

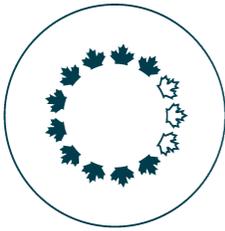
NATIONAL CAPITAL COMMISSION COMMISSION DE LA CAPITALE NATIONALE

INVITATION TO TENDER Tender / Contract Form

NCC TENDER FILE #:

AL1695

ADDRESS INQUIRIES TO: Allan Lapensée, Sr. Contract Officer allan.lapensee@ncc-ccn.ca	CONTRACT NO.: (NCC use only)
BID CLOSING DEADLINE: March 23, 2017 at 3:00pm EDT time	
RETURN ORIGINAL Submit tender on this tender / contract form and return to:	→ Procurement Services National Capital Commission 40 Elgin Street 2nd Floor Security Office Ottawa, ON K1P 1C7 Envelope to reference NCC tender file # AL1695
DESCRIPTION OF GOODS: Richmond Landing – Navy Wake	DELIVERY LOCATION: Canada`s Capital Region Richmond Landing Ottawa ON https://goo.gl/maps/a6oxCc758w92



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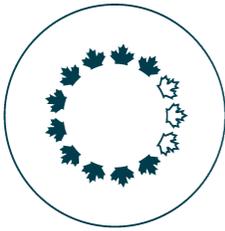
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I. OFFER

The undersigned bidder (hereinafter called the "Contractor") hereby offers to the National Capital Commission (hereinafter called the "Commission" or the "NCC") to supply & deliver the services and/or goods in accordance with the specification and drawings, terms and conditions, **for the all-inclusive lump sum and/or unit price(s) as set out in section III herein.**

II. GENERAL AGREEMENT The Contractor agrees:

1. To deliver no later than June 1, 2017.
2. **to provide at his/her own cost the following securities:**
 - (a) **with your tender to ensure entry into a contract a bid bond from an [acceptable company](#), a certified cheque made payable to the National Capital Commission, or, "Cash" in the amount of 10 % of the bid amount including taxes.**
 - (b) **upon notification of acceptance of tender, a Performance Bond and a Payment of Labour and Material Bond may be requested for each at 50% of the bid amount including taxes, or, "Cash" in the amount of 20 % of the bid amount including taxes;**
3. that this Offer and Agreement, together with the Specifications and Drawings, the Instructions to Bidders, the General Conditions – Goods Contracts, and any and all attachments and addenda issued thereto, shall be and are the complete tender and this offer is made subject to the provisions contained therein.
4. that this offer supersedes and cancels all communications, negotiations and agreements relating to the work other than contained in the complete tender and is irrevocable for 30 days from the Tender Closing Time shown hereon and in the event that security is provided with this tender, it will be forfeited if the Contractor refuses a contract if this tender is accepted and executed on behalf of the Commission.
5. that the complete tender together with and subject to all the provisions contained therein shall, when accepted and executed on behalf of the Commission, constitute a binding contract between the Contractor and the Commission.



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III. PRICING

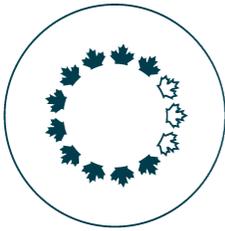
The Contractor agrees that the following is (are) the all-inclusive lump sum and/or unit price(s) referred to in Clause I:

The Bidder agrees that

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

No.	Description	Unit Unité	Qty Qté	Unit Price Prix Unitaire	Total or lump sum price / Total ou somme forfaitaire
1	Sloped Granite Slabs / Dalles de granit inclinées	LUMP SUM / SOMME FORFAITAIRE	n/a - s/o	n/a - s/o	
2	Granite Pavers / Pavés de granit	LUMP SUM / SOMME FORFAITAIRE	n/a - s/o	n/a - s/o	
3	Text on Sloped Granite Slabs / Texte gravé sur les dalles de granit inclinées	LUMP SUM / SOMME FORFAITAIRE	n/a - s/o	n/a - s/o	
3.1	Introductory Text / Texte d'introduction	LUMP SUM / SOMME FORFAITAIRE	n/a - s/o	n/a - s/o	
3.2	Secondary Introductory Text / Texte d'introduction secondaire	LUMP SUM / SOMME FORFAITAIRE	n/a - s/o	n/a - s/o	
3.3	Ship Names / Noms des navires	LUMP SUM / SOMME FORFAITAIRE	n/a - s/o	n/a - s/o	
4	Delivery FOB Destination / Livraison FAB destination	LUMP SUM / SOMME FORFAITAIRE	n/a - s/o	n/a - s/o	
				SUB-TOTAL	
				13 % HST	
				TOTAL	

Basis of award will be the bidder who meets all of the terms and conditions, and, who offers the NCC the lowest total amount. Lowest or any tender NOT necessarily accepted. The NCC also reserves the right to cancel this tender and/or re-issue the tender in its original or revised form, and, to negotiate with the successful bidder and/or all bidders.



NATIONAL CAPITAL COMMISSION COMMISSION DE LA CAPITALE NATIONALE

INVITATION TO TENDER Tender / Contract Form

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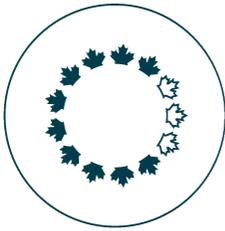
AL1695

V. INVOICING

- The Contractor will have the right to receive payments within 30 days after the technical representative has delivered a certificate indicating that in fact the invoice is authentic and exact, that the Contractor has delivered the said services and has observed the terms of the contract.
- The Commission is a Crown Corporation subject to the Goods and Services Tax (GST) and the Provincial Sales Tax (OHST or QST). The Contractor is required to indicate separately, with the request for payment, the amount of GST and OHST/QST, to the extent applicable, that the Commission will pay. These amounts will be paid to the Contractor who will be required to make the appropriate remittances to Revenue Canada and the respective provincial governments. The successful bidder must complete in its entirety the T1204 tax form before awarded a contract.
- All invoices are to make reference to the **Commission Contract Number xxxxxx (6 digit number on page 1 once a contract is executed between the Contractor and the Commission)** and be forwarded by email at payables@ncc-ccn.ca .
- To ensure prompt payment, please prepare your invoice in accordance with the price(s) quoted. Errors in invoicing can cause delay of payment. Submit your invoice to the address shown above and clearly indicate the contract number.

V. ENQUIRIES

Enquiries regarding this tender must be submitted in writing to the Senior Contract Officer as early as possible within the solicitation period. Enquiries should be received no later than five(5) business 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. To ensure consistency and quality of the information provided to Bidders, the Senior Contract Officer shall examine the content of the enquiry and shall decide whether or not to issue an amendment. All enquiries and other communications related to this tender sent throughout the solicitation period are to be directed **ONLY** to the Senior Contract Officer. Non-compliance with this requirement during the solicitation period can, for that reason alone, result in disqualification of a tender.



**NATIONAL CAPITAL COMMISSION
COMMISSION DE LA CAPITALE NATIONALE**

**INVITATION TO TENDER
Tender / Contract Form**

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VI. ADDENDUM ACKNOWLEDGEMENT

I/We acknowledge receipt of the following addenda _____ (Bidder to enter number of addenda issued, if any) and have included for the requirement of it/them in my/our tendered price.

We hereby OFFER to sell and/or supply to the National Capital Commission upon the terms and conditions set out herein, the supplies and/or services listed above and on any attached sheets at the submitted price(s).

Name and address of Contractor :	Signature(s)
Tel-Tél:	Title:
Fax-Télécopieur:	Date:
E-mail:	

Accepted & executed on behalf of the Commission this _____ day of _____, 2017

COMMISSION USE ONLY NCC SIGNATURE ONLY	TITLE
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GOODS CONTRACTS
Instructions to Tenderers

1. Addressing

The tender envelope shall be addressed to Procurement Services, National Capital Commission, 40 Elgin Street, Security Office on the 2nd floor, Ottawa, Ontario K1P 1C7.

The name and address of the tenderer and the due time and date of the tender shall be clearly shown on the envelope.

2. Delivery of Tenders

Tenders must be received by the National Capital Commission on or before the exact time and date set for their reception. Care must be taken to mail or deliver tenders in good time as tenders received after the specified time and date will not be accepted or considered and will be returned unopened.

3. Unacceptable Tenders

Tenders not submitted on the accompanying Tender and Contract form.

Faxed tenders and tenders by e-mail unless otherwise stated.

Tenders received after the tender closing date and time.

Incomplete tenders may be rejected.

Unsigned tenders shall be subject to disqualification.

4. Revision of Tenders

The tenderer may revise his tender by fax, letter or telegram, provided it is received before the tender closing date and time.

Faxes or letters must clearly indicate required changes.

5. Acceptance of Offer

The lowest or any tender not necessarily accepted.

6. Completion of Tender and Contract Form

Insert the price per unit against each item, multiply by the respective estimated quantity, extend the answers in the Total column and apply GST and PST where applicable before calculating Total Amount.

PST is calculated on applicable Provincial legislation at the delivery location.

Type or legibly print the tenderer's full business name, address and telephone number under the spaces provided for the Contractor's Full Business Name and Contractor's Business Address respectively.

Sign the Tender /Contract form in the space provided as indicated below.

The tender must be signed by a duly authorized signing officer of the Company in his/her normal signature designating against his/her signature the official capacity in which the signing officer acts. The corporate seal of the company, if any, must also be affixed to the tender.

Do not make any entry in the signature section marked for Commission use only.

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.

GOODS CONTRACTS

General Conditions

1. This order, including these general terms and conditions, forms the entire contract between the Commission and the contractor and no variation thereof, irrespective of the wording or terms of the contractor's acceptance, will be effective unless specifically agreed to in writing by the Commission. No local, general or trade customs shall be deemed to vary the terms thereof. Where the context requires, the word "goods" is to be read as including services.
2. Goods will be received by the Commission subject to final inspection and acceptance by the consignee, specified in this order and if not so specified, by any person authorized by the Commission. Goods found to be defective or not in compliance with the specifications may be returned to the contractor at the contractor's expense.
3. In supplement of and not by way of substitution for the terms of the specifications or any warranty stipulated or implied by law and notwithstanding prior acceptance by the Commission the contractor shall at any time within its standard warranty period, at its own expense replace any goods which are or become defective as a result of faulty or inefficient manufacture, materials or workmanship. The contractor shall state its standard warranty period and related terms and conditions at the time of delivery.
4. The contractor warrants that it has the right to use and sell any patented devices or parts used in the goods purchases and agrees to indemnify the Commission against any claims for royalties, license fees and other claims or demands by reason of the use or sale thereof, whether or not any such devices or parts are specified by the Commission or used by the contractor in the goods purchases without such specifications.
5. The goods shall be at the risk of the contractor who shall bear all loss or damage, from whatsoever cause arising which may occur to the goods, or any part thereof, until delivered to the Commission. The Commission reserves the right to change the place of delivery at any time prior to the actual shipment provided that the contractor shall be entitled to be reimbursed for any actual increased costs, or shall reduce the prices to the extent of any decrease cost arising out of such change.
6. Goods must be new and unused unless specified otherwise herein and delivered strictly in accordance with the quantities, specifications, terms and conditions of this order. Time shall be of the essence of this order.
7. The charges are F.O.B. destination and include all charges for packing, loading, unloading and transportation unless otherwise specified herein. Should the contractor prepay transportation charges which are payable by the Commission under the terms of this contract these charges are to be shown as a separate item on the invoice.
8. If carload shipment, shipping notices must be sent immediately to the Commission showing car number, initial and routing. Car service will be deducted from all cars that reach the Commission without shipping notice.
9.
 - i) The Chairman may, by giving notice to the Contractor, terminate or suspend the goods/services to be supplied with respect to all or any part or parts not completed/received.
 - ii) All goods/services completed/received by the Contractor to the satisfaction of the commission before the giving of such notice shall be paid for by the Commission in accordance with the provisions of the contract and, for all goods/services not completed/received before the giving of such notice, the Commission shall pay the Contractor's costs as determined under the provisions of the contract and, in addition, an amount representing a fair and reasonable fee in respect of such goods/services.

GOODS CONTRACTS
General Conditions

- iii) The Commission reserves the right to cancel or purchase elsewhere, any portion of this order that is not delivered by the date required by this order.

- 10. Unless otherwise specified in this order, payment will only be made in Canadian funds within 30 days following presentation of invoices or progress claims forms or within 30 days of delivery of the goods, whichever is later. Discounts will be calculated from the date when both the goods and acceptable invoices or progress claims forms are received by the Commission.

- 11. The total dollar amount shown on this order is final and unless otherwise specified herein includes all applicable Taxes (GST and PST) and duties.

- 12. No member of the House of Commons of Canada shall be admitted to any share or part of this contract or any benefits to arise therefrom.

- 13. This agreement shall ensure to the benefit of, and shall be binding upon the successors and assigns of the Commission and the contractor respectively, provided that the contractor shall not assign this agreement or any part of the development without prior written consent of the Commission, and any assignment made without such consent shall be of no effect.

- 14. All specifications, drawings, samples, patterns and dies furnished to the contractor by the Commission for use in respect of the order shall be deemed to be owned by the Commission and shall be returned to the Commission at the expense of the contractor when required.

- 15. WHMIS Regulations apply to Controlled Products.

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)		
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 -		
GST/HST / TPS et TVH	QST / TVQ (Québec)			
Number / Numéro : _____	Number / Numéro : _____			
Not registered / non inscrit <input type="checkbox"/>	Not registered / non inscrit <input type="checkbox"/>			
Type of contract / Genre de contrat	Contract for services only / Contrat de services seulement <input type="checkbox"/>			
	Contract for mixed goods & services / Contrat de biens et services <input type="checkbox"/>		Contract for goods only / Contrat de biens seulement <input type="checkbox"/>	
Type of goods and/or services offered / Genre de biens et / ou services rendus :				

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

Please send a void cheque 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.

01 01 00 – GENERAL REQUIREMENTS

Part 1 General

1.1 MINIMUM STANDARDS

- .1 Execute work to meet or exceed:
 - .1 National Building Code of Canada 2015, National Fire Code of Canada 2015, Ontario Building Code 2012 and any other code of provincial or local application, including all amendments up to project date, provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.
 - .2 Rules and regulations of authorities having jurisdiction.
 - .3 Fire Commissioner of Canada, No. 301, Standard for Construction Operations, and No. 302, Standard for Welding and Cutting, June 1982.
 - .4 Occupational Health and Safety Act and Regulations for Construction Projects, Revised Statutes of Ontario 1990, Chapter O.1 as amended, O. Reg. 213/91 as amended, R.R.O. 1990, Reg. 834. O. Reg. 629/94 as amended, Diving Operations.
 - .5 Environmental Protection Act, O. Reg. 102/94, O. Reg. 103/94, and Regulation 347.
 - .6 Canadian Labour Code Part 2.

1.2 TAXES

- .1 Pay applicable Federal, Provincial and Municipal taxes.

1.3 FEES, PERMITS AND CERTIFICATES

- .1 Provide authorities having jurisdiction with information requested.
- .2 Pay fees and obtain certificates and permits required.
- .3 Furnish certificates and permits when requested.

1.4 EXAMINATION

- .1 Before submitting tender, examine existing conditions and determine conditions affecting work.
- .2 Obtain all information which may be necessary for proper execution of Contract.

1.5 SITE

- .1 Confine work, including temporary structures, plant, equipment and materials to the minimum required to complete construction. The drawings indicate permitted access routes to the site and, permissible work and storage areas. Confine all operations to these locations. Movement of equipment, tools, machinery, etc. in areas that are within the two year high water mark is to be minimized.
- .2 Contractor Parking is to be confined to the site, as indicated on the drawings, and not to interfere with the adjacent properties, driveways etc.
- .3 Make adjustments, as directed by the NCC's Representative, to correct any issues which may affect neighbouring properties.

- .4 Offsite work is required (construction of gangway, floating docks and strut system) to complete the work at a facility arranged and paid for by the contractor.
- .5 Locate temporary buildings, roads, walks, drainage facilities, services as directed and, maintain in a clean and orderly manner.

1.6 CONSTRUCTION AND STORAGE AREAS

- .1 The limits of the Construction and Storage Area are shown on the drawings. Should the Contractor require additional area(s) for work and storage, the Contractor will be responsible for arranging for permission to use these areas and for obtaining releases from the affected NCCs at the end of the project indemnifying the Contractor and the NCC from any claim from the NCC of the land used in the form acceptable to the NCC's Representative.

1.7 DOCUMENTS

- .1 Keep on site one copy of Contract Documents and reviewed Shop Drawings.

1.8 NCC'S REPRESENTATIVE

- .1 The National Capital Commission will appoint or designate a representative for this contract who will be referred to as the NCC's Representative. The Contractor will be informed of the designated individual or individuals. Should it be required to change the Representative, the Contractor will be informed.

1.9 ADDITIONAL DRAWINGS

- .1 The NCC's Representative may furnish additional drawings to clarify work.
- .2 Such drawings shall become part of the Contract Documents.

1.10 REPRODUCTION OF CONTRACT DOCUMENT

- .1 Reproduce and distribute Contract Documents and all drawings to all Sub-Contractor and Contractor employees required to adequately control the work and provide information to all trades.

1.11 LAYOUT OF WORK

- .1 Immediately upon entering the site for purpose of beginning work on this project, locate all general reference points and take proper action necessary to prevent their disturbance.
- .2 Supply stakes and other survey markers required for this work. Employ competent personnel to lay out work in accordance with lines and grades provided.
- .3 Maintain all reference points and markers for duration of Contract.

1.12 CO-OPERATION AND PROTECTION

- .1 Execute work with minimum disturbance to occupants, public and normal use of site (outside of delineated work and storage areas). Make arrangements with NCC's Representative to facilitate execution of work.
- .2 Maintain access and exits.

- .3 Provide necessary barriers, warning lights and signs. Replace damaged existing and new signs and work with material and finish to match work of similar nature specified elsewhere in the Contract or to match the original in good condition if no similar work is specified.

1.13 EXISTING UTILITIES

- .1 Establish location, protect and maintain existing utilities.
- .2 Connect to existing utilities with minimum disturbance to pedestrian and vehicular traffic and only with the approval of the utility NCC.
- .3 Power for construction is not available at the site. The Contractor shall arrange for and provide all power requirements necessary to complete the work.

1.14 MATERIAL AND EQUIPMENT

- .1 Use new products unless otherwise specified.
- .2 Deliver and store material and equipment to manufacturer's instructions with manufacturer's labels and seals intact.
- .3 When material or equipment is specified by standard or performance specifications, upon request of NCC's Representative, obtain from manufacturer an independent testing laboratory report, stating that material or equipment meets or exceeds specified requirements.

1.15 INSPECTION AND TESTING

- .1 The NCC's Representative may employ an Inspection and Testing Company to ensure work conforms with Contract Documents.
- .2 When initial tests and inspections reveal work not to Contract requirements, pay for additional tests and inspections required by NCC's Representative on corrected work.

1.16 FIRES

- .1 Burning any material or rubbish on site is not permitted.

1.17 PROGRESS PHOTOGRAPHS

- .1 As soon as work commences, take periodic progress electronic/digital photographs from four locations.
- .2 View points, which will best illustrate progress of work, will be selected by the NCC's Representative.
- .3 Forward electronic photos to NCC's Representative.

1.18 DATUM

- .1 Elevations and soundings shown on Drawings are expressed in metres relative to the established bench mark.

1.19 SITE MEETINGS

- .1 Site meetings will be held at a maximum interval of every two weeks, at a designated site (by the Consultant) unless otherwise directed by the NCC's Representative.

- .2 Ensure that all key site personnel and a representative from the Contractor, who is designated to speak on behalf of the Contractor and can commit the Contractor to action and price, is present at the meetings.

1.20 WASHROOM FACILITIES

- .1 The Contractor shall supply an acceptable chemical toilet and locate as directed by the NCC's Representative. The toilet shall be thoroughly cleaned at least once a week and shall be a minimum of 10 meters from the water.
- .2 No waste or chemicals will be allowed to stain or wet the ground or be washed by rain into the waterway. The Contractor will have a spill kit on site capable of preventing such an occurrence.

1.21 OPSS AND OPSD

- .1 OPSS Ontario Provincial Standard Specifications and OPSD Ontario Provincial Standard Drawings are quoted in these specifications. Copies of these standards are not included in these documents but the latest editions will be considered to be an integral part of these specifications. Generally they are available online at <http://www.raqsa.mto.gov.on.ca/techpubs/ops.nsf/OPSHomepage>.

1.22 PROTECTION OF THE SITE

- .1 Prevent damage to any features of the site to remain (trees, structures, etc.). Modify operations, as directed by the NCC's Representative, if the methods being used are considered to be detrimental to any site features to remain in place.
- .2 No works shall be undertaken in the water between the following dates: March 15 to July 15 in any year.

1.23 MEASUREMENT AND PAYMENT

- .1 No measurement for payment will be made for the work of this section. Payment shall be by lump sum under the item, "Mobilisation and Construction Site Installation".

Part 2 Products

- .1 Not Used

Part 3 Execution

- .1 Not Used

END OF SECTION

01 11 00 – SUMMARY OF WORK

Part 1 General

1.1 RELATED SECTIONS

01 01 00	General Requirements
01 33 00	Submittal Procedures
01 33 50	Delegated Design Submittals
01 35 30	Health and Safety
01 45 00	Quality Control
04 42 00	Exterior Stone Cladding
05 50 00	Metal fabrications
09 96 23	Graffiti Resistant Coatings
32 14 00	Unit Paving

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- .1 Work of this Contract comprises supply and fabrication of monument grade granite slabs for a commemorative “Navy Wake” wall and granite pavers for a small plaza at the site of the Royal Canadian Navy Monument, located at Richmond Landing in Ottawa, Ontario, Canada.

1.3 INFORMATION TO BIDDERS

- .1 This section describes the general scope of work. The scope of work is general in nature, and is not to be considered exhaustive.
- .2 The Contractor is responsible for supplying labour, equipment and services, and the supply and delivery of materials required for the proper execution of the Contract.
- .3 The scope of work concerns the supply and fabrication of etched (sandblasted) Barre granite slabs and Barre granite pavers including delivery to the monument site no later than June 1, 2017.
- .4 Contractual price payments are based on a lump sum price and will be compensated for all labour, services, equipment and materials necessary to fully complete, following pay items specified in the Unit Price Table of the Contract Documents.
- .5 All unit prices must include labour, equipment and materials necessary to fully complete according to work items for each category listed. The unit price for each item listed included the payment of any related work that is not identified elsewhere in the tender document.
- .6 Indexes and References Numbers
 - .1 All index and reference numbers of Unit Price Table, plans, specifications etc., are shown only for the convenience of the Contractor and are to be interpreted only as a general guide to sections of work. It is not to be assumed that index and reference numbers are the only means to refer to an item. Plans and specifications are to be read in detail as a whole.

- .7 Description of Individual Tasks
- .1 The scope of work is provided as general information only, for the convenience of the Contractor, and should therefore not be considered exhaustive. Any description of a specific task should be read in conjunction with the Contract Drawings. In the case of discrepancies between specifications and drawings, the bidder must assume the most costly option. Any work indicated on the Contract Drawings that is not listed, mentioned or described in the written provisions of the Contract or vice versa, will be considered included in both.
- .8 Following award of this tender, the fabricator will be engaged under separate contract to complete the installation of the granite slabs no later than June 30, 2017

1.4 SUMMARY OF PAID ITEMS AS LISTED IN PRICE TABLE

Basis of Payments

Payment at the price per item listed in the Unit Price Table shall be full compensation for all labour, services and equipment for the supply and delivery of all materials required for the proper execution of this contract.

1.4.1 Sloped Granite Slabs (“Navy Wake”)

- .1 This item consists of the supply and fabrication of sloped monument grade granite slabs and the end stone as detailed in the Contract Drawings, including:
- Production of shop drawings including cut dimensions, steeled finish and antigrffiti coating of exposed granite surfaces.
 - Fabrication of one (1) 300x 300mm sample of granite color and finish with antigrffiti coating for NCC approval including etched (sandblasted) text of various sizes as indicated in the Contract Drawings and Section 1.4.3 – *Text on Sloped Granite Slabs*. Approved sample, color, finish and etched (sandblasted) text will be used as reference.
 - Shop fabrication of monument grade Barre granite slabs according to the cut dimensions specified in the NCC approved shop drawings.
 - Supply and installation in shop of steeled finish and antigrffiti coating on all apparent granite surfaces.
 - Granite installation instructions, as required.
 - Granite maintenance instructions including graffiti removal
 - And all other necessary work to complete the item, as specified to plans and technical specifications.
- .2 Included in the price shall be all costs associated with supply and delivery of granite including crating, packaging, etc. and any other minor or miscellaneous items necessary or as indicated on the drawings as being part of the work for this contract
- .3 Payment at the contract price shall be full compensation for all labour, equipment and materials necessary to complete this work as indicated in the contract documents.

- ,4 This item is subject to payment based on a price corresponding to a lump sum listed in the Unit Price Table. This item will be paid following delivery to the Navy Monument site.

1.4.2 Granite Pavers

- .1 This item consists of the supply of standard grade Barre granite pavers around the flagpole as detailed in the Contract Drawings, including:
- Production of shop drawings including cut dimensions and flamed finish of exposed granite surfaces.
 - Fabrication of one (1) 300x 300mm sample of granite color and finish for NCC approval. Approved sample, color and finish will be used as reference.
 - Shop fabrication of Barre granite pavers according to the cut dimensions specified in the NCC approved shop drawings.
 - Supply and installation in shop of flamed finish on all apparent granite surfaces.
 - Granite installation instructions, as required.
 - Granite maintenance instructions including graffiti removal
 - And all other necessary work to complete the item, as specified to plans and technical specifications.
- .2 Included in the price shall be all costs associated with supply and delivery of granite including crating, packaging etc. and any other minor or miscellaneous items necessary or as indicated on the drawings as being part of the work for this contract
- .3 Execution of this work shall not commence until NCC has approved the sample noted in Section 1.4.1.
- .4 Payment at the contract price shall be full compensation for all labour, equipment and materials necessary to complete this work as indicated in the contract documents.
- .5 This item is subject to payment based on a price corresponding to a lump sum listed in the Unit Price Table. This item will be paid following delivery to the Navy Monument site.

1.4.3 Text on Sloped Granite Slabs

- .1 This item consist of etched (sandblasted) text on the sloped granite slabs including:
- An introductory text and the 515 names of ships that the Royal Canadian Navy commissioned since 1910 and some 22 commissioned ships since 2010:
 - Introductory Text: Frutiger LT STD, 83 characters x 38 mm high
 - Secondary Introductory Text: Frutiger LT STD, 254 characters x 29 mm high
 - Ship Names: Frutiger LT STD, 515 ship names containing 4313 characters x 19 mm high.
- Depth required for text visibility to be approved by NCC in sample phase. The final wording and artwork for graphic layout will be provided by the NCC following Award of Contract.
- Instructions for the addition of ship names on site;

- All other necessary work to complete the item, as specified in the plans and technical specifications.
- .2 Included in the price shall be all costs associated with the etching (sandblasting) of all supplied text on monument grade Barre granite slabs and any other minor or miscellaneous items as necessary or as indicated on the drawings as being part of the work for this contract
 - .3 Payment at the contract price shall be full compensation for all labour, equipment and materials necessary to complete this work as indicated in the contract documents.
 - .4 This item is subject to payment based on a price corresponding to a lump sum listed in the Unit Price Table. This item will be paid following delivery to the Navy Monument site.

1.4.4 Delivery

- .1 This item consists of the delivery of all items listed in the Unit Price Table to the Navy Monument site F.O.B. Ottawa, Ontario, Canada no later than June 1, 2017.
- .2 All slabs and pavers delivered to site shall be crated in such a way to avoid damage from handling and the elements.
- .3 Slabs and pavers shall be clearly marked to indicate their size and position in the assembly
- .4 Payment at the contract price shall be full compensation for all labour, equipment and materials necessary to complete the delivery.
- .5 This item will not be measured for payment but will be paid for on a lump sum basis following delivery to the Navy Monument site.

END OF SECTION

01 33 00 – SUBMITTAL PROCEDURES

Part 1 General

1.1 ADMINISTRATIVE

- .1 Submit to NCC Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Do not proceed with Work affected by submittal until review is complete.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals prior to submission. 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 considered rejected.
- .6 Notify NCC Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are co-ordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by NCC Representative's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by NCC Representative's review.
- .10 Keep one reviewed copy of each submission on site.

1.2 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Shop drawings for concrete structures must be stamped and signed by a registered professional engineer.
- .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 co-ordinated, regardless of Section under which adjacent items will be supplied and installed.
- .4 Allow 10 days for NCC Representative's review of each submission.
- .5 Adjustments made on shop drawings by NCC Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to NCC Representative prior to proceeding with Work.

- .6 Make changes in shop drawings as NCC Representative may require, consistent with Contract Documents. When resubmitting, notify NCC Representative in writing of revisions other than those requested.
- .7 Accompany submissions with transmittal letter containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
- .8 Submissions 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.
 - .11 Soumettre les dessins et fiches sur support électronique de type PDF.
- .9 Supplement standard information to provide details applicable to project.
- .10 If upon review by NCC Representative, no errors or omissions are discovered or if only minor corrections are made, drawings 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.

1.3 SAMPLES

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

1.4 MOCK-UPS

- .1 Erect mock-ups in accordance with 01 45 00 - Quality Control.

1.5 PHOTOGRAPHIC DOCUMENTATION

- .1 The Contractor is responsible for taking pictures of existing site conditions before starting work on site. Submit photos to NCC Representative in JPEG format if requested.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 GENERAL

1.1 Intent

- .1 The intent of Delegated Design Submittals required by this Section is to account for professional engineering responsibility for design, review and acceptance of components of Work forming a part of permanent Work in accordance with Building Code, and that has been assigned to a design entity other than Consultant including, but not limited to, the following:
 - .1 Design requiring structural analysis of load bearing components and connections.
 - .2 Design requiring compliance with fire safety regulations.
 - .3 Design requiring compliance with life or health safety regulations.
- .2 This Section provides standard forms for submittal of Commitment to General Reviews by Architects and Engineers and Letter of General Conformance required complying with requirements of Building Code and design delegated to a professional engineer within technical Specifications Sections.
- .3 Delegated Design Submittals are not required for components of Work requiring engineering for temporary Work (for example: crane hoisting, engineered lifts, false Work, shoring, concrete formwork) that would normally form a part of Contractor or responsible Subcontractor's, suppliers or manufacturer's scope-of-Work.
- .4 The requirements of this Section are in general conformance with recommended Responsibilities for Engineering Services for Building Projects published by Professional Engineers of Ontario (PEO), with regards to duties of specialty professionals appointed during construction period.
- .5 The requirements of this Section do not diminish responsibilities of Consultant's role as Registered Professional of Record; submittals will be used by Consultant to establish that Work is substantially performed and allow declaration for Assurance of Professional Review and Compliance required by the Building Code by the Registered Professional of Record.

1.2 RELATED Requirements

- .1 Section 01 33 00 – Submittal Procedures: Submission of required supporting documentation by Delegated Design Professional Engineers.
- .2 Section 01 45 00 – Quality Control: Quality control and assurance responsibilities for engineered design of shop and site fabricated components.
- .3 Technical Specifications Sections make specific reference to delegated design requirements described in this Section.

1.3 Definitions

- .1 Delegated Design Professional Engineer: The professional engineer hired or contracted to the fabricator or manufacturer to design specialty elements, produce delegated design submittals and Shop Drawings to meet the requirements of the Project; who is registered in the province of the Work; and who is not the Consultant.
- .2 Commitment to General Reviews by Architects and Engineers and Letter of General Conformance: Documents prepared by the delegated design professional engineer as

recommended by PEO guidelines for providing general review of construction by the professional engineer.

- .3 Engineered Judgement for Fire Rated Assembly Components: A written proposal submitted by manufacturer to the Authority Having Jurisdiction arising from a variation that modifies the manufacturer's standard listed assemblies and details to account for actual site conditions and as follows:
 - .1 Engineered Judgements are prepared by a certified specialist that has completed a sanctioned examination and has professional accreditation in the assemblies affected by site conditions different than those forming standard listed assemblies and details.
 - .2 Person issuing Engineered Judgement must be directly employed by the manufacturer and have direct experience in the preparation of Engineered Judgements required for the Project.
 - .3 Person signing the Engineered Judgement must be a Certified Fire Protection Specialist; Engineered Judgements do not require signature and seal of a professional engineer unless required by the Authority Having Jurisdiction.

1.4 Reference Standards

- .1 Ontario Association of Architects (OAA) / Professional Engineers Ontario / Ontario Building Officials Association (OBOA):
 - .1 Form: Commitment to General Reviews by Architect and Engineers
- .2 Professional Engineers of Ontario (PEO):
 - .1 PEO Guideline: Professional Engineers Providing Professional Services in Building Projects using Manufacturer Designed Systems and Components (September 1999)
 - .2 PEO Guideline: Professional Engineers Providing General Review of Construction as Required by the Ontario Building Code (April 2008, Revised November 2008)

1.5 Submittals

- .1 Provide required information in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Informational Submittals: Provide the following submittals during the course of the Work:
 - .1 Commitment to General Reviews by Architects and Engineers: Submit a signed and sealed on company letterhead addressed to Consultant in accordance with format in Appendix A attached to the end of this Section prior to starting Work requiring design and seal of a professional engineer.

1.6 Project Closeout Submissions

- .1 Record Documentation: Submit the following required information in accordance with Section 01 01 00 – General Requirements: Project Closeout Submissions before application for Substantial Performance of the Work:
 - .1 Letter of General Conformance: Submit a signed and sealed Letter of General Conformance on company letterhead addressed to Consultant in accordance with format in Appendix A attached to the end of this Section on completion of Work requiring design and seal of a professional engineer.
 - .2 Engineered Judgements: Submit Product literature and compliance certificates as required by Section 07 84 00, and include any required Engineered

Judgements that became necessary to account for installation conditions that are different than tested assemblies.

PART 2 PRODUCTS

2.1 Delegated Design

- .1 Performance and Design Criteria: Provide Products and systems complying with specific performance and design criteria indicated where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents.
- .2 Submit a written request for additional information to Consultant and Contractor if criteria indicated within documents are not sufficient for the Subcontractor to perform services or certification required.
- .3 Delegated design will be required for elements designed by a specialty professional engineer, which may include:
 - .1 Elements normally fabricated off-site
 - .2 Elements that require specialized fabrication equipment or a proprietary fabrication process not usually available at job site (for example: open web steel joists, wood trusses, combination wood and metal or plywood joists, prefabricated wood or metal buildings, noise and vibration isolation devices, elevators).
 - .3 Elements requiring engineering associated with fire protection or life safety, that are specifically assigned by architectural; structural; mechanical; or geotechnical disciplines of Consultant (for example: sprinkler system pipe sizing, permanently attached façade access equipment design).
 - .4 Elements requiring civil engineering, not normally a part of scope of services performed by architectural; structural; mechanical; electrical; or geotechnical disciplines of Consultant (for example: structural steel connection design, steel deck design).

PART 3 EXECUTION

3.1 Implementation

- .1 Include Summary of Work described in technical specification section as a part of the required Commitment to General Reviews by Architects and Engineers.
- .2 Prepare required submittals and present to Consultant within sufficient time to allow for Consultant's detailed review and acceptance.

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APPENDIX A

LETTER OF GENERAL CONFORMANCE - ONTARIO

[Date]

DIALOG®
611 Alexander Street, Suite 406
Vancouver, British Columbia V6A 1E1

Attention: [Consultant's Registered Professional of Record]

Re: Letter of General Conformance for Delegated Design of [System of Component
of Work]

[Name of Project]
[Project Number]
[City, Province]

I hereby give assurance that I have fulfilled my obligations for field review as outlined by previously submitted Engineers, Architects and Building Officials (EABO) standard form Commitment to General Review by Architects and Engineers and as required by the [National] [Ontario] Building Code.

During the course of construction of this [project] [Project], personnel from our firm visited the site in order to carry out general review in accordance with the performance standards of the by Professional Engineers of Ontario (PEO) and the requirements of the [National] [Ontario] Building Code. On the basis of our review, we have determined that the construction has been carried out in general conformity with the [specify description as appropriate to define area of review for delegated design undertaken] as required by the Contract Documents which formed the basis for the issuance of the building permit.

Retained Professional Engineer

Signature

Date

(Apply seal)

END OF SECTION

01 35 30 – HEALTH AND SAFETY REQUIREMENTS

Part 1 General

1.1 REFERENCES

- .1 Canadian Standards Association (CSA):
 - .1 CSA S350-M1980 (R2003) Code of Practice for Safety in Demolition of Structures.
- .2 National Building Code 2015 (NBC):
 - .1 Division B, Part 8 Safety Measures at Construction and Demolition Sites
- .3 National Fire Code 2015 (NFC):
 - .1 NFC 2015, division B, Part 2 Emergency Planning, subsection 2.8.2 Fire Safety Plan.
- .4 Province of Ontario:
 - .1 Occupational Health and Safety Act and Regulations for Construction Projects, Revised Statutes of Ontario 1990, Chapter O.1 as amended, O. Reg. 213/91 as amended, Reg. 834, O. Reg. 278/05 (Asbestos - Construction).
 - .2 Workplace Safety and Insurance Act, 1997
 - .3 Municipal statutes and authorities.
- .5 Fire Commissioner of Canada (FCC):
 - .1 FC-301 Standard for Construction Operations, June 1982.
 - .2 FC-302 Standard for Welding and Cutting, June 1982.
- .6 Canadian Labour Code Part 2.

1.2 SUBMITTALS

- .1 Make submittals in accordance with Sections 01 01 00 and 01 33 00.
- .2 Submit site-specific Health and Safety Plan: Within 5 days after date of Award of Contract 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 operations.
 - .3 Measures and controls to be implemented to address identified safety hazards and risks.
 - .4 Contractor's and Sub-contractors' Safety Communication Plan.
 - .5 Contingency and Emergency Response Plan addressing standard operating procedures specific to the project site to be implemented during emergency situations, including evacuating injured personnel from the site and areas of limited or special access such as height.
- .3 NCC's Representative will review Contractor's site-specific Health and Safety Plan and may provide comments to Contractor within 5 days after receipt of plan. Revise plan as appropriate and resubmit plan to NCC's Representative within 5 days after receipt of comments from NCC's Representative.

- .4 NCC's Representative's review of Contractor's final Site Specific Health and Safety Plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction site health and safety.
- .5 Submit records of Contractor's Safety Meetings at site meetings.
- .6 Submit 1 copy of the Contractor's authorized representative's work site health and safety inspection reports to NCC's Representative when requested.
- .7 Submit copies of reports or directions issued by safety inspectors of authority having jurisdiction.
- .8 Submit copies of near-miss, incident, and accident reports, and/or confirmation monthly that no incidents have occurred.
- .9 Submit Material Safety Data Sheets (MSDS) for all products and items used on site to Departmental Representative.
- .10 Submit names of personnel and alternates responsible for site safety and health.
- .11 Submit Workplace Safety and Insurance Board (WSIB), Experience Rating Report for Province of Ontario.

1.3 FILING OF NOTICE

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

1.4 SAFETY ASSESSMENT

- .1 Perform site specific safety hazard assessment, related to project, identifying all potential hazards that may affect workers or the public, particularly related to but not limited to contaminants present in soil and groundwater as identified in Environmental Reports as provided by NCC.

1.5 MEETINGS

- .1 Pre-construction meeting: schedule and administer Health and Safety meeting with NCC's Representative prior to commencement of work.

1.6 REGULATORY REQUIREMENTS

- .1 Comply with Acts and regulations of the Province of Ontario.
- .2 Comply with specified standards and regulations to ensure safe operations at site.
- .3 In event of conflict between any provisions of specified standards and regulations, the most stringent provision governs.

1.7 PROJECT SITE CONDITIONS

- .1 Work at the site will also involve:
 - .1 A Hazard Assessment and listing of designated substances on site such as contaminated soils.
 - .2 Contact with silica/dust in Concrete.
 - .3 Work near water.

- .4 Work near utilities including overhead utilities.

1.8 GENERAL REQUIREMENTS

- .1 Develop an independent 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 after final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Relief from or substitution for any portion or provision of minimum Health and Safety Guidelines specified herein or reviewed site-specific Health and Safety Plan shall be submitted to NCC's Representative in writing. NCC's Representative will respond in writing, where deficiencies are noted and request resubmission with correction of deficiencies either accepting or requesting improvements.

1.9 RESPONSIBILITY

- .1 Be responsible for safety of persons and property on site and for protection of 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, and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.
- .3 The Contractor shall be designated "Constructor", as defined by Ontario Act.

1.10 COMPLIANCE REQUIREMENTS

- .1 Comply with Ontario Occupational Health and Safety Act, R.S.O., 1990 Chapter O.1, as amended.

1.11 UNFORESEEN HAZARDS

- .1 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, immediately stop work and advise NCC's Representative verbally and in writing.
- .2 Follow procedures in place for Employees Right to Refuse Work as specified in the Act for the Province of Ontario and Canada Labour Code Part 2.

1.12 HEALTH AND SAFETY COORDINATOR

- .1 Employ and assign to Work, competent and authorized representative as Health and Safety Coordinator. Health and Safety Coordinator must:
 - .1 Have site-related working experience specific to activities associated with remediation of contaminated soil.
 - .2 Have working knowledge of occupational safety and health regulations.
 - .3 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter site to perform Work.
 - .4 Be responsible for implementing, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan.

- .5 Be on site during execution of Work and report directly to site supervisor.

1.13 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province of Ontario, and in consultation with NCC's Representative.
 - .1 Contractor's Safety Policy.
 - .2 Constructor's Name.
 - .3 Notice of Project.
 - .4 Name, trade, and employer of Health and Safety Representative or Joint Health and Safety Committee members.
 - .5 Ministry of Labour Orders and reports.
 - .6 Occupational Health and Safety Act and Regulations for Construction Projects for Province of Ontario.
 - .7 Address and phone number of nearest Ministry of Labour office.
 - .8 Material Safety Data Sheets.
 - .9 Written emergency Response Plan.
 - .10 Site Specific Safety Plan.
 - .11 Copy of Valid certificate of first aid personnel on duty.
 - .12 WSIB "In Case of Injury At Work" poster.
 - .13 Location of toilet and cleanup facilities.
 - .14 Any special handling or procedures specific to the site.
- .2 Comply with Provincial general posting requirements.

1.14 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by NCC's Representative and regulatory agency having jurisdiction in the Province or any individual who notes a safety related issue.
- .2 Provide NCC's Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 NCC's Representative may stop Work if a perceived non-compliance of health and safety regulations is perceived to not be immediately corrected.

1.15 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.
- .2 Assign responsibility and obligation to Competent Supervisor to stop or start Work when, at Competent Supervisor's discretion, it is necessary or advisable for reasons of health or safety. NCC's Representative or, their designates, may also stop Work for health and safety considerations.

Part 2 Products

2.1 Not Used.

Part 3 Execution

3.1 Not Used

END OF SECTION

01 45 00 - QUALITY CONTROL

Part 1 General

1.1 INSPECTION

- .1 Allow NCC Representative and Client Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by instructions, or law of Place of Work.
- .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .4 NCC Representative will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction.

1.2 INDEPENDENT INSPECTION AGENCIES

- .1 Independent Inspection/Testing Agencies will be engaged by the NCC for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by the NCC.
- .2 Provide equipment required for executing inspection and testing by appointed agencies.
- .3 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised at no cost to the NCC. Pay costs for retesting and reinspection.

1.3 ACCESS TO WORK

- .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2 Co-operate to provide reasonable facilities for such access.

1.4 PROCEDURES

- .1 Notify appropriate agency 24 hours in advance of requirement for tests, in order that attendance arrangements can be made.
- .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in orderly sequence to not cause delays in Work.
- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

1.5 REJECTED WORK

- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by NCC Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 Make good other Contractor's work damaged by such removals or replacements promptly.
- .3 If in opinion of NCC Representative it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, NCC will deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by NCC Representative.

1.6 REPORTS

- .1 Submit inspection and test reports to NCC Representative by email in PDF format.

1.7 TESTS AND MIX DESIGNS

- .1 Furnish test results and mix designs as requested.

1.8 MOCK-UPS

- .1 Prepare mock-ups for Works specifically requested in specifications. Specifications included in the present section are valid for all sections in which mock-ups are required.

Part 2 Products

- .1 Not Used .

Part 3 Execution

- .1 Not Used

END OF SECTION

PART 1 GENERAL

1.1 Summary

- .1 This section includes requirements for supply and installation of, mechanically anchored, stone cladding system.

1.2 Related Requirements

- .1 Division 03 – Concrete: Cast-in-Place Concrete
- .2 Section 05 50 00 – Metal Fabrications
- .3 Section 09 96 23 – Graffiti Resistant Coatings

1.3 Reference Standards

- .1 American Society for Testing of Materials (ASTM):
 - .1 ASTM A276-13a, Standard Specification for Stainless Steel Bars and Shapes
 - .2 ASTM A666-15 - Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar
 - .3 ASTM C119-11, Standard Terminology Relating to Dimension Stone
 - .4 ASTM C615-11 - Granite Dimension Stone
- .2 Terrazzo, Tile and Marble Association of Canada (TTMAC):
 - .1 Dimension Stone Guide, Volume II

1.4 Definitions

- .1 Exterior Cladding System: An exterior wall covering system consisting of dimensional stone and trim with necessary anchors, backup structure, fasteners, and sealants used to secure stone to building structure.
- .2 Delegated Design Professional Engineer: The professional engineer hired or contracted to the fabricator or manufacturer to design specialty elements, produce delegated design submittals and shop drawings to meet the requirements of the Project; who is registered in the province of the Work; and who is not the Consultant.

1.5 Administrative Requirements

- .1 Pre-Construction Meeting: Conduct a pre-construction meeting in accordance with Section 01 01 00 – General Requirements: Project Meetings attended by Contractor, Subcontractor, Consultant and other Subcontractor's affected by work of this Section on site to verify project requirements, and review methods and procedures related to stone cladding systems including the following:
 - .1 Review structural load limitations and deflection criteria of adjacent construction, support systems and stone cladding system.
 - .2 Review installation and substrate and structure conditions affecting work of this Section.
 - .3 Review requirements of this Section for connection to substrates and structures provided by other Sections.
 - .4 Review of metal fabrications, anchors and fasteners required by and provided by this Section to other components of the work.

- .5 Review and finalize construction schedule and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
- .6 Review location and alignment of vertical and horizontal elements as they relate to the aesthetic criteria and technical requirements indicated on the shop drawings.
- .7 Review written installation instructions and warranty requirements.
- .8 Review other or additional installation requirements not otherwise covered by the suggested listing of topics.
- .2 Coordination: Coordinate installation of stone cladding system with work specified in other Sections to ensure correct placement and installation, and as follows:
 - .1 Coordinate compatibility of products supplied by this Section.
 - .2 Coordinate installation of sealants so that ambient and surface temperatures are greater than 5°C from time of application until sealants have cured.
 - .3 Coordinate connection of stone cladding system structural connections to horizontal building structures and vertical members.
 - .4 Coordinate design of stone cladding elements to tie into adjacent building envelope elements.
 - .5 Coordinate fabrication of miscellaneous steel, anchorages and fasteners required by stone cladding system for complete installation.
- .3 Delegated Design Requirements: Coordinate design of stone cladding with stone thicknesses, size and configuration of components, and connections to structural steel in accordance with referenced standards and requirements of this Section.

1.6

Submittals

- .1 Provide required information in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Action Submittals: Provide the following submittals before starting any work of this Section:
 - .1 Product Data: Submit product data indicating construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of product indicated, in addition to the following specific requirements:
 - .1 Mechanical Fasteners: Indicate sizes, shear, and pull over loading capacity where applicable.
 - .2 Shop Drawings: Submit shop drawings prepared by or under the supervision of a qualified professional engineer detailing fabrication and assembly of stone cladding systems clearly indicating all construction details including the following:
 - .1 Connections and anchor requirements.
 - .2 Metal fabrications integral with stone cladding system installation.
 - .3 Type, size and spacing of fastening devices.
 - .4 Design loads.
 - .5 Seal of a professional engineer registered in the Province of the Work for details requiring structural design for load bearing, or life and health safety.
 - .6 Other detailed requirements for installation.
 - .3 Samples for Verification: Submit samples for verification including sample sets showing the full range of variations expected where products involve normal colour and texture variations:

- .1 Submit two (2) pieces of 300 mm x 300 mm sized stone
- .2 Submit two (2) pieces of 300 mm x 300 mm sized stone with lettering
- .3 Informational Submittals: Provide the following submittals during the course of the work:
 - .1 Qualification Statement: Submit evidence of relevant project experience with installation of similar system as follows:
 - .1 Years of proven experience
 - .2 List of projects
 - .3 Application description
 - .2 Source Quality Control Submittals: Submit delegated design professional engineer's design notes and calculations when requested by Consultant.
 - .3 Delegated Design Submittals: Submit letters of commitment and compliance in accordance with Section 01 33 50 – Delegated Design Submittals as follows:
 - .1 Provide Letter of General Conformance in conjunction with shop drawings, signed and sealed by the professional engineer required by the Work of this Section indicating the following are designed to the intent of the Building Code:
 - .1 Exterior stone cladding to substructure
 - .2 Exterior stone cladding deflection connections to building structure
 - .3 Deflection of members
 - .2 Provide Letter of General Conformance, signed and sealed by the professional engineer required by the Work of this Section indicating that connections, reinforcement and deflection criteria, and glass thickness of installed system is in compliance with the intent of the Building Code and reviewed shop drawings before declaration of Substantial Performance.

1.7 Project Closeout Submissions

- .1 Operation and Maintenance Data: Submit copies of TTMAC Maintenance Guide, and additional materials as follows:
 - .1 Provide written literature and instructions to Owner's personnel addressing maintenance specified in this Section.
 - .2 Provide specific warning of any maintenance practice or materials that may damage or disfigure the finished Work.

1.8 Quality Assurance

- .1 Qualifications: Provide proof of qualifications when requested by Consultant:
 - .1 Installers: Use experienced installers having experience of a minimum of ten (10) years proven experience with stone cladding projects similar in material, design and extent as required for Work of this Contract with a record of successful in-service performance.
 - .2 Delegated Design Professional: Retain a Professional Engineer, registered in the Province of the Work, to design fabrication and erection of the Work of this Section in accordance with applicable Building Code and Contract Documents requirements including the following:
 - .1 Seal and signature to shop drawings and design submittals
 - .2 Site review of installed components
 - .3 Verify wall system based on maximum deflections provided in this Section and to suit building location and configuration.

- .3 Stone that does not meet a Top Grade Standard, or that is marked as a factory second or discount will be rejected, immediately removed from the site and replaced with specified materials.
- .2 Stone Selection:
 - .1 Stone selection of slabs for cut, colour and polish to be selected by Consultant through verification samples.
 - .2 Upon review by Consultant of stone slabs, cut for dry lay installation. Dry lay stone panel wall for review at quarry by Owner and Consultant.
 - .3 Consultant recognizes that stone is a natural material, and that variations in tone and hue, and hairline cracks are normal to this material; however Consultant can reject up to 5% of each stone during installation.

1.9 Mock-Ups

- .1 Provide required Mock-ups in accordance with Section 01 45 00 – Quality Control:
 - .1 Construct mock-ups for Exterior stone cladding for the completed work, and as follows:
 - .1 When identified modifications to the mock-up are completed, and reviewed by the Consultant, they will form the standard of acceptance for the remainder of the Work.
 - .2 Locate mock-ups in the location and of the size indicated or, if not indicated, as directed by Consultant and Owner, and as follows:
 - .1 Exterior Stone Cladding:
 - .1 Provide minimum 1220 mm wide sections of stone cladding specified for fit and finish, lettering, and include all specified components
 - .3 Notify Consultant seven (7) days in advance of the dates and times when mock-ups will be constructed.
 - .4 Obtain Consultant's acceptance of mock-ups before proceeding with final unit of Work.
 - .5 Maintain mock-ups during construction in an undisturbed condition as a standard for judging the completed Work.
 - .6 Accepted mock-ups in an undisturbed condition at the time of Substantial Performance may form a part of the completed Work.

1.10 Delivery, Storage and Handling

- .1 Deliver, store and handle stone to prevent chipping, breakage, staining or other damage.
- .2 Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use.
- .3 Prevent damage or contamination to materials by water, moisture, freezing, excessive heat, foreign matter or other causes; do not stir or mix materials that have frozen until completely thawed.

1.11 Site Conditions

- .1 Site Measurements: Verify dimensions by site measurements before ordering products and indicate measurements on shop drawings where Exterior stone cladding are indicated to fit between or around other construction; coordinate fabrication schedule with construction progress to avoid delaying the Work.

- .2 Established Dimensions: Establish dimensions and proceed with ordering products without site measurements where site measurements cannot be made without delaying the Work; coordinate construction to ensure that actual site dimensions correspond to established dimensions; allow for trimming and fitting.

PART 2 PRODUCTS

2.1 Manufacturers

- .1 Basis-of-Design Materials: Products named in this Section were used as the basis-of-design for the project; additional manufacturers offering similar products may be incorporated into the work of this Section provided they meet the performance requirements established by the named products and provided they submit requests for substitution in accordance with Section 01 01 00 – General Requirements: Product Options.

2.2 Performance Requirements

- .1 System Description: Plans, elevations, details, characteristics, and other requirements indicated are based upon materials and details provided by one manufacturer that forms the Basis-of-Design for products named in this Section and as follows:
 - .1 Responsibility: Delegated Design professional engineer is responsible for designing composite panel assembly, composite panel thickness and connections based on design loads, and verifying that installation meets requirements of the Authority Having Jurisdiction.
 - .2 Provide a system that has no visible fasteners, telegraphing or fastening on the exposed panel faces or other components that detract from a neat and flat finished appearance.
 - .3 Deflection Limitation: Maximum deflection of perimeter not to exceed $L/720$

2.3 Materials

- .1 Stone Anchoring System: Stainless steel stone anchoring system designed specifically for the installation of thin set stone panels, and as follows:
 - .1 Body Anchors:
 - .1 Stainless Steel Bars and Shapes: In accordance with ASTM A276, Type 316
 - .2 Stone Anchors:
 - .1 Bolts: Adjustable flat-faced bolt, horizontal face to support stone panel, stainless steel type 316.
 - .2 Stainless Steel Bars and Shapes: In accordance with ASTM A276, Type 316
 - .3 Slotted anchors: Stainless steel, type 316
- .2 Stone: Selected for characteristics suitable for exterior use in accordance with ASTM C1528, and as follows:
 - .1 Granite: In accordance with ASTM C615, and as follows:
 - .1 Size: Thickness and face size as indicated on Drawings
 - .2 Finish: Steel finish
 - .3 Basis-of-Design Material: Barre Granite

- .3 Silicone Sealant (Type A): ASTM C920, Type S, Grade NS, Class 50; single component, medium modulus elastomer; colour to match stone, as selected by Consultant.
 - .1 Product: Dow Corning 756 SMS Building Sealant.
- .4 Accessories: Provide all materials required for a complete installation in accordance with manufacturers written instructions and referenced standards for Exterior installation of vertical stone panel system.

PART 3 EXECUTION

3.1 Examination

- .1 Examine substrates, areas, and conditions where stone cladding will be installed for compliance with requirements for installation tolerances and other conditions affecting performance of installed tile.
- .2 Site verify for compliance with requirements for installation tolerances and other conditions affecting performance of work, report any conflicts or coordination issues to Contractor.
- .3 Inspect all stone cladding and components prior to installation and verify that there is no shipping damage, chips, discoloration; do not install damaged tiles and components, replace as required.
- .4 Notify Contractor in writing of any conditions that are not acceptable, do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 Installation

- .1 Notch stone to accept mechanical fixing pins; fasten mechanical anchors to structural wall framing in accordance with manufacturer's written instructions, provide additional metal supports as may be required to conform to Performance Requirements.
- .2 Install stone panels in pattern indicated on Drawings and as follows:
 - .1 Book match pattern
 - .2 Cut stone panels to fit required joint spacing
 - .3 Chipped or split edges are not acceptable.
 - .4 Install stone having a butt joint.

3.3 Cleaning and protection

- .1 Clean stone completely with water leaving no apparent cement laitance on the surface; do not acid wash surfaces to remove haze.
- .2 Leave finished installation clean and free of cracked, chipped, broken, or other deficiencies.
- .3 Protect walls from impact, vibration and hammering on adjacent and opposite walls for at least 36 hours after installation.
- .4 Provide protective covering until Substantial Performance of the Work.

END OF SECTION

PART 1 GENERAL

1.1 Summary

- .1 This Section includes requirements for supply and installation of non-ornamental metal fabrications and miscellaneous metals required for installation of structural steel, decking and joist framing, and other structural components.

1.2 Related Requirements

- .1 Section 04 42 00 – Exterior Stone Cladding

1.3 REFERENCE Standards

- .1 American Society for Testing of Materials (ASTM):
 - .1 ASTM A276-13, Standard Specification for Stainless Steel Bars and Shapes
 - .2 ASTM A307-10, Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength
 - .3 ASTM A563-07a, Standard Specification for Carbons and Alloy Steel Nuts
 - .4 ASTM A666-10, Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar
 - .5 ASTM B633-11, Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel
 - .6 ASTM C1107/C1107M-13, Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
 - .7 ASTM F568M-07, Standard Specification for Carbon and Alloy Steel Externally Threaded Metric Fasteners
 - .8 ASTM F1554-07ae1, Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength
- .2 Canadian Standards Association (CSA):
 - .1 CAN/CSA S16-09, Limit States Design of Steel Structures
 - .2 CSA G30.18-09, Carbon Steel Bars for Concrete Reinforcement
 - .3 CSA G40.20-13/G40.21-13, General Requirements for Rolled or Welded Structural Quality Steel
 - .4 CSA W47.1-09, Certification of Companies for Fusion Welding of Steel
 - .5 CSA W55.3-08, Certification of Companies for Resistance Welding of Steel and Aluminum
 - .6 CSA W59-03, Welded Steel Construction (Metal Arc Welding) with Update
 - .7 CSA W178.1-08, Certification of Welding Inspection Organizations
- .3 Canadian General Standards Board (CGSB):
 - .1 CAN/CGSB 1.40M-97, Primer, Structural Steel, Oil Alkyd Type
 - .2 CAN/CGSB 1.181M-99, Coating, Zinc Rich, Organic, Ready Mixed
- .4 The National Association of Architectural Metal Manufacturers (NAAMM):
 - .1 AMP 555-92, Code of Standard Practice for Architectural Metal Industry, including Miscellaneous Iron

1.4 Submittals

- .1 Provide required information in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Action Submittals: Provide the following submittals before starting any work of this Section:
 - .1 Product Data: Submit product data for the following:
 - .1 Non-slip aggregates and non-slip aggregate surface finishes
 - .2 Grout
 - .3 Fasteners
 - .4 Prefabricated components
 - .5 Paint and coating products
 - .2 Shop Drawings: Submit shop drawings indicating detailed fabrication and erection of each metal fabrication indicated in accordance with NAAMM AMP 555 including; but not limited to plans, elevations, sections, and details of metal fabrications and connections; show anchorage and accessory items.
- .3 Informational Submittals: Provide the following submittals when requested by the Consultant:
 - .1 Certificates: Submit certificates for the following:
 - .1 Mill certificates signed by manufacturers of stainless steel sheet certifying that products provided are in accordance with requirements of this Section.
 - .2 Copies of welding certificates for welding procedures and personnel.
 - .2 Qualification Statement: Submit qualification data of fabricator and employed personnel indicating their capabilities and experience; include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified when requested by the Consultant.

1.5 QUALITY ASSURANCE

- .1 Regulatory Requirements: Perform structural welding, use personnel and qualify procedures in accordance with requirements listed.
- .2 Qualifications: Provide proof of qualifications when requested by Consultant:
 - .1 Fabricators: Use fabricator experienced in producing metal fabrications similar to those required for this project and with a record of successful in-service performance with sufficient production capacity to produce required units.
 - .2 Personnel: Use welders qualified by Canadian Welding Bureau for classification of work being performed that are experienced in type and extent of work required for the project.

1.6 PROJECT CONDITIONS

- .1 Site Measurements: Verify dimensions by site measurements before fabrication and indicate measurements on shop drawings where metal fabrications are indicated to fit walls and other construction; coordinate fabrication schedule with construction progress to avoid delaying the Work.
- .2 Established Dimensions: Establish dimensions and proceed with fabricating metal fabrications without site measurements where site measurements cannot be made

without delaying the Work; coordinate construction to ensure that actual dimensions correspond to established dimensions; allow for trimming and fitting.

PART 2 PRODUCTS

2.1 Materials

- .1 Metal Surfaces: Provide materials with smooth, flat surfaces without blemishes for metal fabrications exposed to view in the completed Work; do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.
- .2 Ferrous Metals:
 - .1 Stainless Steel Sheet, Strip, Plate, and Flat Bars: In accordance with ASTM A666, Type 316.
 - .2 Stainless Steel Bars and Shapes: In accordance with ASTM A276, Type 316.
- .3 Cementitious Materials:
 - .1 Grout:
 - .1 Non-Shrink, Non-Metallic Grout: Factory packaged, non-staining, non-corrosive, non-gaseous grout in accordance with ASTM C1107/C1107M, specifically recommended by manufacturer for interior and exterior applications.
- .4 General Fasteners: Provide Type 316 stainless steel fasteners for exterior use and zinc plated fasteners with coating in accordance with ASTM B633, Class Fe/Zn 5, where built into exterior walls; select fasteners for type, grade and class required and selected from the following:
 - .1 Bolts and Nuts:
 - .1 Bolts: Regular hexagon head bolts, ASTM A307, Grade A or ASTM F568/F568M, Property Class 4
 - .2 Nuts and Washers ASTM A563/A563M hex nuts and flat washers
 - .2 Anchor Bolts: ASTM F1554, Grade 36.
 - .3 Machine Screws: ASME B18.6.3/B18.6.7M.
 - .4 Plain Washers: Round, carbon steel, ASME B18.22.1/B18.22M.
 - .5 Lock Washers: Helical, spring type, carbon steel, ASME B18.21.1/B18.21.2M.
- .5 Finishes: Finish metal fabrications in accordance with NAAMM Metal Finishes Manual for Architectural and Metal Products following recommendations for applying and designating finish after assembly and as follows:
 - .1 Stainless Steel Finishes: Remove tool and die marks and stretch lines or blend into finish; grind and polish surfaces to match original finish; passivate and rinse surfaces after polishing, remove embedded foreign matter and leave surfaces chemically clean.

2.2 Fabrication

- .1 Shop Fabrication: Shear and punch metals cleanly and accurately, remove burrs; ease exposed edges to a radius of approximately 1 mm; form bent metal corners to smallest radius possible without causing grain separation or otherwise impairing work and as follows:
 - .1 Fabricate joints exposed to weather in a manner to exclude water, or provide weep holes where water may accumulate.
 - .2 Fabricate assemblies exposed to exterior conditions that allow for thermal movement resulting from ambient and surface temperatures by preventing

- buckling, opening up of joints, overstressing of components, failure of connections, and other detrimental effects.
- .3 Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges.
- .4 Remove sharp or rough areas on exposed traffic surfaces.
- .2 Shop Welding: Weld corners and seams continuously and as follows:
 - .1 Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - .2 Obtain fusion without undercut or overlap.
 - .3 Remove welding flux immediately.
 - .4 At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- .3 Shop Assembly: Pre-assemble items in shop to greatest extent possible to minimize site splicing and assembly and as follows:
 - .1 Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible.
 - .2 Use exposed fasteners of type indicated; or if not indicated, Phillips flat-head countersunk screws or bolts.
 - .3 Locate joints where least conspicuous.
 - .4 Disassemble units only as necessary for shipping and handling limitations.
 - .5 Use connections that maintain structural value of joined pieces.
 - .6 Clearly mark units for reassembly and coordinated installation.
- .4 Anchorage Fabrication: Fabricate and space anchoring devices to secure metal fabrications rigidly in place and to support required loads; provide for anchorage of type indicated and suitable for supporting structure, and as follows:
 - .1 Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.

PART 3 EXECUTION

3.1 INSTALLATION

- .1 Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing metal fabrications to in-place construction. Include threaded fasteners for concrete and masonry inserts, toggle bolts, through bolts, lag bolts, wood screws, and other connectors.
- .2 Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels and as follows:
 - .1 Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.
 - .2 Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations.

- .3 Site Welding: Perform welding work in accordance with CSA W59; do not weld, cut or abrade surfaces of exterior units that have been hot dip galvanized after fabrication and are for bolted or screwed site connections and as follows:
 - .1 Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - .2 Obtain fusion without undercut or overlap.
 - .3 Remove welding flux immediately.
 - .4 At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

3.2 ADJUSTING AND CLEANING

- .1 Touch-Up of Shop Applied Primer: Immediately after erection, clean site welds, bolted connections, and abraded areas of shop coatings, and recoat exposed areas using same material as used for shop priming in accordance with SSPC-PA1 for touching up shop coated surfaces; apply by brush or spray to a minimum 0.05 mm dry film thickness.

END OF SECTION

PART 1 GENERAL

1.1 Summary

- .1 Work in this section includes application of graffiti resistant coatings to exterior stone cladding.

1.2 Related Requirements

- .1 Section 04 42 00 – Exterior Stone Cladding

1.3 Reference Standards

- .1 Miscellaneous References:
 - .1 Canadian Environmental Assessment Act (CEAA) 1995
 - .2 Mine Safety and Health Administration/National Institute for Occupational Safety and Health (MSHA/NIOSH) Standards

1.4 Submittals

- .1 Provide required information in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Action Submittals: Provide the following submittals before starting any work of this Section:
 - .1 Product Data: Submit product information for cleaning materials used on the Project, installation instructions, and manufacturers written cleaning instructions specific for surfaces being cleaned and substances being removed from surfaces; include written methodology describing cleaning process and rationale for cleaning techniques being used.
 - .2 Supplier to provide finish samples for approval.

1.5 Project Closeout Submissions

- .1 Operation and Maintenance Data: Provide maintenance information in accordance with Section 01 01 00 – General Requirements: Operations and Maintenance Data indicating proper care of graffiti resistant coating, cleaning instructions, locally available materials used to clean and maintain surfaces, and approximate recoating requirements.
- .2 Maintenance Materials: Provide maintenance materials in accordance with Section 01 78 30 – Spare Parts and Maintenance Materials the following:
 - .1 One (1)-4L container of graffiti resistant coating listed below, stored in location directed by Owner.
 - .2 One (1)-4L container of graffiti remover materials as recommended by coating manufacturer for graffiti resistant coatings listed below, stored in location directed by Owner.

1.6 Quality Assurance

- .1 Qualifications: Provide proof of qualifications when requested by Consultant:
 - .1 Source of Supply: Use only materials from one manufacturer and a single source of supply; use only proprietary materials from acceptable materials listing; materials from non-proprietary or materials having an unknown composition will not be permitted as these may contain harmful substances and may cause deleterious effects to surrounding material surfaces.

PART 2 PRODUCTS

2.1 Manufacturers

- .1 Basis-of-Design Materials: Products named in this Section were used as the basis-of-design for the project; manufacturers listed as additional acceptable materials and that offer similar products may be incorporated into the work of this Section provided they meet the performance requirements established by the named products.

2.2 Materials

- .1 Water: Clean potable water free from contaminants; treat water that has high metal content before use in cleaning.
- .2 Masking Materials: Polyethylene or strippable masking (butyl rubber spray) at choice of trade Contractor.
- .3 Graffiti Resistant Coating: UV resistant, hydrophobic, and chemical resistant coating, and as follows:
 - .1 Basis-of-Design Material: CeNano Portol Pro
- .4 Maintenance Cleaners: Manufacturer's recommended maintenance cleaners formulated for use with graffiti resistant coating used on project.

2.3 Tools and Equipment

- .1 Use only brushes with natural or soft plastic bristles.
- .2 Use only scrapers of wood or plastic.
- .3 Use air compressors equipped with on-line oil filters to avoid spraying oil onto masonry.
- .4 Use only plastic or non-ferrous metal piping and fittings.
- .5 Use nozzles that give nebulized droplet spray.

PART 3 EXECUTION

3.1 Preparation

- .1 Place safety devices and signs near work areas as indicated and directed.
- .2 Seal or repair openings and joints where there is potential risk of water or chemical infiltration through the wall assembly.
- .3 Cover surfaces not scheduled for coatings.
- .4 Cover and protect surfaces and non-masonry finishes with in areas scheduled for coatings as follows:
 - .1 Mask or seal vents, windows, and other openings
 - .2 Mask wood, glass, and metal adjacent to masonry
 - .3 Protect plants (if any) from excessive watering and chemicals
 - .4 Hang sheeting material from scaffolding to enclose spray
 - .5 Equip workers with eye, head, and face protection; and protective gloves, coveralls, boots and filter mask in accordance with MSHA/NIOSH standard

3.2 Application

- .1 Apply materials following manufacturer's instructions.

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- .2 Apply anti-graffiti coating to areas as directed by Consultant, in accordance with manufacturer's written instructions and as follows:
 - .1 Apply solution in a three coat application using approved spray equipment at rate in accordance with manufacturer's written instructions.
 - .2 Protect non porous surfaces from overspray.

3.3 Cleaning

- .1 Rinse off substrates until no indications of chemicals are present.
- .2 Rinse from bottom to top and from top to bottom.
- .3 Clean up work area as work progresses.
- .4 Remove debris and waste from site at end of each work day.

END OF SECTION

PART 1 GENERAL

1.1 Summary

- .1 This Section includes requirements for supply and installation of unit paving.

1.2 reference standards

- .1 American Society for Testing of Materials (ASTM):
 - .1 ASTM C615-11 - Granite Dimension Stone
- .2 Terrazzo, Tile and Marble Association of Canada (TTMAC):
 - .1 Dimension Stone Guide, Volume II

1.3 Submittals

- .1 Provide required information in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Action Submittals: Provide the following submittals before starting any work of this Section:
 - .1 Product Data: Submit manufacturer's technical information for each product specified.
 - .2 Samples for Verification: Submit the following samples:
 - .1 Unit Paving: Submit full size unit of each paver for approval before ordering material.

1.4 Quality Assurance

- .1 Qualifications: Provide proof of qualifications during course of work:
 - .1 Supplier: Obtain materials from one source with resources to provide products from the same production run for each contiguous area of consistent quality in appearance and physical properties.
 - .2 Installer: Work of this Section using qualified personnel skilled in unit paver installation, having a minimum of five (5) years proven experience and have completed paving installations similar in material, design, and extent to that indicated for this Project.

1.5 Delivery, Storage and Handling

- .1 Delivery and Acceptance Requirements: Deliver units to site using protective covers to prevent staining and soiling arising from transportation and weather; separated from cementitious materials, alkali sources and ground moisture; and do not permit stone to come into contact with oil or grease.
- .2 Storage and Handling Requirements: Store materials to prevent damage or contamination to materials by water, freezing, foreign matter, and other causes; store cementitious materials in a dry area, and blocked off floor and ground surfaces.

1.6 Site Conditions

- .1 Site Measurements: Verify dimensions by site measurements before fabrication and indicate measurements on shop drawings where units are indicated to fit around other construction; coordinate fabrication schedule with construction progress to avoid delaying the Work.

- .2 Established Dimensions: Establish dimensions and proceed with fabricating units without site measurements where site measurements cannot be made without delaying the Work; coordinate construction to ensure that actual site dimensions correspond to established dimensions; allow for trimming and fitting.

PART 2 PRODUCTS

2.1 Manufacturers

- .1 Basis-of-Design Products: Products named in this Section were used as the basis-of-design for the project; manufacturers listed as additional acceptable materials and that offer similar products may be incorporated into the work of this Section provided they meet the performance requirements established by the named products.

2.2 Materials

- .1 Stone: Selected for characteristics suitable for exterior use in accordance with ASTM C1528, and as follows:
 - .1 Granite: In accordance with ASTM C615, and as follows:
 - .1 Size: Thickness and face size as indicated on Drawings
 - .2 Finish: Flamed finish
 - .3 Basis-of-Design Material: Barre Granite
 - .2 Portland Cement: to CSA-A3000, type 10.
 - .3 Hydrated Lime: to ASTM C307, type N.
 - .4 Sand: clean, washed, sharp, to TTMAC recommendations.
 - .5 Bonding Agent: as recommended by TTMAC
 - .6 Thin-Set Mortar: latex modified Portland cement mortar conforming to ANSI A118.4.
 - .7 Thick-Set Mortar: Portland Cement Mortar bed conforming to ANSI A 108.1.
 - .8 Non-Shrink Cementitious Backing: type as recommended by the granite supplier.
 - .9 Setting Systems: As recommended by the Trade Contractor and approved by the Consultant.
 - .10 Joint Sealant: Two-component, self-levelling, polyurethane elastomeric sealant
 - .1 Basis-of-Design Material: Sikaflex 2c SL

PART 3 EXECUTION

3.1 Examination

- .1 Examine exposed surfaces for compliance with requirements for dimensional and elevation tolerances.

3.2 Installation

- .1 Install unit pavers in accordance with manufacturers written instructions.
- .2 Install in accordance with TTMAC

3.3 Closeout Activities

- .1 Cleaning: Perform final cleaning as required by Section 01 01 00 – General Requirements: Final Cleaning:
- .1 Keep installed Work clean as Work progresses.
 - .2 Clean and repair surfaces that become soiled or otherwise damaged arising from work of this Section; provide protection from damage arising from adjacent work of other Sections.
 - .3 Replace paving materials that cannot be cleaned or damaged at no additional cost to the Owner.
 - .4 Remove concrete and alkali wash-off on surfaces as work progresses.
 - .5 Remove all debris, equipment and excess material resulting from work of this Section on completion of work of this Section.

END OF SECTION