

**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
Public Works and Government Services / Travaux  
publics et services gouvernementaux  
Kingston Procurement  
Des Acquisitions Kingston  
86 Clarence Street, 2nd floor  
Kingston  
Ontario  
K7L 1X3  
Bid Fax: (613) 545-8067

**REQUEST FOR PROPOSAL**  
**DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government  
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services  
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

**Comments - Commentaires**

<b>Title - Sujet</b> Electron Microscope	
<b>Solicitation No. - N° de l'invitation</b> W0114-155153/A	<b>Date</b> 2014-10-28
<b>Client Reference No. - N° de référence du client</b> W0114-15-5153	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$KIN-620-6457	
<b>File No. - N° de dossier</b> KIN-4-42121 (620)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2014-12-08</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Standard Time EST
<b>F.O.B. - F.A.B.</b> Specified Herein - Précisé dans les présentes <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input checked="" type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Porter, Marta M.	<b>Buyer Id - Id de l'acheteur</b> kin620
<b>Telephone No. - N° de téléphone</b> (613) 547-7587 ( )	<b>FAX No. - N° de FAX</b> (613) 545-8067
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> Sawyer Building Loading Dock The Royal Military College 11 General Crerar Cresnet Kingston ON., K7K 7B4	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

**Vendor/Firm Name and Address**

**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Public Works and Government Services / Travaux publics  
et services gouvernementaux  
Kingston Procurement  
Des Acquisitions Kingston  
86 Clarence Street, 2nd floor  
Kingston  
Ontario  
K7L 1X3

<b>Delivery Required - Livraison exigée</b> See Herein	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

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**See Attached**

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## **PART 1 - GENERAL INFORMATION**

### **1.1 Requirement**

The Department of Chemistry and Chemical Engineering at the Royal Military College of Canada, Canadian Forces Base Kingston, Kingston Ontario, requires one (1) Scanning Electron Microscope (SEM) with a broad range of capabilities; not only to study traditional conductive materials, but also equipped to handle samples that in their native state, are non-conductive or fully hydrated (or contain other volatiles).

### **1.2 Debriefings**

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

### **1.3 Trade Agreements**

The requirement is subject to the provisions of:

- Agreement on Internal Trade (AIT)
- North America Free Trade Agreement (NAFTA)
- Canada-Panama Free Trade Agreement
- Canada-Colombia Free Trade Agreement
- Canada-Peru Free Trade Agreement (CPFTA)
- World Trade Organization - Agreement on Government Procurement (WTO-AGP)

## **PART 2 - BIDDER INSTRUCTIONS**

### **2.1 Standard Instructions, Clauses and Conditions**

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The [2003](#) (2014-09-25) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

### **2.2 Submission of Bids**

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

### **2.3 Former Public Servant**

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

#### ***Definitions***

For the purposes of this clause, "former public servant" is any former member of a department as defined in the [Financial Administration Act](#), R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the [Public Service Superannuation Act](#) (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the [Supplementary Retirement Benefits Act](#), R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the [Canadian Forces Superannuation Act](#), R.S., 1985, c. C-17, the [Defence Services Pension Continuation Act](#), 1970, c. D-3, the [Royal Canadian Mounted Police Pension Continuation Act](#), 1970, c. R-10, and the [Royal Canadian Mounted Police Superannuation Act](#), R.S., 1985, c. R-11, the [Members of Parliament Retiring Allowances Act](#), R.S. 1985, c. M-5, and that portion of pension payable to the [Canada Pension Plan Act](#), R.S., 1985, c. C-8.

#### **Former Public Servant in Receipt of a Pension**

As per the above definitions, is the Bidder a FPS in receipt of a pension? **Yes** ( ) **No** ( )

If so, the Bidder must provide the following information, for all FPSs in receipt of a pension, as applicable:

- a. name of former public servant;
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with [Contracting Policy Notice: 2012-2](#) and the [Guidelines on the Proactive Disclosure of Contracts](#).

#### **Work Force Adjustment Directive**

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **Yes** ( ) **No** ( )

If so, the Bidder must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks;
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

## **2.4 Enquiries - Bid Solicitation**

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All enquiries must be submitted in writing to the Contracting Authority no later than ten (10) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

## **2.5 Applicable Laws**

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the bidders.

## **PART 3 - BID PREPARATION INSTRUCTIONS**

### **3.1 Bid Preparation Instructions**

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Financial Bid (1 hard copy)

Section II: Certifications (1 hard copy)

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

#### **Section I: Financial Bid**

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Applicable Taxes must be shown separately.

#### **3.1.1 Exchange Rate Fluctuation**

[C3011T](#) (2013-11-06), Exchange Rate Fluctuation

#### **Section II: Certifications**

Bidders must submit the certifications required under Part 5.

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## **PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**

### **4.1 Evaluation Procedures**

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

#### **4.1.1 Financial Evaluation**

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, Delivered Duty Paid, Canadian customs duties and excise taxes included.

### **4.2 Basis of Selection**

A bid must comply with all requirements of the bid solicitation to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

## **PART 5 - CERTIFICATIONS**

Bidders must provide the required certifications and associated information to be awarded a contract.

The certifications provided by bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default in carrying out any of its obligations under the Contract, if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority may render the bid non-responsive or constitute a default under the Contract.

### **5.1 Certifications Precedent to Contract Award**

The certifications listed below should be completed and submitted with the bid, but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to comply with the request of the Contracting Authority and to provide the certifications within the time frame provided will render the bid non-responsive.

#### **5.1.1 Integrity Provisions - Associated Information**

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in Section 01 Integrity Provisions - Bid of Standard Instructions [2003](#). The associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

#### **5.1.2 Federal Contractors Program for Employment Equity - Bid Certification**

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "[FCP Limited Eligibility to Bid](#)" list ([http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/list/inelig.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)) available from [Employment and Social Development Canada \(ESDC\) - Labour's](#) website.

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](#)" list at the time of contract award.

## **PART 6 - RESULTING CONTRACT CLAUSES**

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

### **6.1 Security Requirements**

**6.1.1** There is no security requirement applicable to this Contract.

### **6.2 Requirement**

The Department of Chemistry and Chemical Engineering at the Royal Military College of Canada, Canadian Forces Base Kingston, Kingston Ontario, requires one (1) Scanning Electron Microscope (SEM) with a broad range of capabilities; not only to study traditional conductive materials, but also equipped to handle samples that in their native state, are non-conductive or fully hydrated (or contain other volatiles).

### **6.3 Standard Clauses and Conditions**

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

#### **6.3.1 General Conditions**

2010A (2014-09-25), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

#### **6.3.2 Supplemental General Conditions**

4001 (2013-02-28), Hardware Purchase, Lease and Maintenance, apply to and form part of the Contract.

4004 (2013-04-25), Maintenance and Support Services for Licensed Software, apply to and form part of the Contract.

### **6.4 Term of Contract**

#### **6.4.1 Delivery Date**

Delivery and installation of the Microscope must be on or before March 15, 2015 with Operational Training to be completed by March 31, 2015.

#### **6.4.2 Shipping Instructions - FOB Destination and DDP**

Incoterms 2000 "DDP Delivered Duty Paid" Sawyer Building loading dock of The Royal Military College of Canada, 11 General Crerar Crescent, Kingston, Ontario.

### **6.5 Authorities**

#### **6.5.1 Contracting Authority**

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The Contracting Authority for the Contract is:

Name: Marta Porter  
Title: Supply Specialist  
Public Works and Government Services Canada  
Acquisitions Branch  
Address: 86 Clarence Street, 2<sup>nd</sup> Floor  
Kingston ON., K7L 1X3  
Telephone: 613-547-7587  
Facsimile: 613-545-8067  
E-mail address: marta.porter@pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

#### **6.5.2 Technical Authority (To be filled in at time of Contract Award)**

The Technical Authority for the Contract is:

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_

Telephone : \_\_\_\_\_  
Facsimile: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

The Technical Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

#### **6.5.3 Contractor's Representative (To be filled in by the Bidder)**

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_

Telephone : \_\_\_\_\_  
Facsimile: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

#### **6.6 Proactive Disclosure of Contracts with Former Public Servants**

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive

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disclosure reports, in accordance with [Contracting Policy Notice: 2012-2](#) of the Treasury Board Secretariat of Canada.

## **6.7 Payment**

### **6.7.1 Basis of Payment**

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm lot price, as specified in Annex B- Basis of Payment for a cost of \$ \_\_\_\_\_ (*insert the amount at contract award*). Customs duties are included, and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

### **6.7.2 Limitation of Price**

SACC Manual clause [C6000C](#) (2011-05-16) Limitation of Price

### **6.7.3 Single Payment**

SACC Manual clause H1000C (2008-05-12), Single Payment

### **6.7.4 SACC Manual Clauses**

A9117C (2007-11-30), T1204 – Direct Request by Customer Department

## **6.8 Invoicing Instructions**

- 1 The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
  - a. The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.

## **6.9 Certifications**

### **6.9.1 Compliance**

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing associated information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the associated information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

### **6.10 Applicable Laws**

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

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### **6.11 Priority of Documents**

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the supplemental general conditions 4001 (2013-02-28), Hardware Purchase, Lease and Maintenance;
- (c) the supplemental general conditions 4004 (2013-04-25), Maintenance and Support Services for Licensed Software;
- (c) the general conditions 2010A (2014-09-25), Goods (Medium Complexity);
- (d) Annex A, Requirement;
- (e) Annex B, Basis of Payment;
- (f) the Contractor's bid dated \_\_\_\_\_ .

### **6.12 SACC Manual Clauses**

B1501C (2006-06-16), Electrical Equipment

## **ANNEX "A"**

### **REQUIREMENT**

#### **Background**

The Department of Chemistry & Chemical Engineering at the Royal Military College of Canada requires a Scanning Electron Microscope (SEM) with a broad range of capabilities; not only to study traditional conductive materials, but also equipped to handle samples that in their native state, are non-conductive or fully hydrated (or contain other volatiles).

#### **1.0 Minimum Mandatory Technical Specifications:**

##### **1.1 Accessories required:**

1. Scanning Transmission Electron Microscope (STEM) to investigate samples that are 'wet' (colloids, emulsions or slurries)
2. 1400° heating stage to study morphological changes in solid samples as they are heated.

##### **1.2 Electron Optics:**

*Source:* field emission gun (FEG) electron source which delivers:

- a) the mandatory resolution specifications for the different modes of operation as outlined in section 1.2.
- b) high spatial resolution at high (30 kV), and low (1 kV) accelerating voltages

*Magnification:* 20x (at longest working distance) to 2,000,000x

*Focus Range:* 2.5 – 99mm

*Beam Stability:* Schottky based field emission design compatible with an EDAX Electron Dispersive Spectroscopy (EDS) system to deliver maximum beam stability and beam density for X-ray microanalysis including:

- a) a long term beam stability of at least 0.4% per 10 hours
- b) a minimum of 200 nA probe current at the specimen.

##### **1.3 Resolution:**

- a) High Vacuum mode:
  - 1.2 nm at 30 kV in secondary electron mode.
  - 2.5 nm at 30 kV in backscatter electron (BSE) mode.
  - 3.0 nm at 1 kV in secondary electron mode.
- b) Low Vacuum mode
  - 1.4 nm at 30 kV in secondary electron mode.
  - 2.5 nm at 30 kV in BSE mode.
  - 3.0 nm at 3 kV in secondary electron mode.

- c) ESEM mode
  - 1.4 nm at 30 kV in secondary electron mode.
- d) Accelerating Voltage: 200V to 30kV, continuously adjustable
- e) Beam Current: Up to 200 nA

#### 1.4 Detectors:

- a) an Everhardt Thornley scattered electron (SE) detector.
- b) the ability to collect an SE signal in both low vacuum and ESEM mode with the resolution values indicated in section 1.2
- c) a lens-mounted directional back-scattered (DBS) detector which:
  - i. is sensitive to electrons emitted from 500 V onwards.
  - ii. detects electrons emitted at different angles to help differentiate between the morphological information (low angle electrons) from the compositional information (high angle electrons).
  - iii. allows for simultaneous EDS spectra acquisition.
- d) an IR camera for viewing the sample in the chamber.

#### 1.5 Specimen Chamber Vacuum

- a) High vacuum mode:  $6 \times 10^{-6}$  Pa
- b) Low Vacuum mode: 10 and 130 Pa
- c) ESEM mode: between 10 and 4000 Pa

#### 1.6 Specimen Stage:

- a) X = y = 50mm motorized
- b) z = 50 mm total, 25mm motorized and 25mm manual
- c) tilt = -15 ~ +75 degrees (manual)
- d) stage navigation based on a pre-recorded image
- e) eucentric tilt
- f) compucentric sample rotation

#### 1.7 Accessories:

1. STEM accessory which includes:
  - a. control of the sample hydration through temperature control by a cold stage
  - b. integrated STEM detector
    - i. 0.8 nm at 30 kV
  - c. movie recording control
  - d. brightfield, darkfield and high-angle-annular-dark-field (HAADF) imaging modes
  - e. control of chamber pressure, sample temperature, STEM detector as well as contrast and brightness must be fully embedded into the control software (the graphical user interface) of the SEM
  - f. the use and study of conventional TEM grids.
2. Heating stage with the following specifications:

- 
- a. heating of the sample up to 1400° to record morphological changes in real time
  - b. movie recording control
  - c. heat shield to protect sensitive detectors such as the EDS detector
  - d. a temperature stability of  $\pm 5^\circ$
  - e. ability for accurate control of the chamber gas pressure, the ability to set up a heating/temperature profile coupled to an on-board digital recorder must be embedded with the control interface of the SEM.
3. Peltier/Heating stage Control Kit to control the stage temperature for the STEM and Heating Stage accessories.
  4. Chamber door mounted camera which allows:
    - a. for a 5 megapixel image of the specimens on the stage to be taken
    - b. for colour images to be taken to allow areas of interest to be found easily and investigated
  5. Specimen decontamination device attached to SEM chamber which:
    - a. is compatible with an EDAX EDS system.
    - b. can be used for general chamber clean-up after working with dirty or wet samples
    - c. works for an extended period of time to accommodate long acquisition times under high vacuum.

## 2.0 General Specifications:

- a) Computer and operating system:  
Computer and interface has sufficient performance to permit complete operation and control of all devices and accessories necessary to operate the equipment.  
Windows 7 operating system  
24" monitor  
DVD+/- R/RW (including software)
- b) Software:
  - a. computer software for data acquisition and processing; and
  - b. the ability to export data to external programs for further analyses.
- c) Safety:  
Instrument enclosure must be compliant with Canadian regulations (CSA or equivalent) for X-ray, electrical & mechanical safety.
- d) Installation, Training and Support:  
On-site installation by March 15/2015 and operational training must be conducted by a qualified person and provided for at least 2 attendees of RMC by March 31/2015.  
All labour and travel costs must be included in the price
- e) Service Contract:

A 3 year Service Contract must be provided after the warranty expires which includes:

- i. labour, travel and accommodation expenses for the service technician.
- ii. service availability during normal business hours including:
  - a. Scheduled maintenance: wherein ordinary repairs and adjustments arising from normal usage of the equipment will be done as well as a compliance review of the equipment, and cleaning and alignment of the equipment, as the SEM manufacturer deems reasonably necessary for the functioning of the equipment.
  - b. Telephone support: the service division will provide telephone support for repair and maintenance and assist user(s) as necessary with specific questions/concerns
  - c. Unscheduled maintenance: In addition to the scheduled visits and telephone support described herein, RMC may place corrective maintenance service calls at no additional cost in the event of equipment failures with a targeted response time of 48 hours. In the event that a service representative cannot resolve an equipment problem in a reasonable amount of time, the service representative will escalate the problem to the manufacturer of the equipment requesting both telephone and/or on-site assistance, as necessary, in an effort to expedite a solution.
- iii. Major parts coverage (including system software and/or software upgrades applicable to the SEM current configuration) and include one FEG tip exchange as may be required per service contract year, as required. RMC will be responsible for purchasing consumable items, as required.

Solicitation No. - N° de l'invitation  
W0114-155153/A  
Client Ref. No. - N° de réf. du client  
W0114-15-5153

Amd. No. - N° de la modif.  
File No. - N° du dossier  
KIN-4-42121

Buyer ID - Id de l'acheteur  
KIN620  
CCC No./N° CCC - FMS No./N° VME

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**ANNEX "B"**

**BASIS OF PAYMENT**

**Pricing Instructions:**

Bidders will provide a firm, all-inclusive lot price in Canadian dollars (exclusive of HST). H.S.T., if applicable, is extra to the price herein and shall be shown on any invoice as a separate item. Customs duties are included.

**Incoterms 2000 "DDP Delivered Duty Paid" to Sawyer Building loading dock of The Royal Military College of Canada, 11 General Crerar Crescent, Kingston, Ontario.**

<u>Item</u>	<u>Quantity</u>	<u>DDP Firm Lot Price</u>
<b>Scanning Electron Microscope</b> <i>(As per the Minimum Mandatory Technical Specifications in Annex A - Requirement)</i>	<b>1</b>	\$ _____