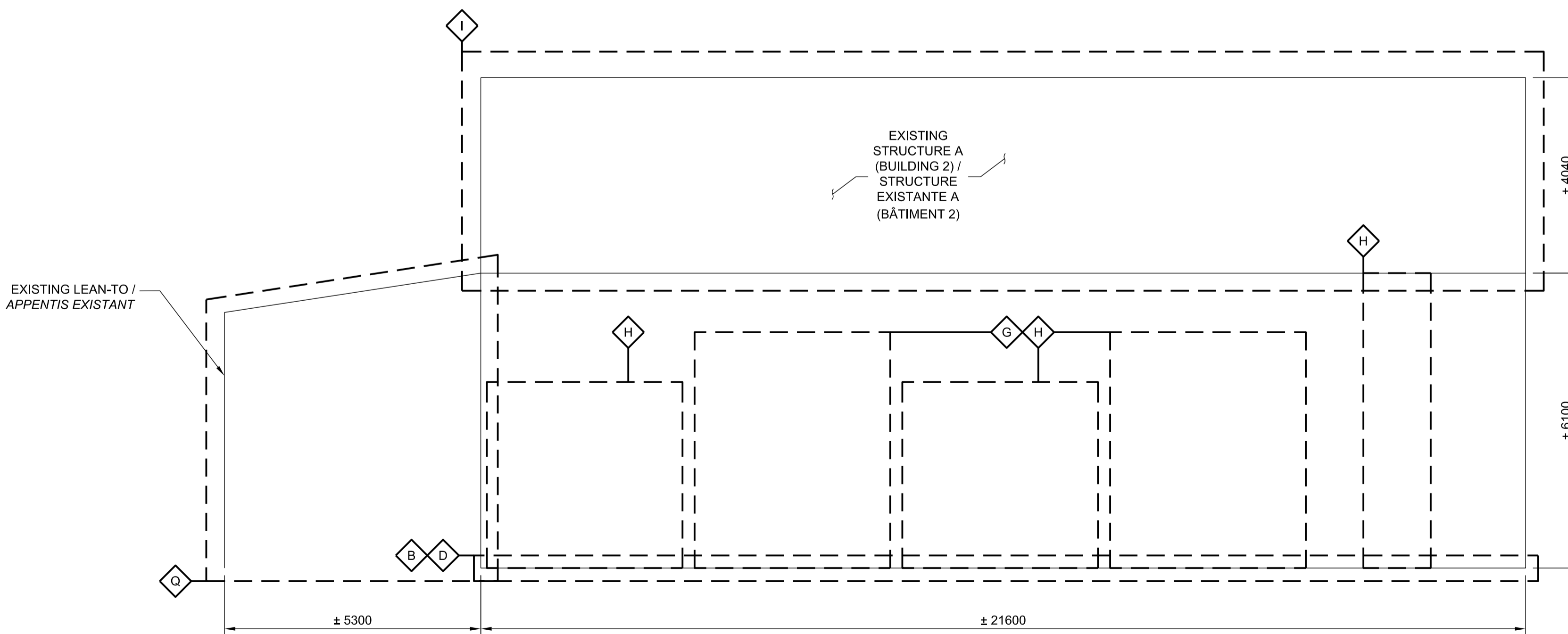
SOUTH ELEVATION - STRUCTURE B
ÉLÉVATION SUD - STRUCTURE B

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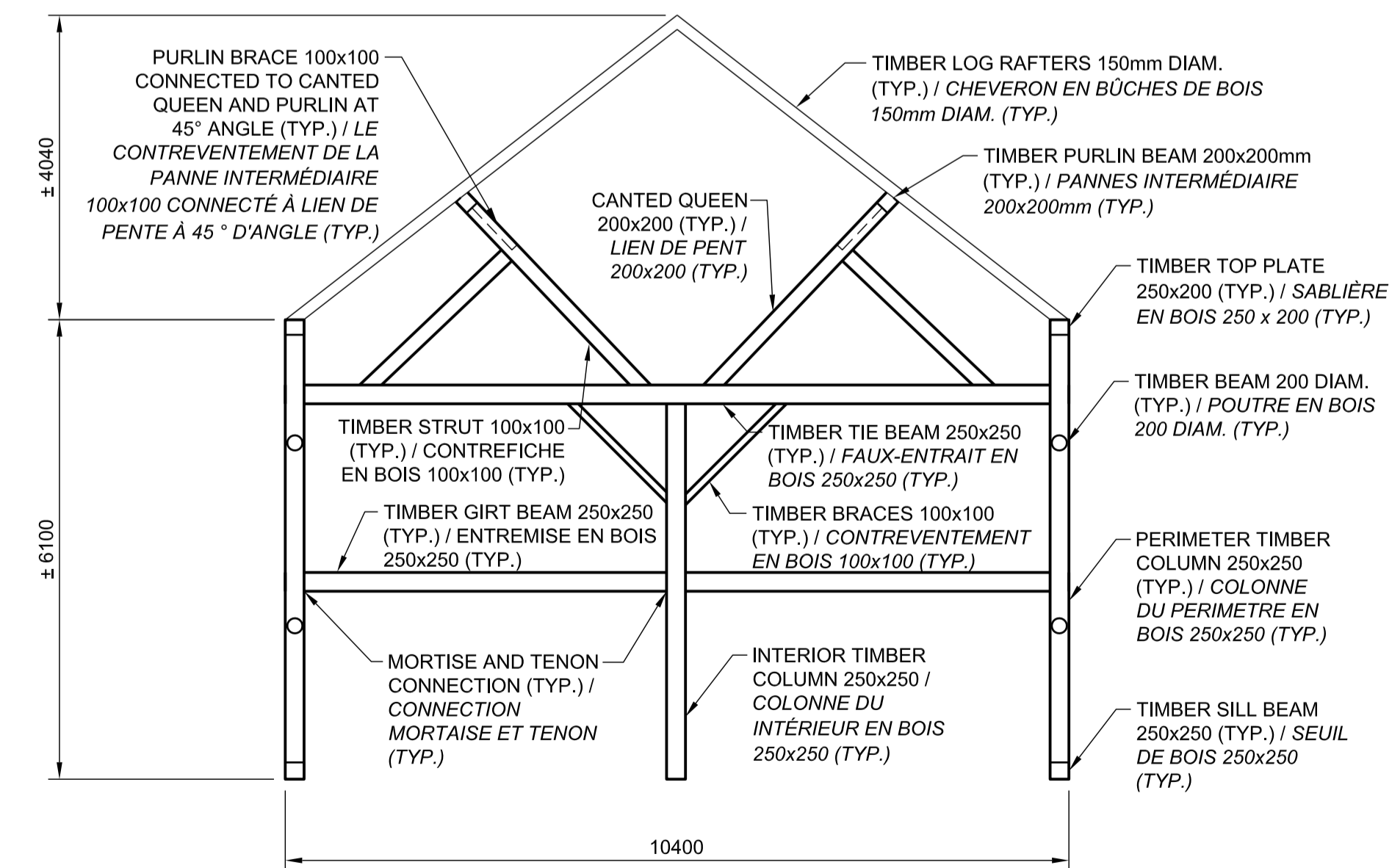
WEST ELEVATION - STRUCTURE B
ÉLÉVATION OUEST - STRUCTURE B

1:75



NORTH ELEVATION - STRUCTURE A
ÉLÉVATION NORD - STRUCTURE A

1:75



TYPICAL BENT ELEVATION - STRUCTURE A (BUILDING 2)
ÉLÉVATION TYPIQUE DE CADRE - STRUCTURE A (BÂTIMENT 2)

1:75



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**RESTORATION OF
139 MARCH ROAD**
**RESTAURATION DU
139 MARCH ROAD**

drawing
dessin

**GENERAL ARRANGEMENTS
EAST AND WEST ELEVATIONS**
**ARRANGEMENT GÉNÉRAL
ÉLÉVATIONS EST ET OUEST**

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approuvé par TASHI DWIVEDI

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conçu par JAN PODLAK

drawn by
dessiné par M.Q.

date 11 OCTOBER 2017 scale
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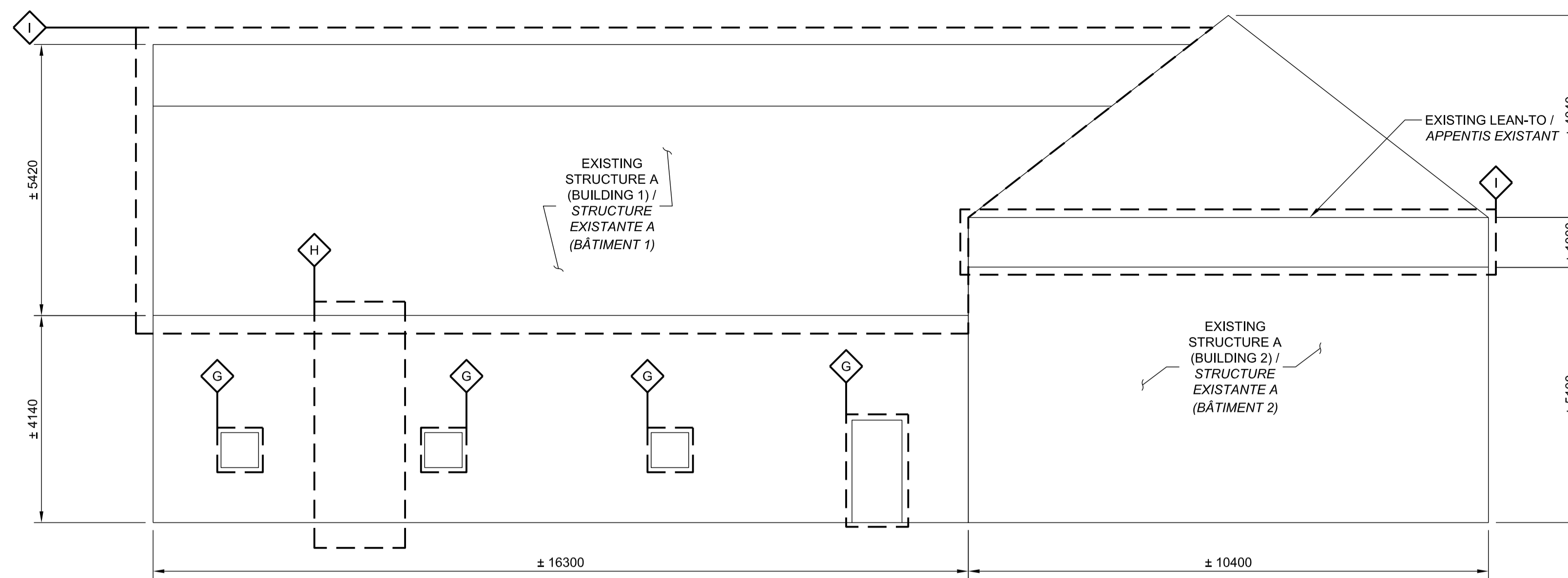
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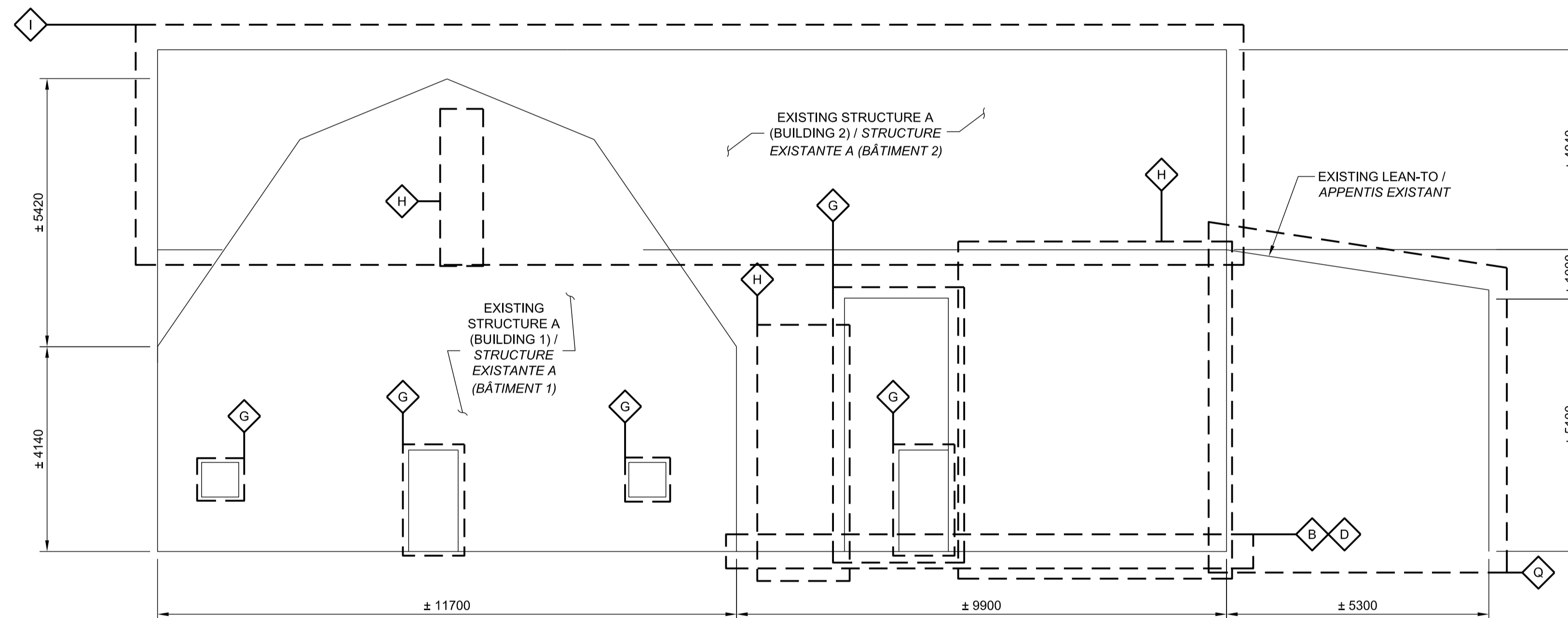
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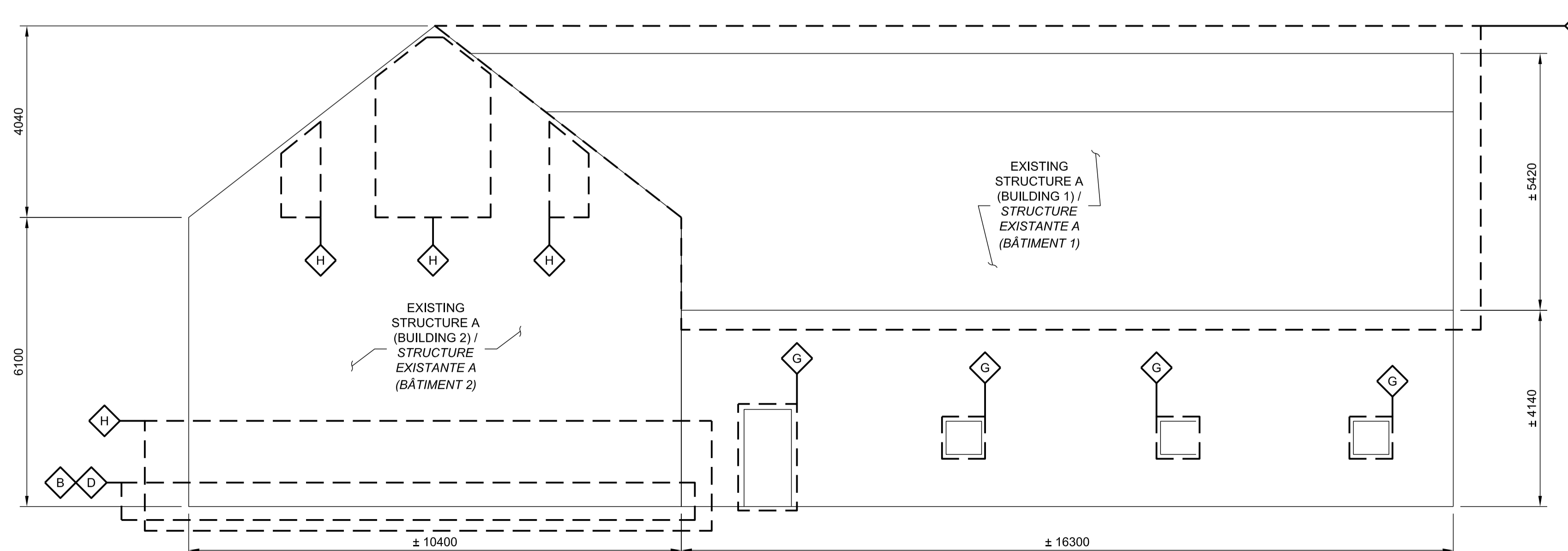
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EAST ELEVATION - STRUCTURE A
ÉLÉVATION EST - STRUCTURE A
1:75



SOUTH ELEVATION - STRUCTURE A
ÉLÉVATION SUD - STRUCTURE A
1:75



WEST ELEVATION - STRUCTURE A
ÉLÉVATION OUEST - STRUCTURE A
1:75



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RESTORATION OF
139 MARCH ROAD

RESTAURATION DU
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GENERAL ARRANGEMENTS
NORTH AND SOUTH ELEVATIONS

ARRANGEMENT GÉNÉRAL
ÉLÉVATIONS NORD ET SUD

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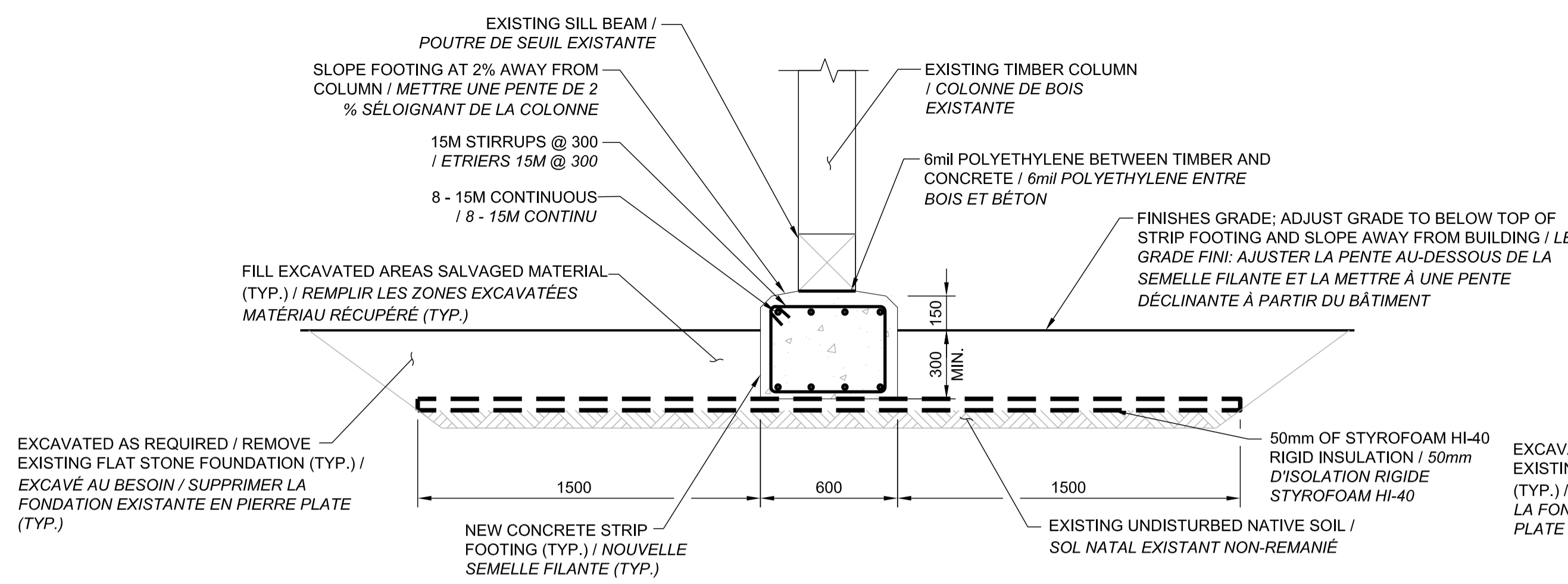
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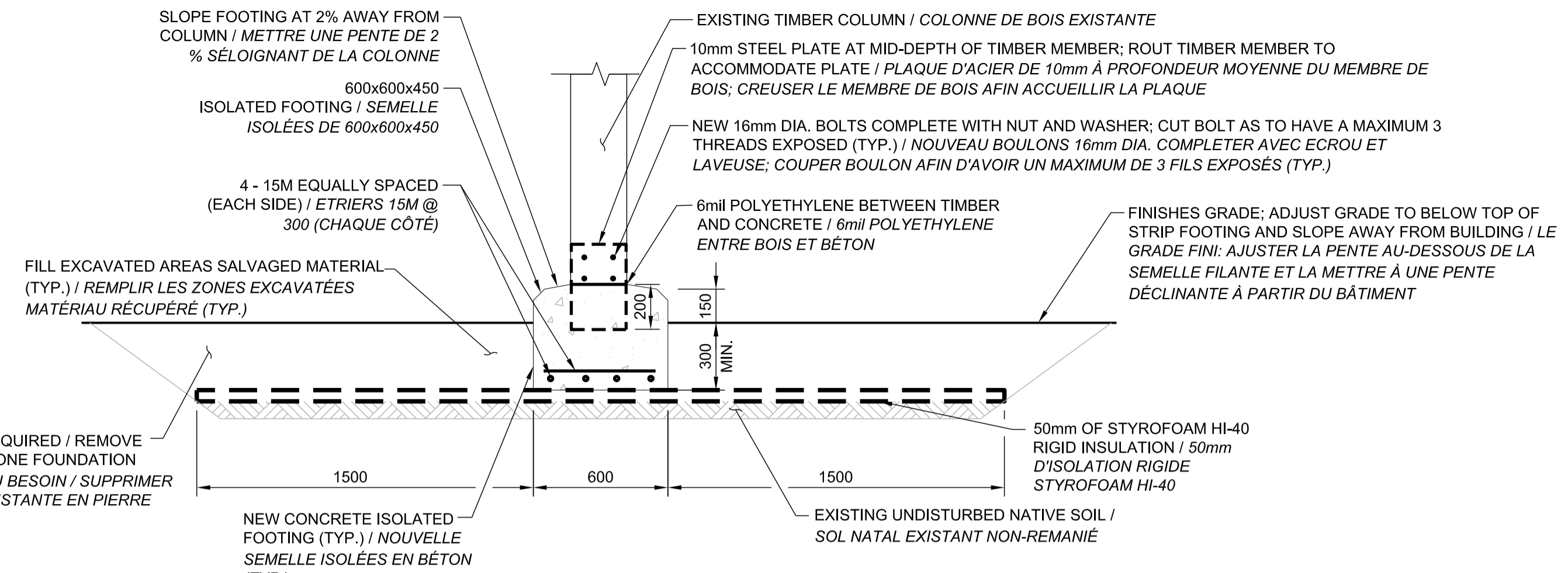
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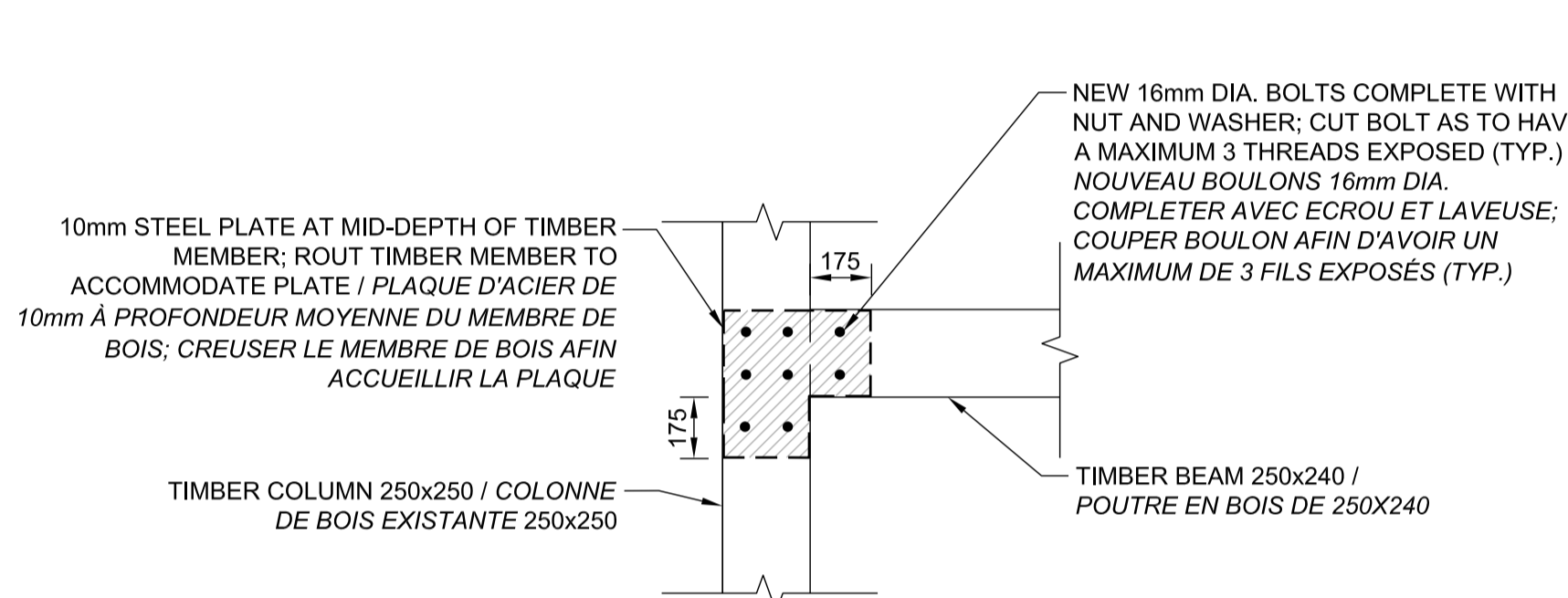
B STRIP FOOTING DETAIL
DÉTAIL SEMELLE FILANTE

1:20



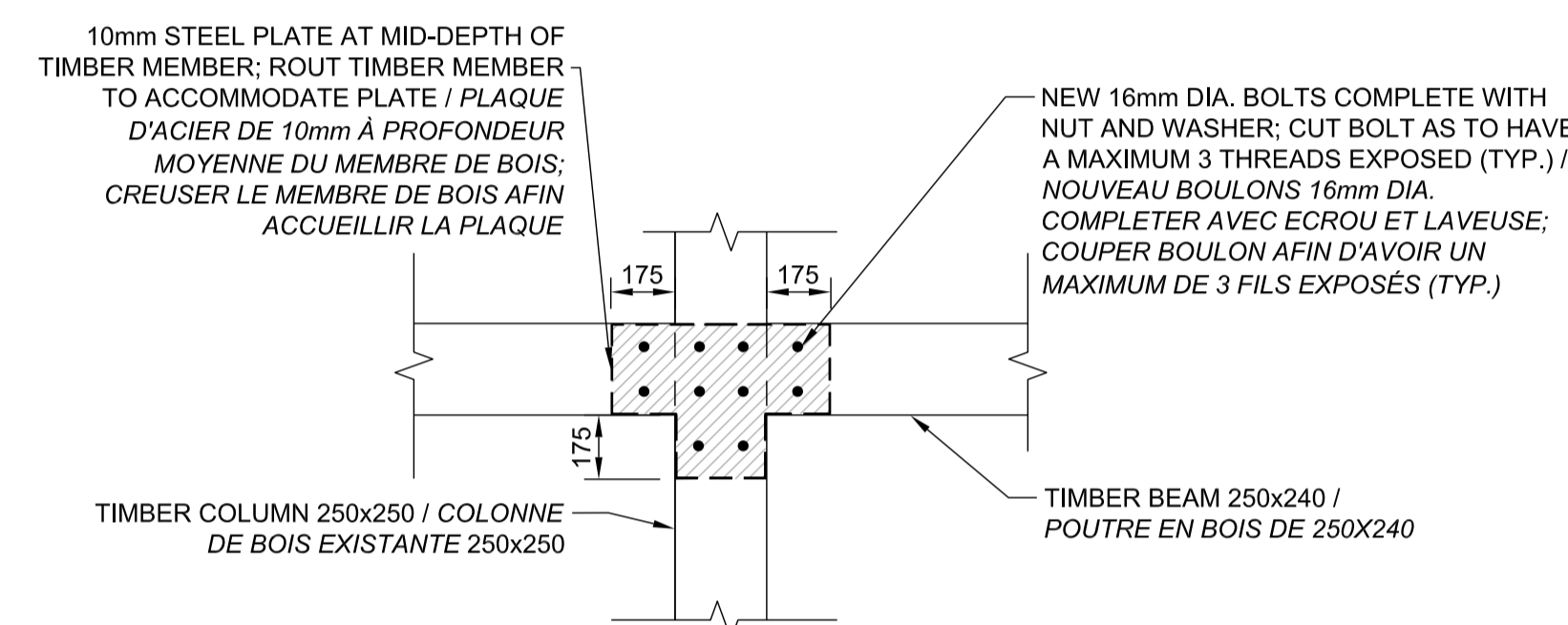
C ISOLATED FOOTING DETAIL
DÉTAIL SEMELLE ISOLÉE

1:20



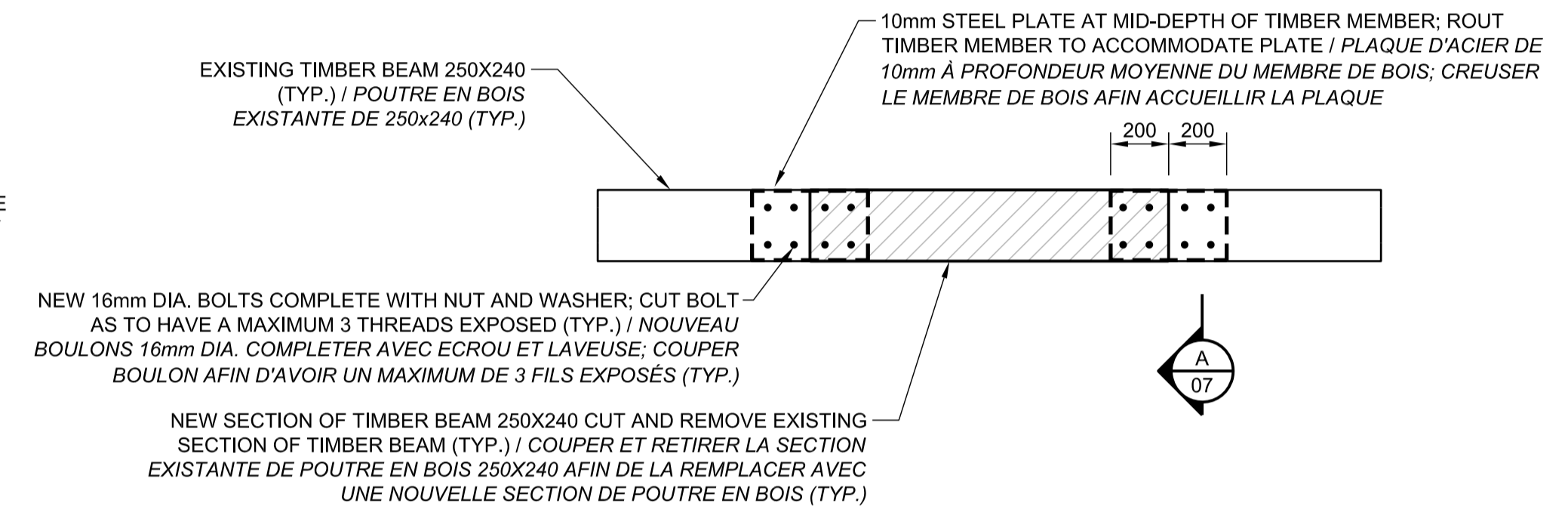
DEFK COLUMN AND BEAM CONNECTION DETAIL 1
DÉTAIL 1 DE CONNEXION DE POUTRE ET COLONNE

1:20



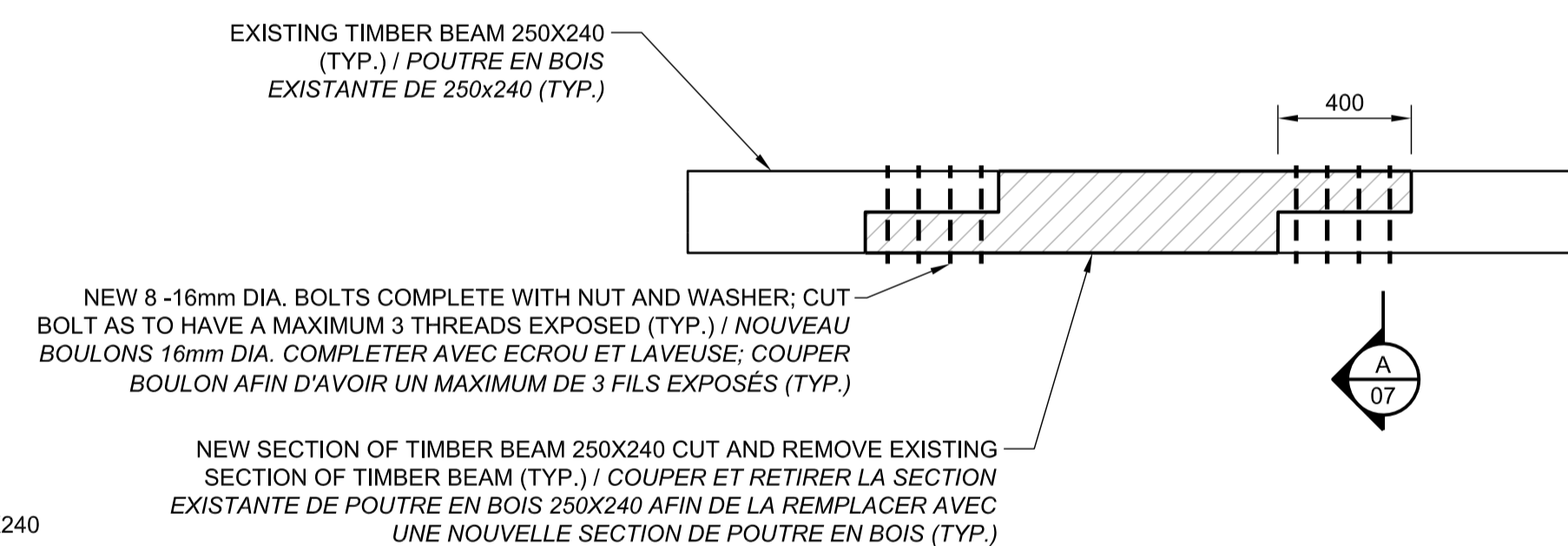
DEFK COLUMN AND BEAM CONNECTION DETAIL 2
DÉTAIL 2 DE CONNEXION DE POUTRE ET COLONNE

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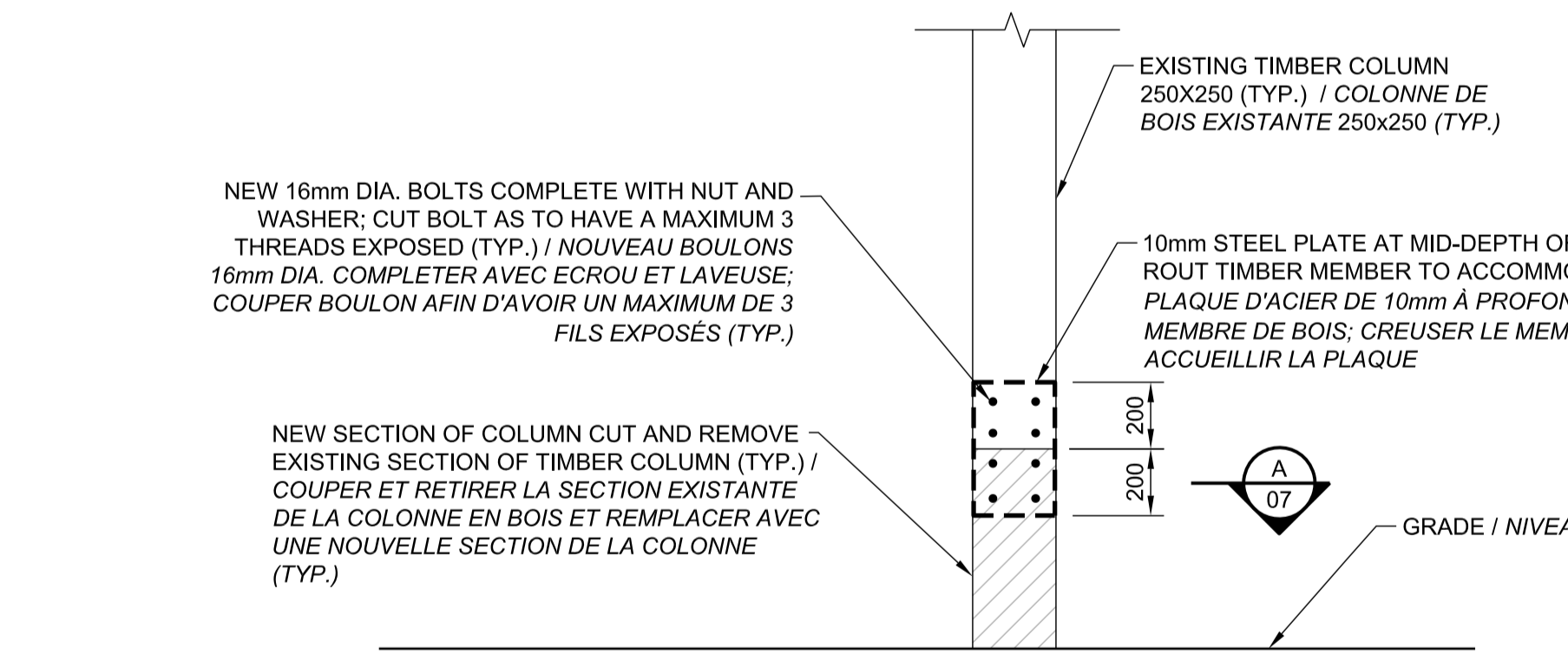
DEK TIMBER BEAM REPLACEMENT DETAIL A
DÉTAIL A DU REMPLACEMENT DE POUTRE EN BOIS

1:20



DEK TIMBER BEAM REPLACEMENT DETAIL B
DÉTAIL B DU REMPLACEMENT DE POUTRE EN BOIS

1:20



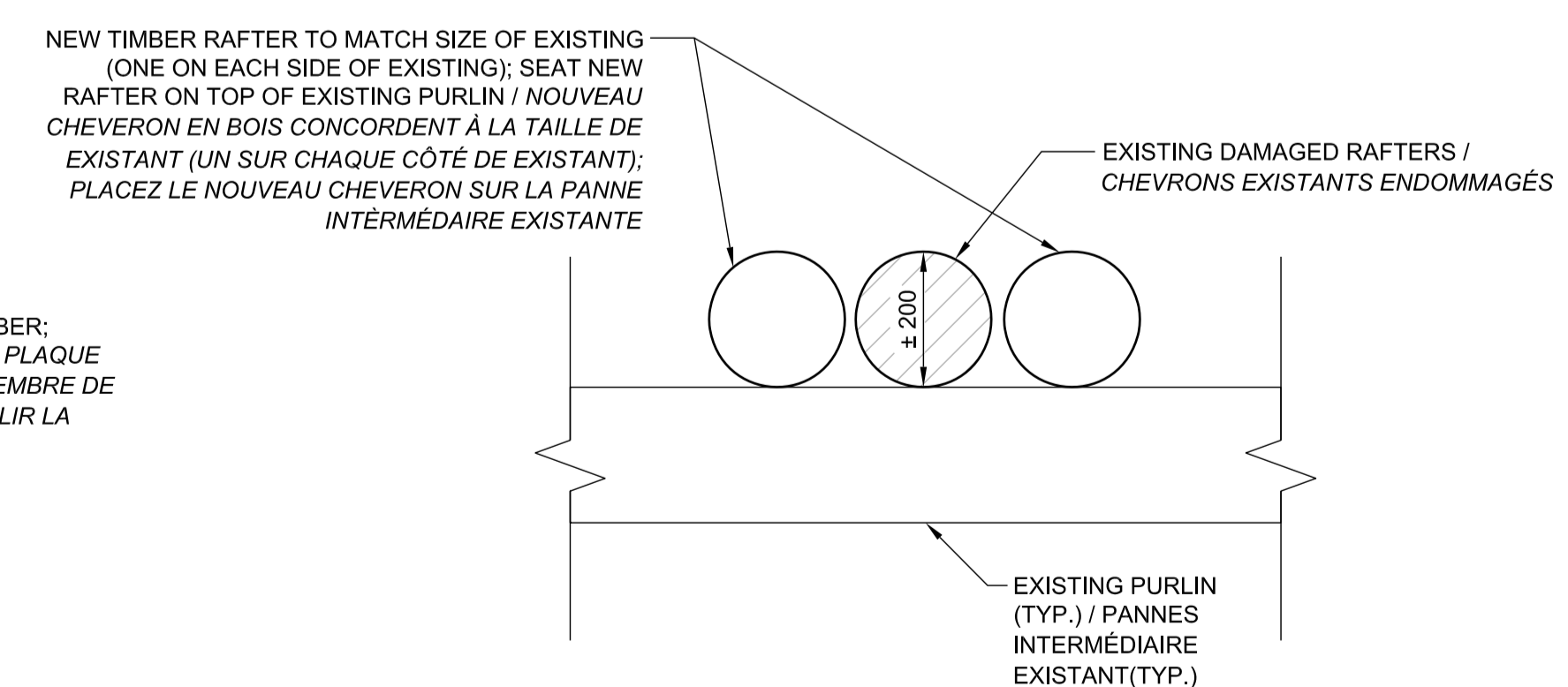
E COLUMN REPAIR DETAIL
DÉTAIL DE RÉPARATION DE COLONNE

1:20



NO BRACING DETAIL
DÉTAIL DE CONTREVENTEMENT

1:20



P RAFTER DETAIL
DÉTAIL DE CHEVRON

1:20



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139 MARCH ROAD
RESTAURATION DU
139 MARCH ROAD

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REHABILITATION DETAILS

DÉTAILS DE RÉHABILITATION

approved by
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drawn by
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27 FEBRUARY 2018

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07

APPENDIX 5 – BARN SWALLOW NEST LOCATIONS

139 March Road

3 Barn Swallow nests

Ground Floor: 12 Barn Swallow nests
Second Floor: 5 Barn Swallow nests

No nest found

1 Barn Swallow nest



APPENDIX 7 – CLEAN EQUIPMENT PROTOCOL

Clean Equipment Protocol for Industry – Summary

Invasive species are plants, animals and microorganisms that have been accidentally or deliberately introduced into areas beyond their normal range, that out compete native species. Invasive species are a major threat to Ontario's natural areas, and are very costly to deal with once established.

Invasive species can be spread to new areas by contaminated mud, gravel, soil and plant materials on vehicles and machinery.

The best practice is to prevent the spread of invasive species. By inspecting and cleaning equipment and following some simple guidelines, the risk of spreading invasive plants is greatly reduced.

- Identify invasive plants and plan activities accordingly (i.e. schedule work in areas without invasive plants first, leaving infested areas til the end, to reduce the risk of unintentionally moving plants into a new area).
- Record & report sightings of invasive plants
(Invading Species hotline at **1-800-563-7711** or online www.invadingspecies.com/report/ or www.eddmaps.org/Ontario)
- Inspect vehicles and machinery before and after entering sites or conducting work along roadways & waterways.

How to Inspect

Before leaving the site, inspect the vehicle thoroughly inside and out for where dirt, plant material and seeds may be lodged or stuck to interior and exterior surfaces. Remove and clean any guards, covers or plates that are easy to remove.

Pay attention to the underside of the vehicle, radiators, spare tires, foot wells and bumper bars. If clods of dirt, seed or other plant material are found, remove immediately and discard where the contamination occurred or in the garbage.

When Cleaning is required

- Safely locate the vehicle and equipment away from any hazards, ensure engine is off and the vehicle or equipment is immobilized.
- Clean the vehicle/equipment in an appropriate area where contamination and seed spread is not possible (or limited).

The site should be:

- » Mud free, gravel covered hard surface, or, if this is not available, a well maintained grassy area.
- » Gently sloping to assist in draining water and material away from the vehicle or equipment. Care should be taken to ensure that localized erosion will not be created.
- » At least 30m away from any watercourse, water body and natural vegetation.
- » Large enough to allow for adequate movement of larger vehicles and equipment.

Continued...

Equipment Required

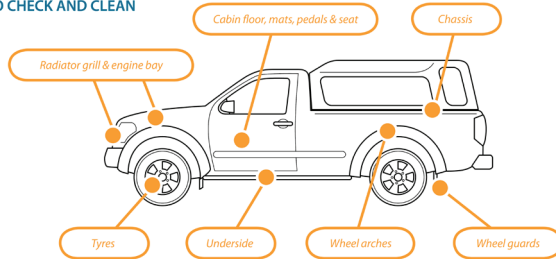
- A pump and high pressure hose OR High pressure water unit
- Air compressor and blower OR Vacuum
- Shovel
- Pry bar
- Stiff brush or broom

Final Inspection Checklist

- No clods of dirt should be visible after cleaning.
- Radiators, grills and the interiors of vehicles should be free of accumulations of seed, soil, mud and plant material parts including seeds, roots, flowers, fruit and or stems.

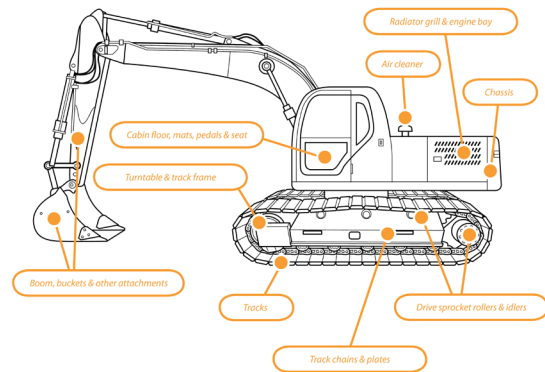
2WD and 4WD Vehicles

4WD VEHICLE WITH KEY SPOTS TO CHECK AND CLEAN



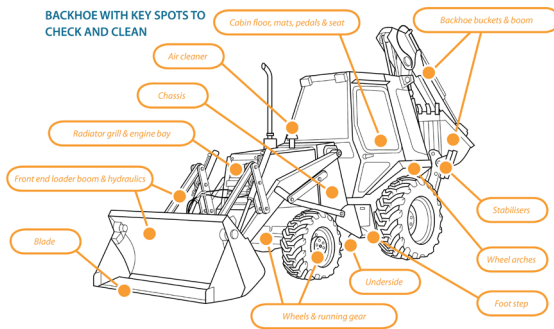
Excavator

EXCAVATOR WITH KEY SPOTS TO CHECK AND CLEAN



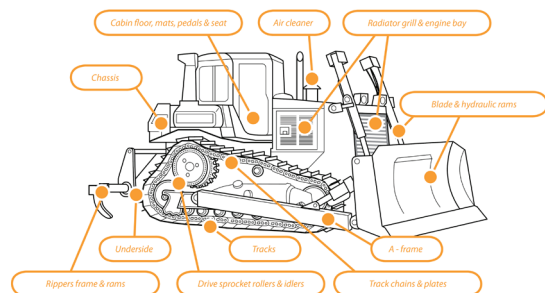
Backhoe

BACKHOE WITH KEY SPOTS TO CHECK AND CLEAN



Bulldozer

BULLDOZER WITH KEY SPOTS TO CHECK AND CLEAN



Catalyst for research and response





Del Management Solutions

Designated Substances Survey
139 March Road
Out Buildings
Kanata, Ontario

July 2013
EHS^P Project No.: 04-0034-13-032



**DESIGNATED SUBSTANCES SURVEY REPORT
139 MARCH ROAD
OUT BUILDINGS
KANATA, ONTARIO**

EHS Project No.: 04-0034-13-032

Prepared by:
EHS Partnerships Ltd.
406-2 Gurdwara Road
Ottawa, ON K2E 1A2

For:

Mr. Nicholas Pope
Del Management Solutions
2197 Riverside Drive, Suite 300
Ottawa, ON.
K1H 7X3

July 2013

Prepared by:

Joel Marcellus
Technician

Reviewed by:

Trent Windsor, C.E.T.
Associate

CONFIDENTIAL

Distribution:

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EXECUTIVE SUMMARY

EHS Partnerships Ltd. (EHS^P) was commissioned by Del Management Solutions (DMS) to complete a Pre-Demolition Designated Substances Survey (DSS) of the out buildings located on the residential property at 139 March Road, Kanata, Ontario (Site). The survey was requested to satisfy Section 30 of the Occupational Health and Safety Act and Ontario Regulation 278/05 “Regulation Respecting Asbestos on Construction Projects and in Building and Repair Operations” (O.Reg. 278/05) in order to identify any designated and hazardous materials that may be present at the site.

The buildings surveyed included: the garage/ workshop (building 1), the shed (building 2), the barn (building 3), the large barn/ stable (building 4).

EHS^P personnel completed the site reconnaissance on July 10th, 2013. Based on the findings of the visual inspection, suspect materials were documented, collected and subsequently submitted for analysis at a 3rd party analytical laboratory.

FINDINGS

Asbestos

No asbestos was detected in the samples collected and submitted for analysis. See Section 6.0.

Lead

Lead containing paint is present at the site. Precautions should be taken if painted surfaces are disturbed. Painted surfaces were observed to be in poor condition and should be repaired or removed as soon as possible. Lead may also be present in the solder joints of the copper piping observed throughout the site. See Section 7.0.

Mercury

Mercury containing fluorescent light tubes were observed at the site during the DSS.

Mould

Water staining and suspected mould growth was observed at the site during the DSS.

PCBs

Light ballasts present at the Site potentially contain PCBs.

Radioactive Smoke Detectors

Radioactive smoke detectors were not observed at the site.

Silica

Silica is present in the concrete, mortar, and asphalt shingles observed at the site. Silica containing materials were observed to be in good to poor condition at the time of the DSS.

Animal Feces

Bird and animal feces were observed throughout all buildings during the DSS

Other Designated Substances and Hazardous Materials

Various cans of paint and other containers containing unknown substances were observed in varying condition throughout the garage/workshop and barn.

Arsenic, Acrylonitrile, Isocyanates, Benzene, Coke Oven Emissions, Ethylene Oxide, Ozone-Depleting Substances, PCBs, Urea Formaldehyde Foam Insulation (UFFI) and Vinyl Chloride were not observed at the site.

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1.0 INTRODUCTION

EHS Partnerships (EHS^P) was retained by Mr. Nicholas Pope of Del Management Solutions (DMS) to conduct a Designated and Hazardous Substances Survey (DSS) of the out buildings located at the residential property at 139 March Road, Kanata, Ontario (Site). This report details the results of the DSS completed at the site on July 10th, 2013.

2.0 SITE DESCRIPTION

For the purpose of the DSS only the out buildings located at the property were surveyed. The buildings surveyed included: the garage/ workshop (building 1), the shed (building 2), the barn (building 3), the large barn/ stable (building 4).

3.0 OBJECTIVE

The survey was requested to satisfy Section 30 of the Occupational Health and Safety Act (OHSA) and Ontario Regulation 278/05 “Regulation Respecting Asbestos on Construction Projects and in Building and Repair Operations” (O.Reg. 278/05) in order to identify any designated and hazardous materials that may be present at the site.

4.0 SCOPE

The scope of work included the following activities:

- Preparation of a Health and Safety Plan (HASP) prior to conducting the field work;
- Inspection and sampling of potential hazardous materials within the buildings in areas that could be reasonably accessed by field personnel;
- Documenting the location of potential hazardous materials and estimating quantities;
- Submission of representative samples of potential hazardous materials for laboratory analysis; and
- Preparation of a report summarizing the designated substances survey.

5.0 DESIGNATED SUBSTANCE SURVEY METHODOLOGY AND RESULTS

The field survey included the visual identification of potential designated substances and collection of samples for laboratory analysis to confirm the absence/presence of hazardous materials.

Designated substances in Ontario are defined in accordance with OHSA as a biological, chemical, or physical agent or combination thereof as a designated substance to which the exposure of a worker is prohibited, regulated, restricted, limited or controlled. Under section 30 of OHSA – “Duty of Project Owners”, owners are required to determine if designated substances are present at a project site and disclose this information to project participants.

Designated substances that individuals are likely to be exposed to during construction projects include asbestos and silica. The Ontario Ministry of Labour provides guidance regarding these substances during construction in the following documents:

1. Ontario Regulation 278/05 (O.Reg. 278/05) – Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations;
2. Guideline – Silica on Construction Projects, Ministry of Labour 2004; and
3. Guideline – Lead on Construction Projects, Ministry of Labour 2004.

The following sections provide an overview of the regulated designated substances and the potential presence of such substances at the site.

5.1 Acrylonitrile

Acrylonitrile is a chemical compound that exists as a clear pungent smelling liquid. Acrylonitrile is an important compound used in the production of other chemicals and products.

This designated substance is highly flammable and toxic. When burned it releases hazardous compounds into the air including hydrogen sulfide which has been used in chemical warfare.

Based on EHS^P observations Acrylonitrile was not identified at the site during the DSS.

5.2 Arsenic

Arsenic is chemical element that occurs in several different minerals in nature. Arsenic is used in a wide variety of applications including the strengthening of steel and copper alloys, it is a valuable semiconductor, and has been used in the production of herbicides and pesticides.

Arsenic is a known human carcinogen and potent poison.

Based on EHS^P observations Arsenic was not identified at the site during the DSS.

5.3 Asbestos

Asbestos is a group of naturally occurring mineral silicates that has been used in the manufacture of building materials due to their desirable physical properties. Asbestos was used in a number of building materials such as roofing shingles, acoustic ceiling tile, vinyl flooring, cement products, insulation and other applications.

The association between the inhalation of asbestos fibres and various respiratory diseases is undisputed.

An asbestos containing material (ACM) survey was conducted by EHS^P as part of this DSS. Details of the ACM survey are presented in section 6.0.

5.4 Benzene

Benzene is natural compound found in petroleum based products such as gasoline and diesel fuels, asphalt and other hydrocarbon based products. It is used as a catalyst in various chemical processes including the production of plastics, rubber, drugs and pesticides.

Benzene is a known human carcinogen. Exposure to airborne benzene has been linked to various forms of leukemia.

Benzene was not observed at the site.

5.5 Coke Oven Emissions

Coke Oven Emissions are the airborne by-product resulting from the distillation of low-ash and sulfur coal or coke. Coke is a useful fuel, chemical reducer, and is even used in the production of Scotch whisky.

Coke oven emissions potentially cause lung and skin cancers.

Based on EHS^P observations coke oven emissions are not present at the site.

5.6 Ethylene Oxide

Ethylene Oxide is a colourless gas with a faint sweet odour. This organic compound has various applications in the chemical engineering industry.

Ethylene oxide is a known human carcinogen and poison. Chronic exposure is known to cause genetic mutations (damage caused to DNA resulting in physical mutations).

Based on observations noted during the DSS and historical use of the site, ethylene oxide is not present.

5.7 Isocyanates

Isocyanates are any organic compound that contains a specific chemical functional group made up of a specific structure of one atom of nitrogen, carbon, and oxygen. The presence of this functional group gives chemical compounds unique properties that may be exploited in the production of polymers. Isocyanate containing polymers are used in the manufacture of paints, foams, and electrical insulation.

All isocyanates must be treated as highly hazardous with inhalation being the primary exposure hazard.

Based on observations noted during the DSS and historical use of the site, Isocyanates are not present.

5.8 Lead

Lead is a chemical element that is a soft malleable metal. Lead is used in the production of a number of products including ammunition, batteries, pipes, and paint.

Lead is potent neurotoxin that accumulates in the body and results in brain and nervous system damage. The primary routes of exposure to lead include inhalation and ingestion.

EHS^P conducted a lead-based paint sampling program as part of the DSS. The findings of this sampling program are presented in section 7.0.

5.9 Mercury

Mercury is a chemical element that is the only metal that exists in the liquid state at standard temperature and pressure. Elemental mercury has been used in a number of scientific instruments such as thermometers and barometers. In buildings liquid mercury has been used widely in thermostats and switch gear. Mercury vapour is used to produce light in fluorescent light tubes.

Chronic and acute inhalation of mercury vapour has been shown to have profound effects on the central nervous system including impaired cognitive skills, tremors, hallucinations, delirium, and suicidal tendency.

Mercury containing light tubes were observed at the site during the DSS.

5.10 Silica

Silica is the common name for the chemical compound silicon dioxide that occurs naturally as sand or quartz. Due to the hardness of silica it has been used as the primary raw material in products such as glass, ceramics, and cement.

Inhalation of silica is known to cause irreversible lung diseases including cancer and silicosis.

Based on EHS^P observations silica is expected to be present within the concrete, mortar and asphalt shingles observed at the site. If the aforementioned materials are to be disturbed, appropriate precautions should be taken during disturbance.

5.11 Vinyl Chloride

Vinyl Chloride is a chemical compound that exists as a gas at standard temperature and pressure. It is used in the production of polyvinyl chloride (PVC) which is non-hazardous.

Vinyl chloride is a known human carcinogen and is known to cause liver damage.

Based on EHS^P observations vinyl chloride is not present at the site.

6.0 ASBESTOS CONTAINING MATERIALS SURVEY

6.1 General

The asbestos containing materials (ACMs) survey was conducted by EHS^P to satisfy Section 30 of the Occupational Health and Safety Act of Ontario and Ontario Regulation 278/05: Regulation Respecting Asbestos on Construction Projects and in Buildings and Repair Operations (O.Reg.278/05).

The ACMs survey was carried out in accordance with the measures prescribed in O.Reg.278/05.

6.2 Findings

EHS^P personnel completed site reconnaissance including visual inspection and sampling of potential ACMs on July 10th, 2013. Based on the findings of the visual inspection, suspect materials were documented, collected and subsequently submitted for analysis at a 3rd party analytical laboratory.

As part of the ACMs survey, EHS^P collected twelve (12) representative samples from four (4) distinct types of materials that were suspected to contain asbestos. Potential ACMs sampled during the DSS included mortar, asphalt shingles and tar paper. Sampled materials were submitted using a chain of custody to Steve Moody Micro Services, of Farmers Branch, Texas. The analytical results are presented in Appendix B and are summarized in the following table:

Table 1: Summary of Laboratory Analytical Results – Asbestos Containing Materials

Sample ID	Material	Location	% Asbestos Concentration	Friability	Condition	Photo #
SA-1	Mortar	Garage (building 1)	None Detected	N/A	N/A	N/A
SA-2						
SA-3						
SA-4	Asphalt Shingle	Garage (building 1)	None Detected	N/A	N/A	2
SA-5						
SA-6						
SA-7	Tar Paper	Barn (building 3)	None Detected	N/A	N/A	7
SA-8						
SA-9						
SA-10	Mortar	Barn (building 3)	None Detected	N/A	N/A	8
SA-11						
SA-12						

Based on the analytical results none of the samples submitted for analysis were found to contain greater than 0.5% asbestos by dry weight and therefore are not considered to be ACM's in accordance with O.Reg. 278/05.

7.0 LEAD BASED PAINT SURVEY

7.1 General

The lead based paint survey was conducted by EHS^P to satisfy Section 30 of the Occupational Health and Safety Act of Ontario. The Federal Government has been limiting the concentration of lead allowed in manufactured paints since the 1970's. Painted surfaces that were applied prior to the 1980's likely contain elevated concentrations of lead. Exterior painted surfaces applied prior to the 1990's potentially contain elevated concentrations of lead. General industry practice is to categorize any painted surface that contains 0.5% (5000 ppm) as lead based paint. Paints with a lead concentration between 0.009% (90 ppm) and 0.499% (4999 ppm) are classified as lead containing.

7.2 Findings

EHS^P personnel completed the site reconnaissance including visual inspection and sampling of potential lead based paints. As part of the lead based paint survey two (2) representative paint chip sample were collected for lead characterization.

Sampled materials were submitted using a chain of custody to Paracel Laboratories Ltd. of Ottawa, Ontario. The analytical results are presented in appendix B and are summarized in the following table:

Table 2: Summary of Laboratory Analytical Results – Lead Paint

Sample ID	Colour (Painted Surface)	Location	Lead Concentration % (ppm)	Condition	Photo #
P-01	Grey Wall Paint	Barn (building 3)	0.057% (569ppm)	Good	9
P-02	White Paint	Barn/ Stable (building 4)	<0.002% (<20ppm)	Poor	14

Based on the analytical results sample P-01 grey wall paint was found to contain a lead concentration greater than 90 ppm and is therefore considered to be lead containing paint. Low concentrations of lead may be present in all painted surfaces.

8.0 HAZARDOUS MATERIALS SURVEY

8.1 General

The field survey included the visual identification of materials that are potentially hazardous to site occupants, workers, and others.

The following sections provide an overview of the potential hazardous materials of interest and the potential presence of such substances at the site.

8.2 Ozone Depleting Substances

8.2.1 General

Ozone Depleting Substances (ODSs) are a group of man-made halocarbon refrigerants. They were invented in the 1920's and were used widely as refrigerants and aerosol propellants before 1980. The removal and disposal of ODSs is governed by Federal Regulation SOR/2003-289, Federal Halocarbons Regulations, 2003 made under the Canadian Environmental Protection Act.

ODSs are the primary cause of man-made ozone layer depletion and therefore must be not released into the environment.

8.2.2 Findings

No ozone depleting substances were observed in the buildings during the DSS.

8.3 Polychlorinated Biphenyls

8.3.1 General

Polychlorinated Biphenyls (PCBs) are a group of man-made organic compounds made up of a specific structure that includes two benzene rings or phenyl functional groups. Commercial production began in the 1920's and they were used primarily as coolants and insulating fluids used widely in transformers and capacitors. The removal and disposal of PCBs is governed by Federal Regulation SOR/2008-273, PCBs Regulations, made under the Canadian Environmental Protection Act.

PCBs interfere with hormone production in people causing toxic and mutagenic affects. PCBs are a persistent pollutant and must not be released into the environment.

8.3.2 Findings

PCB's may be present in the fluorescent light ballasts located at the site.

8.4 Mould

8.4.1 General

Mould is a term that generally refers to a specific group of fungi. Mould growth on building materials can impact air quality because toxigenic or allergenic constituents can be dispersed in the air and may be inhaled. Reactions to mould vary depending on physical health, genetics, and age. Common symptoms of mould exposure include cough, congestion, eye irritation, runny nose, headache, fatigue, and vexation of asthma. In some cases, mould is known or suspected to cause serious illness.

8.4.2 Findings

Water damage and suspect mould growth was observed in the garage/ workshop during the DSS.

8.5 Radioactive Smoke Detectors

8.5.1 General

Smoke detectors can contain a small amount of the radioactive isotope Americium-241. The radiation emitted from these detectors is negligible when compared to natural background radiation and is not considered hazardous. The disposal of radioactive smoke detectors is not controlled.

8.5.2 Findings

Based on EHS^P observations radioactive smoke detectors are not present at the Site.

8.6 Urea Formaldehyde Foam Insulation

8.6.1 General

Urea Formaldehyde Foam Insulation (UFFI) is a foam insulation that contains a urea-formaldehyde resin. In the 1970's UFFI was installed in homes throughout Canada. For a short period of time the insulation would off-gas formaldehyde. Authorities became concerned about potential exposure to formaldehyde and the application was banned in 1980. It is unlikely that UFFI installed before the ban would produce a significant concentration of airborne formaldehyde.

8.6.2 Findings

Based on EHS^P observations during the DSS, UFFI was not observed at the Site.

8.7 Animal Feces

8.7.1 General

Animal feces such as that from birds, bats, and rodents may carry human pathogens. Animal feces from birds and bats are known to release airborne fungal spores that may cause serious illness including significant respiratory infection and in some cases blindness. Disturbance of significant deposits of animal feces should only be conducted by a pest control specialist.

8.7.2 Findings

Based on EHS^P observations during the DSS a significant amount of bird and animal feces are present throughout all buildings surveyed.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The following recommendations are based on the DSS conducted by EHS^P at 139 March Road, Kanata, Ontario on July 10th, 2013:

General

The Occupational Health and Safety Act require building owners and their agents to notify all employees, and contractors of the presence of designated substances at a project site.

Asbestos

No asbestos was detected in the samples submitted for analysis.

Lead

Measures prescribed in the Ministry of Labour's Guideline titled "Lead on Construction Projects" should be followed during the disturbance of any painted surface. Alternatively additional paint chip sampling may be utilized to rule out specific painted surfaces as lead containing or lead based.

Mercury

Mercury containing fluorescent light tubes should be carefully removed and containerized for disposal in accordance with Ontario Regulation 347/09 (as amended) when removed.

PCBs

Potential PCB containing ballasts observed at the Site should be separated from the light fixtures and containerized when removed in accordance with Federal Regulation SOR/2008-273 – PCB Regulations.

Silica

Measures prescribed in the Ministry of Labour's Guideline titled "Silica on Construction Projects", should be followed during the disturbance of any silica containing material

Animal Feces

Inform the prospective demolition contractors of the presence of the bird and animal feces. Ensure that the successful demolition contractor wears the appropriate PPE to protect their employees and that they take adequate measures to control dust during the demolition activities.

Other

Various cans of paint and other containers containing unknown substances were observed in varying condition throughout the garage/workshop and barn.

10.0 LIMITATIONS

The conclusions and recommendations contained in this assessment report are based upon professional opinions with regard to the subject matter. These opinions are in accordance with currently accepted environmental assessment standards and practices applicable to these locations and are subject to the following inherent limitations:

1. The data and findings presented in this report are valid as of the dates of the investigations. The passage of time, manifestation of latent conditions or occurrence of future events may warrant further exploration at the properties, analysis of the data, and re-evaluation of the findings, observations, and conclusions expressed in this report.
2. The data reported and the findings, observations and conclusions expressed in this report are limited by the Scope of Work. The Scope of Work was defined by the request of the client, the time and budgetary constraints imposed by the client, and availability of access to the properties.
3. Because of the limitations stated above, the findings, observations and conclusions expressed by EHS^P in this report are not, and should not be, considered an opinion concerning compliance of any past or present owner or operator of the site with any federal, provincial or local laws or regulations.
4. No warranty or guarantee, whether expressed or implied, is made with respect to the data or the reported findings, observations, and conclusions, which are based solely upon site conditions in existence at the time of investigation.
5. EHS^P assessment reports present professional opinions and findings of a scientific and technical nature. While attempts were made to relate the data and findings to applicable environmental laws and regulations, the report shall not be construed to offer legal opinion or representations as to the requirements of, nor compliance with, environmental laws, rules, regulations or policies of federal, provincial, or local governmental agencies. Any use of the assessment report constitutes acceptance of the limits of EHS^P's liability. EHS^P's liability extends only to its client and not to other parties who may obtain this assessment report. Issues raised by the report should be reviewed by appropriate legal counsel.

Appendix A Photolog

Designated Substances Survey
139 March Road
Out Buildings
Kanata, Ontario
EHS^p Ref No.: 04-0034-13-032



Photo 1: Building 1 – Garage/Workshop.



Photo 2: View of representative asphalt shingles collected from Building 1.



Photo 3: View of water damage and suspected mould growth in Building 1.



Photo 4: View of various containers containing unknown substances in Building 1.



Photo 5: Building 2 – Shed.



Photo 6: Building 3 – Barn.



Photo 7: View of representative tar paper located in Building 3.



Photo 8: View of representative mortar located in Building 3.



Photo 9: View of lead containing grey wall paint located in Building 3.



Photo 10: View of various containers containing unknown substances in Building 3.



Photo 11: Building 4 – Large Barn/Stable.



Photo 12: Interior view of large barn.



Photo 13: Interior view of stable.



Photo 14: View of representative white paint located in the stable.

Appendix B

Analytical Results

Designated Substances Survey
139 March Road
Out Buildings
Kanata, Ontario
EHS^p Ref No.: 04-0034-13-032

PLM Summary Report

Steve Moody Micro Services, LLC
 2051 Valley View Lane
 Farmers Branch, TX 75234 Phone: (972) 241-8460

NVLAP Lab Code 102056-0
 TDSHS License No. 30-0084

Client : EHS Partnerships Ltd. - Ottawa, ON Lab Job No. : 13B-07598
 Project : 139 March Road, Out Buildings Report Date : 07/11/2013
 Project # : 04-0034-13-032 Sample Date : 07/10/2013
 Identification : Asbestos, Bulk Sample Analysis
 Test Method : Polarized Light Microscopy / Dispersion Staining (PLM/DS)
 EPA Method 600 / R-93 / 116

Page 1 of 1

On 7/11/2013, twelve (12) bulk material samples were submitted by Joel Marcellus of EHS Partnerships Ltd. - Ottawa, ON for asbestos analysis by PLM/DS. The PLM Detail Report is attached; additional information may be found therein. The results are summarized below:

Sample Number	Client Sample Description / Location	Asbestos Content
SA-1	Mortar, Building 1	None Detected - Mortar
SA-2	Mortar, Building 1	None Detected - Mortar
SA-3	Mortar, Building 1	None Detected - Mortar
SA-4	Asphalt Shingle, Building 1	None Detected - Roofing Shingle
SA-5	Asphalt Shingle, Building 1	None Detected - Roofing Shingle
SA-6	Asphalt Shingle, Building 1	None Detected - Roofing Shingle
SA-7	Tar Paper, Building 3	None Detected - Tar Paper
SA-8	Tar Paper, Building 3	None Detected - Tar Paper
SA-9	Tar Paper, Building 3	None Detected - Tar Paper
SA-10	Mortar, Building 3	None Detected - Mortar
SA-11	Mortar, Building 3	None Detected - Mortar
SA-12	Mortar, Building 3	None Detected - Mortar

These samples were analyzed by layers. Quantification, unless otherwise noted, is performed by calibrated visual estimate. The test report shall not be reproduced, except in full, without written approval of the laboratory. The results relate only to the items tested. These test results do not imply endorsement by NVLAP or any agency of the U.S. Government. Accredited by the National Voluntary Laboratory Accreditation Program for Bulk Asbestos Fiber Analysis under Lab Code 102056-0.



Analyst(s): Heather Deines

Lab Manager : Bruce Crabb

Lab Director : Steve Moody

Approved Signatory :

Approved Signatory :

Thank you for choosing Steve Moody Micro Services

Certificate of Analysis

Report Date: 11-Jul-2013

Order Date: 10-Jul-2013

 Client: **EHS Partnerships Ltd. (Ottawa)**

Client PO:

Project Description: 04-0034-13-032

Sample Results

Lead				Matrix: Paint
				Sample Date: 10-Jul-13
Parcel ID	Client ID	Units	MDL	Result
1328189-01	P-01 Grey Wall Paint - Bldg. 3	ug/g	20	569
1328189-02	P-02 White Paint - Bldg. 4	ug/g	20	<20

Laboratory Internal QA/QC

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Matrix Blank									
Lead	ND	20	ug/g						
Matrix Duplicate									
Lead	6310	200	ug/g	5850			7.6	30	
Matrix Spike									
Lead	248		ug/L	ND	99.1	70-130			

December 13, 2017
PG4349-LET.01

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National Capital Commission
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Geotechnical Engineering
Environmental Engineering
Hydrogeology
Geological Engineering
Materials Testing
Building Science
Archaeological Services

www.patersongroup.ca

Attention: **Mr. Geoff Frigon**

Subject: **Geotechnical Investigation
Proposed Building Renovations
139 March Road - Ottawa**

Dear Sir,

Paterson Group (Paterson) was commissioned by the National Capital Commission (NCC) to conduct a geotechnical investigation for the proposed building renovations at the aforementioned site.

The proposed renovation is understood to include new concrete footings to replace the existing dry stack rock and concrete foundations for each of the three buildings currently occupying the subject site.

1.0 Field Investigation

The fieldwork for the current investigation was carried out on November 13, 2017, and consisted of excavating four (4) test pits and two (2) hand auger holes to a maximum depth of 1.9 m. The test pits were excavated using a rubber tire backhoe. The hand auger holes were dug using a double flighted hand auger. The test holes were reviewed in the field by Paterson personnel under the direction of a senior engineer from the geotechnical division. The field procedure consisted of reviewing the excavation, sampling and testing the overburden at selected locations.

The test pits were placed in a manner to provide general coverage of the property taking into consideration existing site features and underground services. The approximate location of the test holes are shown on Drawing PG4349-1 - Test Hole Location Plan attached to the present report.

2.0 Field Observations

The subject site is currently occupied by three buildings, with an associated gravel laneway and an outbuilding to the east of the property. The property is generally flat and at grade with March Road. The property is surrounded by farmland on all sides, and March Road to the west.

Generally, the subsurface profile encountered at the test hole locations consisted of topsoil or fill overlying glacial till. The soil matrix of the glacial till consisted mainly of a silty clay, with some sand and gravel and trace cobbles and boulders. Refusal on bedrock was encountered at approximately 1.9 m below existing ground surface at TP 1. Refer to the Soil Profile and Test Data sheets attached for specific details of the soil profile encountered at the test hole locations.

The existing building foundation was exposed as part of the field program to determine the composition and condition at 3 locations. The existing foundations at Buildings 'A' and 'C' (TP 2 and TP 4, respectively) were observed to consist of a wooden grade beam placed on top of dry stacked rock wedges. The existing foundation at Building 'B' (TP 3) was observed to consist of a concrete grade beam placed directly on top of the native glacial till. The observed foundation compositions are given in the attached Soil Profile and Test Data sheets. Photographs of the existing footings are also attached.

Based on available geological mapping, the bedrock consists of precambrian mafic to ultramafic plutonic rocks (diorite, gabbro, peridotite, pyroxenite, anorthosite, derived metamorphic rocks), with an anticipated overburden thickness of 0 to 3 m.

Based on the field observations, experience in the local area, moisture levels and colour of the recovered soil samples, the long-term groundwater level is expected between 2 to 3 m depth. Groundwater levels are subject to seasonal fluctuations and therefore, the groundwater levels could vary at the time of construction.

3.0 Geotechnical Design and Construction Precautions

Site Grading and Preparation

Topsoil, fill, disturbed material or any other soils containing deleterious or organic materials, should be removed from within the perimeter of the proposed buildings and other settlement sensitive structures. Care should be taken to not disturb adequate bearing soils at subgrade level during site preparation activities.

Fill Placement

Fill placed for grading beneath the proposed buildings, unless otherwise specified, should consist of clean imported granular fill, such as Ontario Provincial Standard Specifications (OPSS) Granular A or Granular B Type II. The fill should be tested and approved prior to delivery to the site. The fill should be placed in maximum lift thicknesses of 300 mm and compacted with suitable compaction equipment. Fill placed beneath the building should be compacted to a minimum of 98% of the Standard Proctor Maximum Dry Density (SPMDD), noting that excessive vibration could lead to subgrade softening.

Non-specified existing fill along with site-excavated soil could be placed as general landscaping fill where surface settlement is of minor concern. The existing materials should be spread in thin lifts and at least compacted by the tracks of the spreading equipment to minimize voids. If the existing materials are to be placed to increase the subgrade level for areas to be paved, the non-specified existing fill should be placed in 300 mm lifts and compacted to a minimum density of 95% of the respective SPMDD.

Foundation Design

Footings placed on an undisturbed, dense glacial till bearing surface can be designed using a bearing resistance value at Serviceability Limit States (SLS) of **150 kPa** and a factored bearing resistance value at Ultimate Limit States (ULS) of **225 kPa**. A geotechnical resistance factor of 0.5 was applied to the bearing resistance value at ULS.

An undisturbed bearing surface consists of one from which all topsoil and deleterious materials, such as loose, frozen or disturbed soil, have been removed prior to the placement of concrete for footings.

Footings placed on a clean, surface sounded bedrock bearing surface can be designed using a factored bearing resistance value at ultimate limit states (ULS) of **3,000 kPa** incorporating a geotechnical resistance factor of 0.5.

A clean, surface sounded bedrock bearing surface should be free of loose materials, and have no near surface seams, voids, fissures or open joints which can be detected from surface sounding with a rock hammer.

The bearing medium under footing-supported structures is required to be provided with adequate lateral support with respect to excavations and different foundation levels. Adequate lateral support is provided to the soil subgrade medium when a plane extending down and out from the bottom edge of the footing at a minimum of 1.5H:1V, passes only through in situ soil or engineered fill of the same or higher capacity as the soil.

Adequate lateral support is provided to a bedrock bearing medium when a plane extending down and out from the bottom edge of the footing at a minimum of 1H:6V (or flatter) passes only through sound bedrock or a material of the same or higher capacity as the bedrock, such as concrete. A weathered bedrock bearing surface will require a lateral support zone of 1H:1V (or flatter).

Protection of Footings Against Frost Action

Perimeter footings of heated structures are required to be insulated against the deleterious effect of frost action. A minimum of 1.5 m thick soil cover (or equivalent) should be provided.

Exterior unheated footings, such as isolated exterior piers, are more prone to deleterious movement associated with frost action than the exterior walls of the structure proper and require additional protection, such as soil cover of 2.1 m or a combination of soil cover and foundation insulation.

Excavation Side Slopes

The side slopes of the shallow excavations anticipated at this site should either be cut back at acceptable slopes or be retained by shoring systems from the start of the excavation until the structure is backfilled. It is expected that sufficient room will be available to permit the building excavation to be undertaken by open-cut methods (i.e. unsupported excavations).

The excavation side slopes above the groundwater level extending to a maximum depth of 3 m should be cut back at 1H:1V or flatter. The flatter slope is required for excavation below groundwater level. The subsoil at this site is considered to be mainly a Type 2 and 3 soil according to the Occupational Health and Safety Act and Regulations for Construction Projects.

Excavated soil should not be stockpiled directly at the top of excavations and heavy equipment should be kept away from the excavation sides.

Slopes in excess of 3 m in height should be periodically inspected by the geotechnical consultant in order to detect if the slopes are exhibiting signs of distress.

It is recommended that a trench box be used at all times to protect personnel working in trenches with steep or vertical sides. It is expected that services will be installed by "cut and cover" methods and excavations will not be left open for extended periods of time.

Groundwater Control

The contractor should be prepared to direct water away from all bearing surfaces and subgrades, regardless of the source, to prevent disturbance to the founding medium.

The rate of flow of groundwater into the excavation through the overburden and bedrock should be low for the expected subsurface conditions at this site. It is anticipated that pumping from open sumps will be sufficient to control the groundwater influx through the sides of the excavations.

A temporary MOE permit to take water (PTTW) will be required for this project if more than 50,000 L/day are to be pumped during the construction phase. At least 3 to 4 months should be allowed for completion of the application and issuance of the permit by the MOE.

Winter Construction

If winter construction is considered for this project, precautions should be provided for frost protection. The subsurface soil conditions mainly consist of frost susceptible materials. In presence of water and freezing conditions ice could form within the soil mass. Heaving and settlement upon thawing could occur.

In the event of construction during below zero temperatures, the founding stratum should be protected from freezing temperatures by the installation of straw, propane heaters and tarpaulins or other suitable means. The excavation base should be insulated from sub-zero temperatures immediately upon exposure and until such time as heat is adequately supplied to the building and the footings are protected with sufficient soil cover to prevent freezing at founding level.

The trench excavations should be completed in a manner to avoid the introduction of frozen materials, snow or ice into the trenches. Where excavations are constructed in proximity of existing structures precaution to adversely affecting the existing structure due to the freezing conditions should be provided.

4.0 Recommendations

A materials testing and observation services program is a requirement for the provided foundation design data to be applicable. The following aspects of the program should be performed by the geotechnical consultant:

- Observation of all bearing surfaces prior to the placement of concrete.
- Sampling and testing of the concrete and fill materials used.
- Periodic observation of the condition of unsupported excavation side slopes in excess of 3 m in height, if applicable.
- Observation of all subgrades prior to backfilling.
- Field density tests to determine the level of compaction achieved.

A report confirming that the construction have been conducted in general accordance with Paterson's recommendations could be issued upon the completion of a satisfactory inspection program by the geotechnical consultant.

5.0 Statement of Limitations

The recommendations provided in the report are in accordance with Paterson's present understanding of the project. Paterson request permission to review the recommendations when the drawings and specifications are completed.

A soils investigation is a limited sampling of a site. Should any conditions at the site be encountered which differ from the test locations, Paterson requests immediate notification to permit reassessment of the recommendations.

The recommendations provided should only be used by the design professionals associated with this project. The recommendations are not intended for contractors bidding on or constructing the project. The latter should evaluate the factual information provided in the report. The contractor should also determine the suitability and completeness for the intended construction schedule and methods. Additional testing may be required for the contractors purpose.

The present report applies only to the project described in the report. The use of the report for purposes other than those described above or by person(s) other than the NCC or their agents is not authorized without review by Paterson.

Best Regards,

Paterson Group Inc.



Nathan Christie, P.Eng.



David J. Gilbert, P.Eng.

Attachments

- Soil Profile and Test Data sheets
- Symbols and Terms
- Photographs from Site Visit - November 13, 2017
- Figure 1 - Key Plan
- Drawing PG4349-1 - Test Hole Location Plan

Report Distribution

- National Capital Commission (1 electronic copy)
- Paterson Group (1 copy)

DATUM TBM: Mag. nail in a utility pole. Assumed elevation: 100.00 m

FILE NO.
PG4349

REMARKS

HOLE NO.
TP 1

BORINGS BY Backhoe

DATE November 13, 2017

SOIL DESCRIPTION	STRATA PLOT	SAMPLE				DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone				Piezometer Construction	
		TYPE	NUMBER	RECOVERY %	N VALUE or RQD			○ Water Content % 20 40 60 80					
GROUND SURFACE						0	99.91						
TOPSOIL with organics, trace gravel		G	1										
		G	2										
GLACIAL TILL: Brown silty clay, some sand and gravel, trace cobbles and boulders		G	3			1	98.91						
		G	4										
End of Test Pit													
(TP dry upon completion)													
TP terminated on bedrock surface @ 1.85 m depth													

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

DATUM TBM: Mag. nail in a utility pole. Assumed elevation: 100.00 m

FILE NO. PG4349

REMARKS

HOLE NO. TP 2

BORINGS BY Backhoe

DATE November 13, 2017

SOIL DESCRIPTION	STRATA PLOT	SAMPLE				DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone				Piezometer Construction
		TYPE	NUMBER	RECOVERY %	N VALUE or RQD			○ Water Content %				
TOP OF FOUNDATION WALL								20	40	60	80	
300mm Thick wooden beam						0	100.28					
FILL: Dry stacked cobbles and boulders												
GLACIAL TILL: Grey silty clay, some sand, trace gravel, cobbles, boulders		G	1									
End of Test Pit (TP dry upon completion)												

20
40
60
80
100

Shear Strength (kPa)

▲ Undisturbed △ Remoulded

pater-songroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Geotechnical Investigation
 Prop. Building Renovations - 139 March Road
 Ottawa, Ontario

DATUM TBM: Mag. nail in a utility pole. Assumed elevation: 100.00 m

FILE NO. **PG4349**

REMARKS

HOLE NO. **TP 3**

BORINGS BY Backhoe

DATE November 13, 2017

SOIL DESCRIPTION	STRATA PLOT	SAMPLE				DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m					Piezometer Construction			
		TYPE	NUMBER	RECOVERY	N VALUE or RQD			● 50 mm Dia. Cone								
								○ Water Content %								
												20	40	60	80	100
TOP OF FOUNDATION WALL						0	99.68									
Concrete footing																
0.47 GLACIAL TILL: Grey silty clay, some sand, trace gravel and cobbles possible boulders 0.60 End of Test Pit (TP dry upon completion)		G	1													

▲ Undisturbed △ Remoulded

DATUM TBM: Mag. nail in a utility pole. Assumed elevation: 100.00 m

REMARKS

BORINGS BY Backhoe

DATE November 13, 2017

FILE NO. **PG4349**

HOLE NO. **TP 4**

SOIL DESCRIPTION	STRATA PLOT	SAMPLE				DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone				Piezometer Construction	
		TYPE	NUMBER	RECOVERY	N VALUE or RQD			20	40	60	80		
GROUND SURFACE						0	100.18						
TOPSOIL													
GLACIAL TILL: Brown silty clay, some sand, trace cobbles and boulders													
End of Test Pit (TP dry upon completion)													

20 40 60 80 100
Shear Strength (kPa)
 ▲ Undisturbed △ Remoulded

DATUM TBM: Mag. nail in a utility pole. Assumed elevation: 100.00 m

FILE NO. **PG4349**

REMARKS

HOLE NO. **HA 1**

BORINGS BY Backhoe

DATE November 13, 2017

SOIL DESCRIPTION	STRATA PLOT	SAMPLE				DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone				Piezometer Construction	
		TYPE	NUMBER	RECOVERY %	N VALUE or RQD			20	40	60	80		
GROUND SURFACE						0	100.02						
ORGANICS													
<div style="border-top: 1px dashed black; border-bottom: 1px dashed black; padding: 5px;"> 0.35 GLACIAL TILL: Brown silty sand, trace clay, gravel and cobbles, possible boulders 0.40 End of Hand Auger Hole </div>													

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

DATUM TBM: Mag. nail in a utility pole. Assumed elevation: 100.00 m

REMARKS

BORINGS BY Backhoe

DATE November 13, 2017

FILE NO. **PG4349**

HOLE NO. **HA 2**

SOIL DESCRIPTION	STRATA PLOT	SAMPLE				DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone				Piezometer Construction	
		TYPE	NUMBER	RECOVERY %	N VALUE or RQD			20	40	60	80		
GROUND SURFACE						0	100.15						
GLACIAL TILL: Brown silty sand, trace clay, gravel and cobbles, possible boulders													
End of Hand Auger Hole	0.40												

20 40 60 80 100
Shear Strength (kPa)
 ▲ Undisturbed △ Remoulded

Photographs from Site Visit – November 13, 2017

Photo 1: Test hole TP 1, showing bedrock surface at approximately 1.9 m depth.



Photo 2: Exterior of Building 'A', showing wooden grade beam placed on top of dry stacked rock wedge foundation. The native glacial till is visible as the lighter brown material.



Photographs from Site Visit – November 13, 2017

Photo 3: Exterior of Building 'B', showing exposed concrete grade beam foundation. The glacial till is visible under the foundation level.



Photo 4: Exterior of Building 'C', showing dry stacked rock wedge foundation.



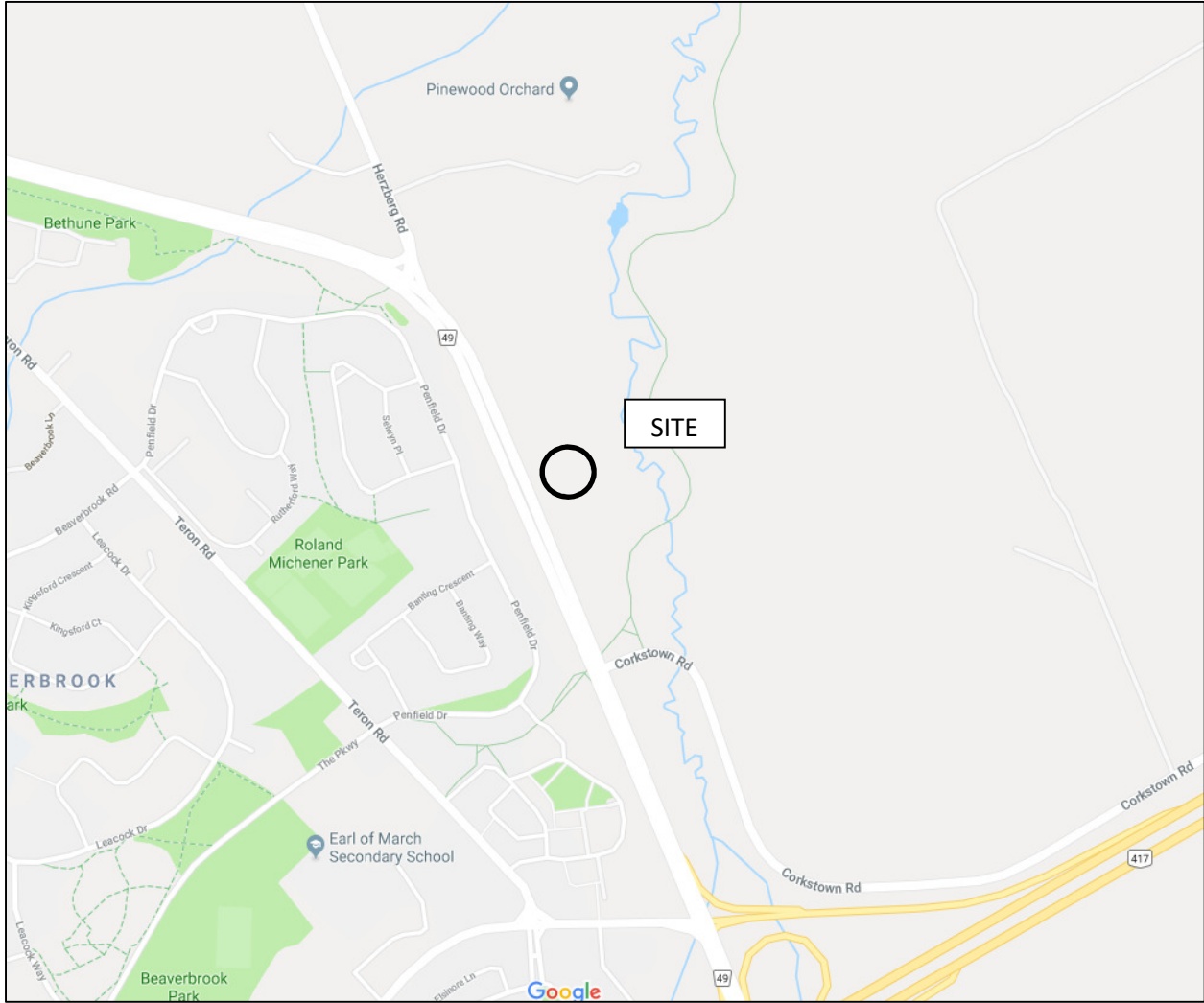


FIGURE 1
KEY PLAN



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NO.	REVISIONS	DATE	INITIAL
0			

NATIONAL CAPITAL COMMISSION
GEOTECHNICAL INVESTIGATION
PROPOSED BUILDING RENOVATIONS - 139 MARCH ROAD

OTTAWA, ONTARIO

Title: **TEST HOLE LOCATION PLAN**

Scale:	~1:400	Date:	11/2017
Drawn by:	RCG	Report No.:	PG4349-1
Checked by:	NC	Dwg. No.:	PG4349-1
Approved by:	DJG	Revision No.:	0

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