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**This bid solicitation cancels and supersedes previous bid solicitation number 9F052-160448/A dated May 3<sup>rd</sup> 2018 with a closing date of June 18<sup>th</sup>, 2018 at 2:00 pm EDT. A debriefing or feedback session will be provided upon request to bidders/offerors/suppliers who bid on the previous solicitation.**

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## **PART 1 - GENERAL INFORMATION**

### **1.1 Introduction**

The Request for Standing Offers (RFSO) is divided into seven parts plus attachments and annexes, as follows:

- Part 1 General Information: provides a general description of the requirement;
- Part 2 Offeror Instructions: provides the instructions applicable to the clauses and conditions of the RFSO;
- Part 3 Offer Preparation Instructions: provides offerors with instructions on how to prepare their offer to address the evaluation criteria specified;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria which must be addressed in the offer, and the basis of selection;
- Part 5 Certifications and Additional Information: includes the certifications and additional information to be provided;
- Part 6 Security, Financial and Insurance Requirements: includes specific requirements that must be addressed by offerors; and
- Part 7 7A, Standing Offer, and 7B, Resulting Contract Clauses:
  - 7A, includes the Standing Offer containing the offer from the Offeror and the applicable clauses and conditions;
  - 7B, includes the clauses and conditions which will apply to any contract resulting from a call-up made pursuant to the Standing Offer.

The Annexes include the Requirement, the Basis of Payment, the Security Requirements Checklist, the Electronic Payment Instruments, the Standing Offer Report Requirements and any other annexes.

### **1.2 Summary**

#### **Description**

Public Works and Government Services Canada (PWGSC) on behalf of Canadian Space Agency (CSA) located in St-Hubert, (Quebec), is seeking bids to conduct research, development and commercialization work in a range of areas related to space.

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A list of qualified resources will be established to provide expert advice and assistance at the technical, scientific, program and commercialization levels. The type of resources required are divided into areas of expertise as described in Annex A – Requirement (and its appendices) of this document.

#### **Duration of the Standing Offer**

The resulting National Individual Standing Offer (NISO) period will be for a period of two (2) years from date of award and will include an option to extend the Standing Offer by three (3) additional one (1) year periods.

#### **Trade Agreements**

The requirement is not subject to any Commercial Trade Agreement.

#### **Canadian Content**

The requirement is limited to Canadian services.

### **1.3 Security Requirements**

There are security requirements associated with the requirement of the Standing Offer. For additional information, see Part 6 - Security, Financial and Insurance Requirements, and Part 7 - Standing Offer and Resulting Contract Clauses. For more information on personnel and organization security screening or security clauses, offerors should refer to the [Contract Security Program](http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html) of Public Works and Government Services Canada (<http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html>) website.

### **1.4 Debriefings**

Offerors may request a debriefing on the results of the request for standing offers process. Offerors should make the request to the Standing Offer Authority within 15 working days of receipt of the results of the request for standing offers process. The debriefing may be in writing, by telephone or in person.

## **PART 2 - OFFEROR INSTRUCTIONS**

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

All instructions, clauses and conditions identified in the Request for Standing Offers (RFSO) 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.

Offerors who submit an offer agree to be bound by the instructions, clauses and conditions of the RFSO and accept the clauses and conditions of the Standing Offer and resulting contract(s).

The [2006](#) (2018-05-22) Standard Instructions - Request for Standing Offers - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the RFSO.

Subsection 5.4 of [2006](#), Standard Instructions - Request for Standing Offers - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days  
Insert: 240 days

#### **2.1.1 SACC Manual Clauses**

SACC Manual Clause M0019T (2007-05-25) - Firm Price and/or Rates  
SACC Manual Clause M9033T (2011-05-16) - Financial Capability

### **2.2 Submission of Offers**

Offers 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 Request for Standing Offers.

Due to the nature of the Request for Standing Offers, transmission of offers by facsimile to PWGSC will not be accepted.

### **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 FPS, offerors must provide the information required below before the issuance of a standing offer. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of offers is completed, Canada will inform the Offeror 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 offer 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:

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- 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 Offeror a FPS in receipt of a pension?

**YES ( ) NO ( )**

If so, the Offeror must provide the following information, for all FPS 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, Offerors agree that the successful Offeror'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 Offeror a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **YES ( ) NO ( )**

If so, the Offeror 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 - Request for Standing Offers**

All enquiries must be submitted in writing to the Standing Offer Authority no later than ten (10) calendar days before the Request for Standing Offers (RFSO) closing date. Enquiries received after that time may not be answered.

Offerors should reference as accurately as possible the numbered item of the RFSO to which the enquiry relates. Care should be taken by offerors 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 offerors do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all offerors. Enquiries not submitted in a form that can be distributed to all offerors may not be answered by Canada.

## **2.5 Applicable Laws**

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in Quebec.

Offerors may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their offer, 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 offerors.

## **PART 3 - OFFER PREPARATION INSTRUCTIONS**

### **3.1 Offer Preparation Instructions**

Canada requests that offerors provide their offer in **separately bound sections** as follows:

Section I: Technical Offer (one [1] hard copy and one [1] soft copy CD/DVD/USB)

Section II: Financial Offer (one [1] hard copy and one [1] soft copy CD/DVD/USB)

Section III: Certifications (one [1] hard copy and one [1] soft copy CD/DVD/USB)

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

Due to the nature of the RFSO, offers transmitted by epost Connect service and by facsimile will not be accepted.

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

Canada requests that offerors follow the format instructions described below in the preparation of hard copy of their offer:

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

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, Offerors 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: Technical Offer**

In their technical offer, offerors should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Offerors may submit an offer on one or more Streams. Offerors should indicate the Streams to which it is submitting an offer on the cover of the Technical Offer.

#### **Section II: Financial Offer**

Offerors must submit their financial offer in accordance with the Financial Presentation Sheet detailed in Appendix 1 to Annex B. The total amount of Goods and Services Tax or Harmonized Sales Tax is to be shown separately, if applicable.

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All financial evaluations will be based on firm per diem rates for each Level of each Resource Category in each proposed Stream.

**The Offeror must provide firm per diem rates for all Levels of all Resource Categories of each Stream offered. A single per diem rate must be provided for each Level of each Resource Category.**

The firm per diem rates must be all-inclusive rates, applicable taxes extra.

Per diem rates must be with Canadian customs duties and excise taxes as applicable included.

### **3.1.1 Electronic Payment of Invoices - Offer**

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex D - Electronic Payment Instruments, to identify which ones are accepted.

If Annex D - Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

### **Section III: Certifications**

Offerors must submit the certifications and additional information required under Part 5.

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

### **4.1 Evaluation Procedures**

- (a) Offers will be assessed in accordance with the entire requirement of the Request for Standing Offers including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the offers.

#### **4.1.1 Technical Evaluation**

##### **4.1.1.1 Mandatory Technical Criteria**

The Offeror must comply with the following Mandatory Requirements and provide the necessary documentation to support compliance.

Any offer which fails to meet the following Mandatory Requirements will be declared non-compliant. Each requirement should be addressed separately.

Definitions for the purposes of this section:

An "Outside Client" is any legal entity that is not a parent, subsidiary or sister corporation of the Offeror and if the Offeror is a joint venture, then a client that is not a member of the said joint venture or a parent, subsidiary or sister corporation of a member of the said joint venture.

A "Project" is a contract between the Offeror or any member of a joint venture offeror and an Outside Client under which the Offeror or any member of a joint venture offeror has provided professional services to the Outside Client, and has fulfilled all of the terms of the contract, provided that, if the contract provides for discrete phases with specific deliverables, then any such phase completed by the Offeror or any member of a joint venture offeror, including receipt by the supplier of payment in full for all work and delivery by the supplier of all deliverables, shall qualify as a Project.

A "Substantiation Reference" is an Outside Client reference who may be contacted, at Canada's discretion, to confirm the Offeror has previously provided services of the identified Resource Category(ies).

##### **M1 - Minimum years in business:**

The Offeror must have been in business for a minimum of three (3) years as of RFSO closing.

In the case of a Joint Venture (JV), one member of the JV must meet the minimum three (3) year requirement and all other member(s) of the JV must have been in business for a minimum of one (1) year as of RFSO closing.

The offeror must demonstrate this by submitting a copy of their company's Certificate of Incorporation or any other equivalent document. In the case of a Joint Venture (JV) each member must provide their company's Certificate of Incorporation or any other equivalent document.

Canada reserves the right to request proof (i.e. tax returns) of any information provided by the Offeror. If the information cannot be validated, the Offeror's Offer will be considered non-compliant.

## **M2 - Resource Categories**

For each particular Stream they wish to be considered, the Offeror must offer and be technically and financially compliant on ALL Resource Categories and Levels.

To demonstrate technical compliance, the Offeror must submit a resume for each of the proposed resources. The contents of the CV must demonstrate that each proposed resource complies with the requirements defined in Appendix 2 to Annex A - Minimum Resource Requirements of this RFSO. The Offeror has to indicate for which category(ies) and level(s) the resource is proposed. The same resource can be used to demonstrate compliance with the requirements for multiple categories and levels.

Canada reserves the right to ask for a copy of the proposed resource's degree to confirm compliance with the academic requirements listed in Appendix 2 to Annex A - Minimum Resource Requirements.

## **M3 – Resource Categories**

The Offeror must have previously provided at least sixty-five (65) percent of the number of offered Resource Categories (which includes all applicable Levels for the applicable Resource Category) for the offered Stream to outside clients within the last three (3) years prior to RFSO closing. The additional Resource Categories offered may be submitted without project summaries.

Example: Resource Categories under the Mission Management Stream  
Offeror A offers to provide all four (4) Resource Categories under the Mission Management Stream, then Offeror A must have previously provided at least three (3) of the four (4) Mission Management Resource Categories (all applicable Levels) to outside clients.

An additional one (1) Mission Management Resource Category may also be offered without project summaries.

**For the purposes of this mandatory requirement M3, where the Offeror is a Joint Venture:**  
Resource Categories previously provided by any JV member will be considered and each JV member must have previously provided at least one (1) of the Resource Categories identified.

## **M4 – Resource Categories**

Offerors must provide confirmation, using project summaries as specified below, that the Resource Categories identified by the Offeror for consideration, have been provided by the Offeror to outside clients within the last three (3) years prior to RFSO closing. The Offeror must choose the Resource Categories that match those it has previously provided.

The project summaries should include as a minimum:

- Name of project;
- Date and duration of project;
- Value of project;
- Client's name and contact details;
- Category(ies) of personnel provided;
- Task(s) performed by each Resource Category; and
- Level of Effort performed by each Resource Category.

Multiple categories may be supported by the same project. Each resource category must have a minimum Level of Effort of sixty (60) days. The demonstrated tasks must match or be similar to the tasks outlined in the category descriptions in Annex A in order to be considered as sufficient support.

**For the purposes of mandatory requirement M4, where the Offeror is a Joint Venture:**

Resource Categories previously provided by any JV member will be considered and each JV member must have previously provided at least one (1) of the Resource Categories identified.

**4.2 Financial Evaluation**

**4.2.1 Financial Evaluation**

PWGSC will conduct the financial evaluation based on the methodology detailed below using the firm per diem rates proposed by the Offeror.

- (1) The financial offers submitted in response to this RFSO will be assessed independently. All financial evaluations will be based on firm per diem rates for each Level for each Resource Category proposed in each Stream selected as per the attached presentation sheet.
- (2) The following steps will be taken for each specific Resource Category and corresponding Level in each Stream:

**Step 1**

The average will be calculated using the offered firm per diem rate for every Resource Category and corresponding Level firm per diem rate. Only firm per diem rates proposed for a specific Resource Category and corresponding Level will be used to calculate the average for that Resource Category and corresponding Level.

**Step 2**

Any Offeror proposing firm per diem rates below the average minus 40% for a specific Resource Category and corresponding Level will be deemed non-compliant and will receive no further consideration for that Resource Category and corresponding Stream.

**Step 3**

Any Offeror proposing firm per diem rates above the average plus 40% for a Resource Category and corresponding Level will be deemed non-compliant and receive no further consideration for that Resource Category and corresponding Stream.

**4.2.2 Example of Financial Evaluation**

Offeror	Offeror A	Offeror B	Offeror C	Offeror D
<b>Firm per diem rate</b>	800	400	1000	600
<b>Status</b>	Under evaluation	Under evaluation	Under evaluation	Under evaluation
<b>Step # 1</b>	The average will be calculated using the offered firm per diem rate.			
<b>Calculation</b>	Average: Sum of all proposed rated divided by the number of offerors. (800 + 400 + 1000 + 600) / 4 = 700			

Offeror	Offeror A	Offeror B	Offeror C	Offeror D
<b>Firm per diem rate</b>	800	400	1000	600
<b>Status</b>	Under evaluation	Non-Compliant	Under evaluation	Under evaluation
<b>Step # 2</b>	Any Offeror proposing firm per diem rates below the average minus 40% for a			

	specific Resource Category and corresponding Level will be deemed non-compliant and will receive no further consideration for that Resource Category and corresponding Stream.
<b>Calculation</b>	Average: 700 Average – 40% : $700 - (40\% \times 700) = 700 - 280 = 420$

<b>Offeror</b>	<b>Offeror A</b>	<b>Offeror B</b>	<b>Offeror C</b>	<b>Offeror D</b>
<b>Firm per diem rate</b>	800	400	1000	600
<b>Status</b>	Compliant	Non-Compliant	Non-Compliant	Compliant
<b>Step # 3</b>	Any Offeror proposing firm per diem rates above the average plus 40% for a Resource Category and corresponding Level will be deemed non-compliant and receive no further consideration for that Resource Category and corresponding Stream.			
<b>Calculation</b>	Average: 700 Average + 40% : $700 + (40\% \times 700) = 700 + 280 = 980$			

### 4.3 Basis of Selection

For evaluation purposes only, Offeror ranking and selection will be conducted per Stream. All Offerors who are compliant with all mandatory requirements and are offering compliant per diem rates meeting the requirements set out in the financial evaluation of the RFSO for each specific Resource Category and corresponding Levels will be ranked per Stream in accordance with the following procedure:

**Step 1:** The Offeror's per diem rates offered for each Resource Category and corresponding Level will be weighted in accordance with the percentages shown in Appendix 1 to Annex B - Financial Presentation Sheet.

**Step 2:** The Offeror's total cumulative weighted per diem rates offered for all Resource Categories and corresponding Levels will be calculated.

**Step 3:** For evaluation purposes only, Offerors will be ranked in ascending order in accordance with the total cumulative weighted per diem rates calculated above, with the Offeror offering the lowest total cumulative weighted per diem rates being ranked number 1.

**Step 4:** A maximum number of four (4) resulting Standing Offers will be recommended for award for each Stream.

Only those Offers ranked within the indicated maximum numbers of resulting Standing Offers will be recommended for Standing Offer issuance. Multiple recommendations for Standing Offer issuance for the same Offeror will still count against the maximum Standing Offers noted above.

## **PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION**

Offerors must provide the required certifications and additional information to be issued a standing offer.

The certifications provided by offerors to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare an offer non-responsive, will have the right to set-aside a standing offer, or will declare a contractor in default if any certification made by the Offeror is found to be untrue whether made knowingly or unknowingly during the offer evaluation period, during the Standing Offer period, or during the contract period.

The Standing Offer Authority will have the right to ask for additional information to verify the Offeror's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Standing Offer Authority will render the offer non-responsive, result in the setting aside of the Standing Offer or constitute a default under the Contract.

### **5.1 Certifications Required with the Offer**

Offerors must submit the following duly completed certifications as part of their offer.

#### **5.1.1 Integrity Provisions - Declaration of Convicted Offences**

In accordance with the Integrity Provisions of the Standard Instructions, all offerors must provide with their offer, **if applicable**, the declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

#### **5.1.2 Canadian Content Certification**

This procurement is limited to Canadian services.

The Offeror certifies that:

(  ) the services offered are Canadian services as defined in paragraph 4 of clause A3050T.

**5.1.2.1** SACC *Manual* clause [A3050T](#) (2014-11-27), Canadian Content Definition

### **5.2 Certifications Precedent to the Issuance of a Standing Offer and Additional Information**

The certifications and additional information listed below should be submitted with the offer, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Standing Offer Authority will inform the Offeror of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the offer non-responsive.

#### **5.2.1 Integrity Provisions – Required Documentation**

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Offeror must provide the required documentation, as applicable, to be given further consideration in the procurement process.

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## **5.2.2 Federal Contractors Program for Employment Equity - Standing Offer Certification**

By submitting an offer, the Offeror certifies that the Offeror, and any of the Offeror's members if the Offeror is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list ) available at the bottom of the page of the Employment and Social Development Canada-Labour's website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#s4>).

Canada will have the right to declare an offer non-responsive, or to set-aside a Standing Offer, if the Offeror, or any member of the Offeror if the Offeror is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of issuing of a Standing Offer or during the period of the Standing Offer.

## **5.3 Additional Certifications Precedent to Issuance of a Standing Offer**

### **5.3.1 Status and Availability of Resources**

SACC Manual clause [M3020T](#) (2016-01-28), Status of Availability of Resources - Offer

## **PART 6 - SECURITY, FINANCIAL AND INSURANCE REQUIREMENTS**

### **6.1 Security Requirements**

1. Before issuance of a standing offer, the following conditions must be met:
  - (a) the Offeror must hold a valid organization security clearance as indicated in Part 7A - Standing Offer;
  - (b) the Offeror's proposed individuals requiring access to classified or protected information, assets or sensitive work sites must meet the security requirements as indicated in Part 7A - Standing Offer;
  - (c) the Offeror must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites;
2. Offerors are reminded to obtain the required security clearance promptly. Any delay in the issuance of a standing offer to allow the successful Offeror to obtain the required clearance will be at the entire discretion of the Standing Offer Authority.
3. For additional information on security requirements, offerors should refer to the [Contract Security Program](http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html) of Public Works and Government Services Canada (<http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html>) website.

### **6.2 Financial Capability**

SACC *Manual* clause [M9033T](#) (2011-05-16) Financial Capability

## **PART 7 - STANDING OFFER AND RESULTING CONTRACT CLAUSES**

### **A. STANDING OFFER**

#### **7.1 Offer**

**7.1.1** The Offeror offers to fulfill the requirement in accordance with the Requirement at Annex A.

#### **7.2 Security Requirements**

1. The Contractor/Offeror must, at all times during the performance of the Contract/Standing Offer/Supply Arrangement, hold a valid Designated Organization Screening (DOS) with approved Document Safeguarding at the level of **PROTECTED B**, issued by the Canadian Industrial Security Directorate, Public Works and Government Services Canada.
2. The Contractor/Offeror personnel requiring access to PROTECTED information, assets or work site(s) must EACH hold a valid **RELIABILITY STATUS**, granted or approved by the Canadian Industrial Security Directorate (CISD), Public Works and Government Services Canada (PWGSC).
3. The Contractor MUST NOT utilize its Information Technology systems to electronically process, produce or store PROTECTED information until the CISD/PWGSC has issued written approval. After approval has been granted or approved, these tasks may be performed up to the level of **PROTECTED B**.
4. Subcontracts which contain security requirements are NOT to be awarded without the prior written permission of CISD/PWGSC.
5. The Contractor/Offeror must comply with the provisions of the:
  - a. Security Requirements Check List attached at Annex C;
  - b. *Industrial Security Manual* (Latest Edition).

#### **7.3 Standard Clauses and Conditions**

All clauses and conditions identified in the Standing Offer and resulting contract(s) 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.

##### **7.3.1 General Conditions**

[2005](#) (2017-06-21) General Conditions - Standing Offers - Goods or Services, apply to and form part of the Standing Offer.

##### **7.3.2 Standing Offers Reporting**

The Offeror must compile and maintain records on its provision of goods and services to Canada under contracts resulting from the Standing Offer. This data must include all purchases done by Canada, including those acquired and paid for by Canada acquisition cards.

The Offeror must provide this data in accordance with the reporting requirements detailed in annex entitled Annex E – Standing Offer Reporting Requirements. If some data is not available, the reason must

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be indicated in the report. If no goods or services is provided during a given period, the Offeror must provide a "nil" report.

The data must be submitted on a quarterly basis to the Standing Offer Authority.

The quarterly reporting periods are defined as follows:

- first quarter: April 1 to June 30
- second quarter: July 1 to September 30
- third quarter: October 1 to December 31
- fourth quarter: January 1 to March 31

The data must be submitted to the Standing Offer Authority no later than 15 calendar days after the end of the reporting period.

#### **7.4 Term of Standing Offer**

##### **7.4.1 Period of the Standing Offer**

The period for making call-ups against the Standing Offer is from award date to \_\_\_\_\_. (*Two (2) years following the award date*)

##### **7.4.2 Extension of Standing Offer**

If the Standing Offer is authorized for use beyond the initial period, the Offeror offers to extend its offer for three (3) additional one (1) year periods, under the same conditions and at the rates or prices specified in the Standing Offer, or at the rates or prices calculated in accordance with the formula specified in the Standing Offer.

The Offeror will be advised of the decision to authorize the use of the Standing Offer for an extended period by the Standing Offer Authority (30) days before the expiry date of the Standing Offer. A revision to the Standing Offer will be issued by the Standing Offer Authority.

#### **7.5 Authorities**

##### **7.5.1 Standing Offer Authority**

The Standing Offer Authority is:

Martine Mathurin  
Supply Specialist  
Procurement Directorate  
Public Works and Government Services Canada  
800 de la Gauchetière West  
Place Bonaventure, South-West Portal, suite 7300

Telephone: 514-712-5733  
Facsimile: 514-496-3822  
E-mail address: [martine.mathurin@tpsgc-pwgsc.gc.ca](mailto:martine.mathurin@tpsgc-pwgsc.gc.ca)

The Standing Offer Authority is responsible for the establishment of the Standing Offer, its administration and its revision, if applicable. Upon the making of a call-up, as Contracting Authority, he is responsible for any contractual issues relating to individual call-ups made against the Standing Offer by any Identified User.

### 7.5.2 Project Authority

The Project Authority for the Standing Offer is identified in the call-up against the Standing Offer.

The Project Authority is the representative of the department or agency for whom the Work will be carried out pursuant to a call-up against the Standing Offer and is responsible for all the technical content of the Work under the resulting Contract.

### 7.5.3 Offeror's Representative

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
  
Telephone: \_\_\_\_ - \_\_\_\_ - \_\_\_\_\_  
Facsimile: \_\_\_\_ - \_\_\_\_ - \_\_\_\_\_  
E-mail address: \_\_\_\_\_

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

### 7.7 Identified Users

The Identified User authorized to make call-ups against the Standing Offer is: Canadian Space Agency.

### 7.8 Call-up Procedures

#### 7.8.1 Call-up Limitations and Process

- a) **Multiple Standing Offers:** The Offeror acknowledges that multiple Standing Offers have been issued for this requirement. Call-ups will be allocated among the Offerors in accordance with the selection methodology described below.
- b) **Only Authorized Call-ups to be Accepted:** The Offeror agrees only to perform individual Call-ups made by an authorized representative of Canada pursuant to this Standing Offer that do not exceed the applicable Call-up Limitations, outlined below.
- c) **Division and Consolidation of Requirements:** Multiple Call-ups will not be issued in order to circumvent Call-up limitations as specified below. A single Call-up can consolidate many different required Resource Categories.
- d) **Call-up Process:** The Method of Allocation is based on the lowest cumulative price. Issue of PWGSC-TPSGC 942, "Call-up Against a Standing Offer" to more than one Offeror is permitted under the method of allocation for this Standing Offer. The following call-up process will be followed when Offerors are invited to propose resource(s) under this Standing Offer framework. Clients may issue Call-ups to the Offeror with the lowest cumulative price, calculated following the steps in article 7.8.6.

## 7.8.2 Call-ups

- a) Call-ups will be issued on a per Stream basis.

The Identified User may send their request to all Offerors within the applicable Stream of the Call-up with the requirements clearly set out and require that Offeror provide a response: a) Forty-eight (48) hours from date of request or b) Other (this allows Identified User to specify longer periods). The Identified User should list the level of the resource(s) required including the education, certification and experience required by the requested resource(s) as indicated in Annex "A", Requirement. The Call-up must be directed to the lower cumulative price Offeror who answers the Call-up and provides the proof of the education, experience and certification specified in the Call-up.

The Offeror shall respond by providing a resource(s) that matches the criteria set out in the requirement including the proof of education, certification and experience. If the Offeror cannot respond or has no resource(s) available for that specific requirement, then the Identified User may request a resource(s) from the next lower cumulative price Offeror and so on, until a suitable resource(s) has been identified. Should the lower cumulative price Offeror not provide proof of education, certification or experience of the proposed resource(s) then it will be considered non-responsive and the Identified User may request a resource(s) from the next Offeror and so on, until a suitable resource(s) has been identified.

For efficiency purposes, the Identified User may send their requests to more than one Offeror at once, but the lowest cumulative price Offeror proposing a compliant resource within the time limitation must always be chosen. In no circumstances, however, shall the designated user skip over the lowest cumulative price Offeror during the process (i.e. the designated user is NOT ALLOWED to simply invite firms listed in positions 3 to 4, without inviting firms listed in positions 1 to 2).

- b) The Offeror acknowledges that no costs incurred before the receipt of a signed Call-Up can be charged to this Standing Offer or any Call-ups made against it.

## 7.8.3 Response Requirements

By filling in the appropriate sections of the Request Form, an Offeror will propose resource(s) to the Project Authority via email.

The response must be signed by an authorized representative of the SO Holder. The signature indicates that the Offeror accepts all the terms and conditions of the Contract in their entirety as they appear in the Request Form. Timely receipt and correct direction of responses are the sole responsibility of the Offeror.

The response to the Request Form must clearly identify the following:

- a) a list of proposed resource(s) for the requested Resource Category(ies) and corresponding Level(s) required in a specified stream as specified in the Request Form;
- b) information requested to satisfy the level of security clearance required to carry out the required Services;
- c) resource qualifications specified in the Request Form such as education, certification and experience;
- d) proof of education and /or certification required;
- e) any other information identified by the Client in the Request Form; and
- f) resume(s) setting out the proposed resource(s) qualifications.

Failure to provide a response within the specified time frame of the Request Form will be interpreted as being unable to perform the services.

#### **7.8.4 Assessment of Proposed Resources**

The qualifications and experience of the proposed resource(s) will be assessed against the requirements set out in the Request Form. The Client may request proof of successful completion of formal training, as well as reference information. Canada reserves the right to request references from an Offeror to conduct a reference check to verify the accuracy of the information provided. Should the reference(s) not confirm the required qualifications of the proposed resource(s) to perform the required services, the Offeror will be found non-responsive and Canada reserves the right to go to the next Offeror.

Where the Offeror is requested to provide information regarding qualifications or experience of its proposed resources, Offerors must provide complete details as to where, when, month and year, and how, through which activities/responsibilities, the stated qualifications/ experience were obtained. Experience gained during formal education will not be considered work experience. All requirements for work experience will be obtained in a legitimate work environment as opposed to an educational setting.

Co-op terms are considered work experience provided they are related to the required services. The month(s) of experience listed for a project whose time frame overlaps that of another referenced project, will only be counted once.

Where the Offeror is requested to provide information or a proof about the education of the proposed individual, the individual must hold a post-secondary diploma or certificate from a recognized Canadian university or college, or the equivalent as established by a recognized Canadian academic credentials assessment service\*, if obtained outside Canada.

\*The list of recognized organizations can be found under the Canadian Information Centre for International Credentials website, at the following internet link: <http://www.cicic.ca/indexe.stm>.

Where the Offeror is requested to provide proof of certification of the proposed resource, the Offeror must submit a copy of the certification received or proof that they have completed the certification program.

#### **7.8.5 Offeror Certification – Call-up Response**

By submitting and signing a response to a call-up, the Offeror certifies and warrants each of the following:

- a) Should the Offeror be authorized to provide services under any Request Form, the persons proposed will be available to commence performance of the work within ten (10) working days from the date the Call-up is issued.
- b) If the Offeror has proposed any person in fulfillment of the requirement who is not an employee of the Offeror, the Offeror certifies that it has written permission from such person or the employer of such person to propose the services of such person in relation to the work to be performed in fulfillment of the requirement and to submit such person's résumé to the Contracting Authority. During the assessment of the proposed resource, the Offeror must upon the request of the Contracting Authority provide a copy of such written permission, in relation to any or all non-employees proposed. If the Offeror fails to comply with such a request, its response will be considered non-responsive and receive no further consideration for the Call-up.
- c) If Canada seeks clarification from the Offeror, the Offeror warrants that clarifications will be made available upon request within two (2) working days of a request by Canada or such longer period as is specified in writing by Canada. If the Offeror does not provide any required information within the time limit requested, its response will be considered non-responsive and will receive no further consideration for the Call-up.

By submitting and signing a response to a Request Form, the Offeror acknowledges each of the following:

- a) The Contracting Authority has the right but is not obliged to perform any of the following: seek clarification or verify any or all information provided by the Offeror with respect to the Request Form;
- b) Canada will not delay the issuance of any Call-up to allow Offerors to obtain the required security clearance. It is the responsibility of Offerors to ensure that the information required concerning the security clearance is provided on time. Offerors should indicate in their response if they meet all the security requirements, and the status of their application for security clearance. Offerors are advised to initiate the security clearance process as soon as possible with the Canadian Security Directorate (CISD) of Public Works and Government Services Canada (PWGSC) if they do not currently meet the security requirement specified herein. For any inquiries, Offerors should contact CISD at 1-866-368-4646, or (613) 948-4176 in the National Capital Region. For personnel security clearance obtained under another entity or with a Federal Government Department other than PWGSC, Offerors should contact the CISD security officer as soon as possible to be guided through the process of completing any paperwork required to request a transfer, or a duplicate of the security clearance or a new application for security clearance as appropriate.

#### **7.8.6 Issuance of a Call-up**

If more than one Offeror submitted a valid response to the Request Form a Call-up will be issued to the lowest cumulative price once the assessment of the proposed resource(s) has been completed, should the proposed resource(s) meet the requirements set out in the Request Form. The Contracting Authority will issue the Call-up within the applicable Call-up Limitations using form PWGSC-TPSGC 942.

#### **The lowest cumulative price will be calculated in 2 steps:**

**Step 1:** Multiplying the estimated level of effort that the Identified User provides by the firm's per diem rate of its respective resource category and corresponding level of expertise. This step must be completed for all required categories of personnel to obtain a rate per for each Offeror.

#### **Note:**

When the Identified User can not estimate level of effort for each resource category and level of expertise, a value of one (1) will be used for calculation purposes only.

**Step 2:** Adding together all the rates per Resource Category and corresponding Level of the required resources.

#### **Example 1: (No level of effort stipulated-use 1 day)**

Client Requires: 2 Senior - Structure  
1 Senior - Thermal  
1 Intermediate – Materials

#### **Offeror #1's response:**

2 Senior - Structure @ \$700 per day = \$1,400  
1 Senior - Thermal @ \$600 per day = \$600  
1 Intermediate - Materials @ \$450 per day = \$450  
Total: \$1,400 + \$600 + \$450 = **\$2,450 is the Lowest Cumulative Price**

#### **Offeror #2's response:**

2 Senior - Structure @ \$800 per day = \$1,600  
1 Senior - Thermal @ \$700 per day = \$700

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1 Intermediate - Materials @ \$400 per day = \$400  
Total: \$1,600 + \$700 + \$400 = **\$2,700**

### **Example 2: (client provided level of effort)**

Client Requires:           2 Senior - Structure for 20 days each  
                                  1 Senior - Thermal for 40 days  
                                  1 Intermediate - Materials for 10 days

#### **Offeror #1's response:**

2 Senior - Structure @ \$700 per day @ 10 days= \$14,000  
1 Senior - Thermal @ \$600 per day @ 40 days = \$24,000  
1 Intermediate - Materials @ \$450 per day @ 20 days = \$9,000  
Total: \$14,000 + \$24,000 + \$9,000 = **\$47,000 is the Lowest Cumulative Price**

#### **Offeror #2's response:**

2 Senior - Structure @ \$800 per day @ 10 days= \$16,000  
1 Senior - Thermal @ \$700 per day @ 40 days= \$28,000  
1 Intermediate - Materials @ \$400 per day @ 20 days= \$8,000  
Total: \$16,000 + \$28,000 + \$8,000 = **\$52,000**

If the Offeror with the lowest cumulative price is unable to provide the qualified resource(s) required, the next lowest cumulative price Offeror may be issued the Call-up, provided written confirmation and an explanation of its inability to provide the required resource(s) has been signed and submitted by the lowest cumulative price Offeror and placed on file for audit purposes.

Should more than one Offerors have an identical lowest cumulative price, the Identified User must issue the Call-up to the Offeror offering the lowest rate for the largest number of required individual resources.

## **7.9 Call-up Instrument**

The Work will be authorized or confirmed by the Identified User using the duly completed forms or their equivalents as identified in paragraphs 1 and 2 below, or by using Canada acquisition cards (Visa or MasterCard) for low dollar value requirements.

1. Call-ups must be made by Identified Users' authorized representatives under the Standing Offer and must be for goods or services or combination of goods and services included in the Standing Offer at the prices and in accordance with the terms and conditions specified in the Standing Offer.
2. The following form could be used which are available through [PWGSC Forms Catalogue](#) website:
  - PWGSC-TPSGC 942 Call-up Against a Standing Offer

## **7.10 Limitation of Call-ups**

Individual call-ups against the Standing Offer must not exceed **\$55,000** (Applicable Taxes included).

Any call-up to be issued in excess of that limit must be authorized by the Standing Offer Authority before issuance.

## 7.11 Financial Limitation

The total cost to Canada resulting from call ups against the Standing Offer must not exceed the sum of \$\_\_\_\_\_ (Applicable Taxes excluded) unless otherwise authorized in writing by the Standing Offer Authority. The Offeror must not perform any work or services or supply any articles in response to call ups which would cause the total cost to Canada to exceed the said sum, unless an increase is so authorized.

The Offeror must notify the Standing Offer Authority as to the adequacy of this sum when 75 percent of this amount has been committed, or three (3) months before the expiry date of the Standing Offer, whichever comes first. However, if at any time, the Offeror considers that the said sum may be exceeded, the Offeror must promptly notify the Standing Offer Authority.

## 7.12 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 call up against the Standing Offer, including any annexes;
- b) the articles of the Standing Offer;
- c) the supplemental conditions:  
[4002](#) (2010-08-16), Software Development or Modification Services  
[4006](#) (2010-08-16), Contractor to Own Intellectual Property Rights in Foreground Information
- d) the general conditions [2005](#) (2017-06-21), General Conditions - Standing Offers - Goods or Services
- e) the general conditions [2035](#) (2018-06-21) General Conditions – Higher Complexity - Services apply to and form part of the Contract.
- f) Annex A, Requirement;
- g) Annex B, Basis of Payment;
- h) Annex C, Security Requirements Check List;
- i) the Offeror's offer dated \_\_\_\_\_.

## 7.13 Certifications and Additional Information

### 7.13.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Offeror with its offer or precedent to issuance of the Standing Offer (SO), and the ongoing cooperation in providing additional information are conditions of issuance of the SO and failure to comply will constitute the Offeror in default. Certifications are subject to verification by Canada during the entire period of the SO and of any resulting contract that would continue beyond the period of the SO.

## 7.14 SACC Manual Clauses

SACC Manual Clause [M3020C](#) (2016-01-28) Status and Availability of Resources  
SACC Manual Clause [M3060C](#) (2008-05-12) Canadian Content Certification

## 7.15 Applicable Laws

The Standing Offer and any contract resulting from the Standing Offer must be interpreted and governed, and the relations between the parties determined, by the laws in force in Quebec.

## **B. RESULTING CONTRACT CLAUSES**

The following clauses and conditions apply to and form part of any contract resulting from a call-up against the Standing Offer.

### **7.1 Requirement**

The Contractor must perform the Work described in the call-up against the Standing Offer.

### **7.2 Standard Clauses and Conditions**

#### **7.2.1 General Conditions**

2035 (2016-04-04) General Conditions – Higher Complexity - Services apply to and form part of the Contract.

#### **7.2.2 Supplemental General Conditions**

The following Supplemental General Conditions may apply to any contract resulting from a call-up against the Standing Offer. The applicable Supplemental General Conditions will be identified in the call-up, and may include:

[4002](#) (2010-08-16), Software Development or Modification Services

[4006](#) (2010-08-16), Contractor to Own Intellectual Property Rights in Foreground Information

### **7.3 Term of Contract**

#### **7.3.1 Period of the Contract**

The Work is to be performed during the period of \_\_\_\_\_ (**fill in start date of the work**) to \_\_\_\_\_ (**fill in end date of the work**).

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

### **7.5 Payment**

#### **7.5.1 Basis of Payment**

##### **7.5.1.1 Firm Price Call-up**

In consideration of the Contractor satisfactorily completing all of its obligations under the call-up, the Contractor will be paid a firm price of \$ \_\_\_\_\_ (insert the amount at issuance of call-up). Customs duties are included and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

### 7.5.1.2 Ceiling Price Call-up

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work under the call-up as determined in accordance with the Basis of Payment in Annex B, to a ceiling price of \$ \_\_\_\_\_ (insert amount at issuance of call-up). Customs duties are included and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

The ceiling price is subject to downward adjustment so as not to exceed the actual costs reasonably incurred in the performance of the Work under the Call-up and computed in accordance with the Basis of Payment.

### 7.5.1.3 Call-up subject to a Limitation of Expenditure

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work under the call-up, as determined in accordance with the Basis of Payment in Annex \_\_.

Canada's total liability to the Contractor under the Call-up must not exceed \$ \_\_\_\_\_. Customs duties are included and Goods and Services Tax or Harmonized Sales Tax is extra, if applicable.

No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Work, will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not perform any work or provide any service that would result in Canada's total liability being exceeded before obtaining the written approval of the Contracting Authority. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:

- (a) when it is 75 percent committed, or
- (b) four (4) months before the call-up expiry date, or
- (c) as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work,

whichever comes first.

If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

## 7.5.2 Limitation of Price or Limitation of Expenditure

### 7.5.2.1 Limitation of Price

SACC *Manual* clause [C6000C](#) (2017-08-17) Limitation of Price

### 7.5.2.2 Limitation of Expenditure

1. Canada's total liability to the Contractor under the Contract must not exceed \$ \_\_\_\_\_. Customs duties are included and Applicable Taxes are extra.
2. No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Work, will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not

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perform any work or provide any service that would result in Canada's total liability being exceeded before obtaining the written approval of the Contracting Authority. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:

- a. when it is 75% committed, or
- b. four months before the contract expiry date, or
- c. as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work,

whichever comes first.

3. If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

### **7.5.3 Method of Payment**

#### **7.5.3.1 For Limitation of Expenditure Call-Ups**

##### **a) Single Payment**

Canada will pay the Contractor upon completion and delivery of the Work in accordance with the payment provisions of the Contract if:

- a) an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b) all such documents have been verified by Canada;
- c) the Work delivered has been accepted by Canada.

**-OR-**

##### **b) Progress Payments**

1. Canada will make progress payments in accordance with the payment provisions of the Contract, no more than once a month, for cost incurred in the performance of the Work up to one-hundred (100) percent of the amount claimed and approved by Canada if:

- a) an accurate and complete claim for payment using form PWGSC-TPSGC 1111 (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>) and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b) the amount claimed is in accordance with the Basis of payment;
- c) all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.

2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all work required under the Contract if the Work has been accepted by Canada and a final claim for the payment is submitted.

3. Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the rights to make adjustments to the Contract from time to time

during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

### **7.5.3.2 For Firm Price Call-Ups**

#### **a) Single Payment**

Canada will pay the Contractor upon completion and delivery of the Work in accordance with the payment provisions of the Contract if:

- a) an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b) all such documents have been verified by Canada;
- c) the Work delivered has been accepted by Canada.

**-OR-**

#### **b) Milestone Payments**

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract if:

- a) an accurate and complete claim for payment using PWGSC-TPSGC 1111 (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>) and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- (b) all the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives;
- (c) all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.

### **7.5.4 SACC Manual Clauses**

SACC Manual clause [C0306C](#) (2017-05-25) Precontractual Cost  
SACC Manual clause [A9117C](#) (2017-11-30) T1204 - Direct Request by Customer Department

### **7.5.5 Discretionary Audit**

SACC Manual clause [C0711C](#) (2008-05-12) Time Verification

### **7.5.6 Electronic Payment of Invoices – Call-up**

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Direct Deposit (Domestic and International);
- b. Electronic Data Interchange (EDI);

## 7.6 Invoicing Instructions

1. The Contractor must submit a claim for payment using form PWGSC-TPSGC 1111 (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf>).

Each claim must show:

- a. all information required on form PWGSC-TPSGC 1111;
- b. all applicable information detailed under the section entitled "Invoice Submission" of the general conditions;
- c. a list of all expenses;
- d. the description and value of the milestone claimed as detailed in the Contract, if applicable.

Each claim must be supported by:  
(for call-ups with a limitation of expenditure)

- a. a copy of time sheets to support the time claimed;
- b. a copy of the invoices, receipts, vouchers for all direct expenses, and all travel and living expenses;
- c. a copy of the monthly progress report.

2. Goods and Services Tax (GST) or Harmonized Sales Tax (HST), as applicable, must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no GST/HST payable as it was claimed and payable under the previous claims for progress payments.

3. The Contractor must prepare and certify one original and two (2) copies of the claim on form PWGSC-TPSGC 1111, and forward:

- a) the **original and one (1) copy** to the Canadian Space Agency at the address shown on page 1 of the Contract under "**Invoices**" (Financial Services Section) for appropriate certification by the Project Authority identified herein after inspection and acceptance of the Work takes place; and
- b) **one (1) copy of the original progress claim** (including all back-up documentation) to the Contracting Authority specified herein.

4. The CSA's Financial Services Section will then forward the original and one (1) copy of the claim to the Contracting Authority for certification and onward submission to the Payment Office for the remaining certification and payment action.

5. The Contractor must not submit claims until all work identified in the claim is completed.

## 7.7 Insurance

SACC Manual clause [G1005C](#) (2016-01-28) Insurance

## 7.8 Access to Facilities and Equipment

SACC Manual clause [B9028C](#) (2007-05-25) Access to Facilities and Equipment

## 7.9 Government Site Regulations

SACC Manual clause [A9068C](#) (2010-01-11) Government Site Regulations

## 7.10 Identification Badge

SACC Manual clause [A9065C](#) (2006-06-16) Identification Badge

## 7.11 Directive on Communications with the Media

### 1. Definitions

“Communication Activity(ies)” includes: public information and recognition, the planning, development, production and delivery or publication, and any other type or form of dissemination of marketing, promotional or information activities, initiatives, reports, summaries or other products or materials, whether in print or electronic format that pertain to the present agreement, all communications, public relations events, press releases, social media releases, or any other communication directed to the general public in whatever form or media it may be in, including but without limiting the generality of the preceding done through any company web site.

### 2. Communication Activities Format

The Contractor must coordinate early on with the Canadian Space Agency (CSA) all Communication Activities that pertain to the present contract.

Subject to review and approval by the CSA, the Contractor may mention and/or indicate visually, without any additional costs to the CSA, the CSA's participation in the contract through at least one of the following methods at the complete discretion of the CSA:

- a. By clearly and prominently labelling publications, advertising and promotional products and any form of material and products sponsored or funded by the CSA, as follows, in the appropriate official language:

“This program/project/activity is undertaken with the financial support of the Canadian Space Agency.”

“Ce programme/projet/activité est réalisé(e) avec l'appui financier de l'Agence spatiale canadienne.”

- b. By affixing CSA's corporate logo on print or electronic publications, advertising and promotional products and on any other form of material, products or displays sponsored or funded by the Canadian Space Agency.

Any and all mention or reference to the Canadian Space Agency in addition to those specified above in (a) and (b) must be specifically accepted by the CSA prior to publication.

The Contractor must obtain and use a high resolution printed or electronic copy of the CSA's corporate identity logo and seek advice on its application, by contacting the project manager.

### 3. Communication Activity Coordination Process

The contractor must coordinate with the CSA's Directorate of Communications and Public Affairs all Communication Activities pertaining to the present contract. To this end, the contractor must:

Solicitation No. - N° de l'invitation  
9F052-160448/B  
Client Ref. No. - N° de réf. du client  
9F052-160448

Amd. No. - N° de la modif.  
File No. - N° du dossier  
mtb-7-40004

Buyer ID - Id de l'acheteur  
mtb770  
CCC No./N° CCC - FMS No./N° VME

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- a. As soon as the Contractor intends to organize a Communication Activity, send a Notice to the CSA's Directorate of Communications and Public Affairs. The Communications Notice must include a complete description of the proposed Communication Activity. The Notice must be in writing in accordance with the clause Notice included in the general conditions applicable to the contract. The Communications Notice must include a copy or example of the proposed Communication Activity.
- b. The contractor must provide to the CSA any and all additional document in any appropriate format, example or information that the CSA deems necessary, at its entire discretion to correctly and efficiently coordinate the proposed Communication Activity. The Contractor agrees to only proceed with the proposed Communication Activity after receiving a written confirmation of coordination of the Communication Activity from the CSA's Directorate of Communications and Public Affairs.
- c. The Contractor must receive beforehand the authorization, approval and written confirmation from the CSA's Directorate of Communications and Public Affairs before organizing, proceeding or hosting a communication activity.

## **ANNEX A**

### **REQUIREMENT**

#### **TITLE**

Expert Consulting Services (engineering) for Space Sciences and Technologies

#### **OBJECTIVE**

The CSA has a requirement on an “as and when requested basis” for expert advice and assistance at the technical, scientific, program and commercialization levels in order to manage its activities.

#### **BACKGROUND**

The CSA conducts its activities, research, development, and commercialization in a range of areas related to space, either in-house, or under contract or cooperative agreements with various partners.

In managing its activities, there are occasions when additional services to the Agency are required. These occasions arise when a temporary workload situation demands resources in addition to those available, and when specialized skills needed for a particular task lie outside the Agency's resources.

#### **TASKS**

Appendix 1 to Annex “A” - “Resource Categories and Associated Tasks” details the high-level tasks to be performed by the particular Resource Category(ies). The specific tasks will be specified in the Call-up.

#### **MINIMUM RESOURCE REQUIREMENTS**

All proposed resources must meet the minimum requirements of the applicable Category(ies) of Personnel as per Appendix 2 to Annex A “Minimum Resource Requirements”.

#### **TRAVEL**

It is anticipated that the majority of technical and analytical work will be undertaken and completed at the Offeror's facilities.

However, from time to time, additional trips to the CSA will be required for meetings and reports or services of the Offeror will be required for extended periods of time at locations other than the CSA facilities. These occasions will be specified in each individual call-up, and the Offeror's response shall specify separately T&L expenses, not to exceed Treasury Board guidelines.

## **CONSTRAINTS**

### **LANGUAGE**

The international language of aerospace is English; therefore proficiency in English is a requirement for all proposed personnel.

Working knowledge of French, Chinese, Russian, German, or Japanese may be required in certain specific tasks. These additional language skills may be used as a minimum requirement in any particular Call-up.

### **MEETINGS**

Occasional meetings may be required, as indicated in the call-up.

### **DELIVERABLES**

The deliverable(s) required from the Offeror will be specified in each call-up for service. The deliverables may include reports, results of data analyses, models and instruments, cost-benefit and other socio-economic studies, mission and/or project cost-to-completion estimates, models and instruments, etc.

For any of the above tasks and/or deliverables, there may be associated work requiring attendance at meetings, preparation of minutes, and progress reports. The Offeror may be required to spend extended periods on site at CSA or some other designated facility.

At the end of a call-up, all data, models, electronic files and documentation created by, or provided to the Offeror for the performance of the call-ups shall be returned to the CSA.

The specific requirements, extent and location of the task, and required deliverable(s) will be specified in the Call-up.

## APPENDIX 1 TO ANNEX A - RESOURCE CATEGORIES AND ASSOCIATED TASKS

Stream	Resource Category	Tasks	Level(s)
<b>1) Space Systems Engineering</b>	1A) Space Systems Definition, Development, and Review	1) Prepare technical documentation for space projects, such as Systems Engineering Management Plan (SEMP), Statement of Work (SOW), Mission/User Requirements Document (MRD/URD), System Requirements Document (SRD), Assembly Integration and Test (AI&T) Plans and Procedures, Interface Control Documents (ICDs)	Senior and Intermediate
		2) Perform various systems engineering tasks during Space System Design, Analysis, Manufacturing, Integration, Test & Verification, Launch, Commissioning and Operations; including engineering Cost Estimation.	
		3) Conduct or participate in Technical Reviews, such as Preliminary Design Review (PDR), Critical Design Review (CDR), Test Readiness Review (TRR), of space systems,	
		4) Participate in external expert review panels for space projects at major technical reviews for missions led by CSA or by international partners.	
<b>2) SATCOM and RF Engineering</b>	1B) Space Systems Assembly, Integration & Test 1C) Space Systems Engineering Policies, Procedures & Practices 1D) Designer/Drafter Technician 2A) SATCOM & Navigation 2B) RF & Microwave Subsystems 2C) Antennas 2D) Interference analysis and spectrum management	1) Work on the Assembly Integration and Test (AI&T) of space subsystems or systems including implementing AI&T plans and procedures, reporting test results, and resolving related technical issues.	Technician
		1) Review, update or prepare CSA Systems Engineering Policies, Procedures and Practices.	
		1) Support systems design and produce technical system drawings or 3D models	
		2) Support technical system drawing reviews and provide recommendations and redline drawings/3D models	
<b>2) SATCOM and RF Engineering</b>	2A) SATCOM & Navigation 2B) RF & Microwave Subsystems 2C) Antennas 2D) Interference analysis and spectrum management	1) Perform various engineering tasks during Design, Analysis, Manufacturing, Integration, Test & Verification, Launch, Commissioning and Operations of Satellite Communications (SATCOM) and/or Global Navigation Space System (GNSS) systems	Senior and Intermediate
		1) Design, analyse and test RF sub-systems and circuits	
		1) Design, analyse and test antenna sub-systems.	
		1) Analyze interferences between different systems to support radio broadcasting license processes	
		2) Support the preparation of license applications	

Stream	Resource Category	Tasks	Level(s)	
<b>3) Mechanical/ Thermal Engineering</b>	3A) Structure	<ol style="list-style-type: none"> <li>1) Design, analyse and test of spacecraft structural configuration;</li> <li>2) Design, evaluate and recommend space structures and mechanisms, including metallic and composite structures, light weight and deployable structures, spacecraft separation and deployment mechanisms;</li> <li>3) Develop finite element models of space structures, and perform loads analysis, structural static and dynamic analyses of space structures;</li> <li>4) Develop qualification plan and design vibration tests to qualify hardware components, subsystems, and systems for flight</li> </ol>	Senior and Intermediate	
	3B) Materials	<ol style="list-style-type: none"> <li>1) Perform design, evaluation and testing of potential materials for space applications. These include conventional materials used in space, as well as new materials and coatings such as metal alloys, metal and polymeric composites, nano-materials, smart and nano-coatings.</li> </ol>		
	3C) Thermal	<ol style="list-style-type: none"> <li>1) Perform thermal design, analysis and testing of space-based systems, sub-systems and equipment.</li> </ol>		
	4A) Software Development	<ol style="list-style-type: none"> <li>1) Develop software code and applications for real-time, distributed and/or mission critical environments for on-board flight software and satellite ground control systems.</li> </ol>	Senior and Intermediate	
	4B) Spacecraft Software Simulation	<ol style="list-style-type: none"> <li>1) Develop software simulators</li> </ol>		
	5A) Digital Design	<ol style="list-style-type: none"> <li>1) Perform digital design using microprocessors , microcontrollers, FPGAs and DSPs for space applications;</li> <li>2) Perform digital design of computer or controller boards;</li> <li>3) Develop digital boards for space applications</li> </ol>		
<b>5) Electronics &amp; Optics Engineering</b>	5B) Power Electronics	<ol style="list-style-type: none"> <li>1) Design, analyse and test of power sub-systems and circuits for space applications.</li> </ol>		
	5C) Control Electronics	<ol style="list-style-type: none"> <li>1) Design, analyse and test of analog, data acquisition and control sub-systems and circuits for space application.</li> </ol>		
	5D) EMC-EMI-ESD	<ol style="list-style-type: none"> <li>1) Perform various engineering task in the field of EMC/EMI, ESD and grounding for spacecraft and/or space applications;</li> </ol>	Senior and Intermediate	
	5E) Optics/Electro Optics/Laser	<ol style="list-style-type: none"> <li>1) Design, evaluate, test and characterize optical systems, including optical detection components for imaging and non-imaging space applications including laser sources for visible and near-IR projection and detection;</li> <li>2) Work with optics including one or several of: geometrical and physical optics, laser technology, opto- electronics, opto-mechanical design, non-linear optics, physical optics, optical materials, holography, image processing, optical scanning methods, optical calibration, and spectrometry.</li> </ol>		
	5F) Electronics Technician	1)	Assemble at flight level (NASA standards STD 8739.3 and STD 8739.2 or equivalent) of electronic printed circuit board, electronic units and subsystems.	
		2)	Assemble at flight level (NASA Standards STD 8739.4 or equivalent) of cables and harnesses.	Technician

Stream	Resource Category	Tasks	Level(s)
<p><b>6) Program Management</b></p>	<p>6A) Transfer Payment Program Management Support</p>	<p>1) Provide advice and assistance in planning, implementing and administering space science and technology transfer payment programs (Grants and Contribution). Such advice and assistance includes but is not limited to:</p> <ul style="list-style-type: none"> <li>I. Planning documents such as budgets and schedules;</li> <li>II. Preparing documentation in support of publication or Announcements of Opportunities (AOs);</li> <li>III. Coordinating proposal solicitation and the corresponding evaluation process;</li> <li>IV. Funding (grant or contribution) implementation, monitoring, and closing.</li> </ul> <p>Develop, write and implement frameworks and documents such as but is not limited to: Communication Plan, Recipient or Project Risk Assessment Framework, Audit Framework, Delivery and Program Risk Framework, G&amp;C processes, policies, procedures, guidelines, operational templates and checklists.</p> <p>Design and deliver G&amp;C training courses.</p>	<p>Senior and Intermediate</p>
	<p>6B) Socio Economic Studies on technology transfer and commercialization (TTC)</p>	<ul style="list-style-type: none"> <li>1) Conduct socio-economic studies, trend analysis or impact analysis on one or more aspects of technology transfer and commercialization (TTC), from terrestrial technologies to space systems (SPIN-IN), or space technologies to terrestrial sectors;</li> <li>2) Do business studies.</li> <li>3) Offer consulting or soliciting services to find potential receivers of technologies and marketing.</li> <li>4) Undertake business diagnostics on technology transfer and commercialization.</li> <li>5) Study or offer consulting services for the establishment of innovation centers or marketing assistance.</li> </ul>	<p>Senior and Intermediate</p>
	<p>6C) Technology Requirements and Planning</p>	<ul style="list-style-type: none"> <li>1) Provide advice and assistance in planning, developing space technology and science roadmaps, including related documentation</li> <li>2) Conduct independent Technology Readiness and Risk Assessment (TRRA)</li> <li>3) Conduct space technology and science surveys with external organizations</li> <li>4) Perform synthesis and presentations of complex technical and scientific information in concise fashion (graphically, verbally)</li> <li>5) Act as facilitator in consultative processes (e.g., workshops) in the context of science technology planning and prioritization</li> </ul>	<p>Intermediate</p>

Stream	Resource Category	Tasks	Level(s)
	6D) Project Management Support	<ol style="list-style-type: none"> <li>1. Provide advice and assistance for the planning and implementation of space projects. Such advice and assistance can include:               <ol style="list-style-type: none"> <li>i. Implementation and planning of projects and in the preparation of budgets, deadlines, cost-benefit analysis and identification of stakeholders;</li> <li>ii. preparation of documentation in support of publication of application for proposal;</li> <li>iii. coordination of calls for proposals and processes related assessment;</li> </ol> </li> <li>2. Prepare, write and implement various documents, for example: Project Management Plan, Project Approval Documents, Request for Proposal and Request for Information Documents, Development of Cost-Benefit Analysis, communication plans, project risk assessment frameworks, processes, policies, procedures and guidelines as well as the development of project reporting and communication template.</li> </ol>	Senior and Intermediate
<b>7) Mission Management</b>	7A) Expert in Earth Observation (EO) applications and utilisation Support	<ol style="list-style-type: none"> <li>1) Provide technical advice and assistance in planning, implementing and administering Earth Observation applications and utilisation activities, projects or missions. Such advice and assistance includes but is not limited to:               <ol style="list-style-type: none"> <li>i. Preparing documents for proposal solicitation (RFPs and AOs) and the corresponding evaluation process;</li> <li>ii. EO application project implementation, monitoring, reviews and closing.</li> <li>iii. Coordinating work with the Canadian EO communities;</li> <li>iv. Analyze EO missions and EO application projects outcomes;</li> <li>v. Produce EO Utilisation requirements documents in support of missions and projects;</li> <li>vi. Analyze and make recommendations related to research work by the Canadian EO community.</li> <li>vii. Review technical documents to ensure that the EO utilisations objectives will be met with proposed application projects/missions proposals</li> </ol> </li> </ol>	Senior and Intermediate
	7B) Expert Scientific Support	<ol style="list-style-type: none"> <li>1) Coordinating work with the Canadian space science scientific or medical communities;</li> <li>2) Analyze space science mission/project outcomes;</li> <li>3) Produce space science requirements documents in support of space missions and projects;</li> <li>4) Analyze and make recommendations related to research work by the Canadian scientific community related to space sciences;</li> <li>5) Review technical documents to ensure that the science objectives will be met with proposed space instrument/mission design;</li> <li>6) Provide support to CSA in the operations of Space Science/Technology Programs instruments and experiments;</li> <li>7) Coordination of Canadian observing time on international space missions.</li> </ol>	Senior and Intermediate

## APPENDIX 2 TO ANNEX A - MINIMUM RESOURCE REQUIREMENTS

### Stream 1) Space System Engineering & Engineering Management

Resource Category	Level	Minimum Requirements
1A) Space Systems Definition, and Development, and Review	Senior	<ol style="list-style-type: none"> <li>1) Must have at least twelve (12) years experience performing various aspects of Space System Design, Analysis, Manufacturing, Integration, Test and Verification, Launch, Commissioning, Operations and conducting or participating in Technical Reviews such as Preliminary Design Review (PDR), Critical Design Review (CDR), Test Readiness Review (TRR), etc. of space systems;</li> <li>2) Must hold a Bachelor's Degree in Mechanical, Electrical, Aerospace or Systems Engineering or be a member or be eligible to become a member of the Professional Engineering Association.</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least six (6) years experience performing various aspects of Space System Design, Analysis, Manufacturing, Integration, Test and Verification, Launch, Commissioning, Operations and conducting or participating in Technical Reviews such as Preliminary Design Review (PDR), Critical Design Review (CDR), Test Readiness Review (TRR), etc. of space systems;</li> <li>2) Must hold a Bachelor's Degree in Mechanical, Electrical, Aerospace or Systems Engineering or be a member or be eligible to become a member of the Professional Engineering Association.</li> </ol>
1B) Space Systems Assembly, Integration and Test	Senior	<ol style="list-style-type: none"> <li>1) Must have at least twelve (12) years experience in Assembly Integration and Test (AI&amp;T) of space subsystems or systems, including implementing AI&amp;T plans and procedures, reporting test results, and resolving related technical issues;</li> <li>2) Must hold a Bachelor's Degree in Mechanical, Electrical, Aerospace or Systems Engineering or be a member or be eligible to become a member of the Professional Engineering Association.</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least six (6) years experience in Assembly Integration and Test (AI&amp;T) of space subsystems or systems, including implementing AI&amp;T plans and procedures, reporting test results, and resolving related technical issues;</li> <li>2) Must hold a Bachelor's Degree in Mechanical, Electrical, Aerospace or Systems Engineering or be a member or be eligible to become a member of the Professional Engineering Association.</li> </ol>
1C) Space Systems Engineering Policies, Procedures and Practices	Senior	<ol style="list-style-type: none"> <li>1) Must have at least twelve (12) years experience in utilization or preparation of formal systems engineering policies, procedures and practices;</li> <li>2) Must hold a Bachelor's Degree in Mechanical, Electrical, Aerospace or Systems Engineering or be a member or be eligible to become a member of the Professional Engineering Association.</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least six (6) years experience in utilization or preparation of formal systems engineering policies, procedures and practices;</li> <li>2) Must hold a Bachelor's Degree in Mechanical, Electrical, Aerospace or Systems Engineering or be a member or be eligible to become a member of the Professional Engineering Association.</li> </ol>
1D) Designer/Drafter Technician	Technician	<ol style="list-style-type: none"> <li>1) Must have at least 1 years of experience designing technical drawings and 3D models</li> <li>2) Must have a college diploma in a relevant technical field</li> </ol>

## **Stream 2) Communications Engineering**

<b>Resource Category</b>	<b>Level</b>	<b>Minimum Requirements</b>
2A) SATCOM & Navigation	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in system design in SATCOM and/or GNSS systems;</li> <li>2) Must have at least four (4) years experience with General Communications Systems Software such as Signal Processing or Link Analysis;</li> <li>3) Must hold a Bachelor's Degree in Electrical Engineering, Physics or Engineering Physics.</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience in system design in SATCOM and/or GNSS systems;</li> <li>2) Must have at least two (2) years experience with General Communications Systems software such as Signal Processing or Link analysis;</li> <li>3) Must hold a Bachelor's Degree in Electrical Engineering, Physics or Engineering Physics.</li> </ol>
	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience designing, analyzing and measuring RF subsystems and circuits; Must have at least four (4) years experience using Advanced Design System (ADS) OR AWR Microwave Office OR ANSOFT Non-linear Design Suite;</li> <li>2) Must hold a Bachelor's Degree in Electrical Engineering or Engineering Physics.</li> </ol>
2B) RF and Microwave Subsystems	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience designing, analyzing and measuring RF subsystems and circuits;</li> <li>2) Must have at least two (2) years experience using Advanced Design System (ADS) OR AWR Microwave Office OR ANSOFT Non-linear Design Suite;</li> <li>3) Must hold a Bachelor's Degree in Electrical Engineering or Engineering Physics.</li> </ol>
	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience designing, analyzing and measuring antenna subsystems;</li> <li>2) Must have at least four (4) years experience using Momentum OR Ensemble OR Numerical Electromagnetic Code (NEC) OR WIPL</li> <li>3) Must hold a Bachelor's Degree in Electrical Engineering or Engineering Physics</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience designing, analyzing and measuring antenna subsystems;</li> <li>2) Must have at least two (2) years experience using Momentum OR Ensemble OR Numerical Electromagnetic Code (NEC) OR WIPL</li> <li>3) Must hold a Bachelor's Degree in Electrical Engineering or Engineering Physics</li> </ol>
2D) Interference analysis and spectrum management	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in analysis of interference between Communication systems</li> <li>2) Must have at least four (4) years experience in preparation of filing for the International Telecommunication Union (ITU)</li> <li>3) Must hold a Bachelor's Degree in Electrical Engineering or Engineering Physics</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience in analysis of interference between Communication systems</li> <li>2) Must have at least two (2) years experience in preparation of filing for the International Telecommunication Union (ITU)</li> <li>3) Must hold a Bachelor's Degree in Electrical Engineering or Engineering Physics</li> </ol>

### **Stream 3) Mechanical & Thermal Engineering**

<b>Resource Category</b>	<b>Level</b>	<b>Minimum Requirements</b>
3A) Structure	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in each of the following:               <ol style="list-style-type: none"> <li>i. spacecraft structural configuration, design, analysis and testing;</li> <li>ii. designing, evaluating and recommending space structure, lightweight and deployable structures, spacecraft separation and deployment mechanisms;</li> <li>iii. developing finite element models of space structures and performing loads analysis, structural static and dynamic analyses of space structures;</li> <li>iv. developing qualification plan and design vibration tests to qualify hardware components, subsystems and systems for flight;</li> </ol> </li> <li>2) Must have at least two (2) years experience using NASTRA/PATRAN AND ANSYS AND Autocad or SolidEdge.</li> <li>3) Must hold a Bachelor's Degree in Mechanical, Electrical, Aerospace or Systems Engineering</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience in each of the following:               <ol style="list-style-type: none"> <li>i. spacecraft structural configuration, design, analysis and testing;</li> <li>ii. designing, evaluating and recommending space structure, lightweight and deployable structures, spacecraft separation and deployment mechanisms;</li> <li>iii. developing finite element models of space structures and performing loads analysis, structural static and dynamic analyses of space structures;</li> <li>iv. developing qualification plan and design vibration tests to qualify hardware components, subsystems and systems for flight;</li> </ol> </li> <li>2) Must have at least two (2) years experience using NASTRA/PATRAN AND ANSYS AND Autocad or SolidEdge. Optional software are: C or Fortran and Abaqus;</li> <li>3) Must hold a Bachelor's Degree in Mechanical, Electrical, Aerospace or Systems Engineering</li> </ol>
	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in space-based materials, including design, evaluation, compatibility and testing of potential materials for space applications. These include conventional materials used in space, as well as new materials and coatings such as metal alloys, metal and polymeric composites, nano-materials, smart and nano-coatings. Material qualification tests and development of test plans for space-based hardware.</li> <li>2) Must have at least six (6) years experience with space material data bases;</li> <li>3) Must hold a Bachelor's Degree in Mechanical or Aerospace Engineering</li> </ol>
3B) Materials	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience in space-based materials, including design, evaluation, compatibility and testing of potential materials for space applications. These include conventional materials used in space, as well as new materials and coatings such as metal alloys, metal and polymeric composites, nano-materials, smart and nano-coatings. Material qualification tests and development of test plans for space-based hardware.</li> <li>2) Must have at least two (2) years experience with space material data bases;</li> <li>3) Must hold a Bachelor's Degree in Mechanical or Aerospace Engineering.</li> </ol>
	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in thermal design, analysis and testing of space-based systems, subsystems and equipment;</li> <li>2) Must have at least six (6) years experience with IDEAS-TMG or equivalent (SINDA, SINDA/FLUIT, ESATAN, ThermXL).</li> <li>3) Must have a Bachelor's Degree in Mechanical, Aerospace or Systems Engineering;</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience in thermal design, analysis and testing of space-based systems, subsystems and equipment;</li> <li>2) Must have at least two (2) years experience with IDEAS-TMG or equivalent (SINDA, SINDA/FLUIT, ESATAN, ThermXL).</li> <li>3) Must hold a Bachelor's Degree in Mechanical, Aerospace or Systems Engineering;</li> </ol>
3C) Thermal	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in thermal design, analysis and testing of space-based systems, subsystems and equipment;</li> <li>2) Must have at least six (6) years experience with IDEAS-TMG or equivalent (SINDA, SINDA/FLUIT, ESATAN, ThermXL).</li> <li>3) Must have a Bachelor's Degree in Mechanical, Aerospace or Systems Engineering;</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience in thermal design, analysis and testing of space-based systems, subsystems and equipment;</li> <li>2) Must have at least two (2) years experience with IDEAS-TMG or equivalent (SINDA, SINDA/FLUIT, ESATAN, ThermXL).</li> <li>3) Must hold a Bachelor's Degree in Mechanical, Aerospace or Systems Engineering;</li> </ol>
	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in thermal design, analysis and testing of space-based systems, subsystems and equipment;</li> <li>2) Must have at least six (6) years experience with IDEAS-TMG or equivalent (SINDA, SINDA/FLUIT, ESATAN, ThermXL).</li> <li>3) Must have a Bachelor's Degree in Mechanical, Aerospace or Systems Engineering;</li> </ol>

Solicitation No. - N° de l'invitation  
9F052-160448/B  
Client Ref. No. - N° de réf. du client  
9F052-160448

Amd. No. - N° de la modif.  
mtb770  
File No. - N° du dossier  
mtb-7-40004

Buyer ID - Id de l'acheteur  
mtb770  
CCC No./N° CCC - FMS No./N° VME

### Stream 4) Software Engineering

Resource Category	Level	Minimum Requirements
4A) Software Development	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience designing and implementing mission critical software for spacecraft on-board systems, ground control support equipments, and/or avionics, using recognized software development standards;</li> <li>2) Must have at least five (5) years experience with modern software engineering standards and methodologies such as ISO, ECSS, CMMi, or NASA Standards;</li> <li>3) Must have at least three (3) years experience supporting writing requirements for space mission software;</li> <li>4) Must have a Bachelor's Degree in Computer Science or Electrical Engineering</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience designing and implementing mission critical software for spacecraft on-board , ground control support equipment, and/or avionics;</li> <li>2) Must have at least three (3) years experience with modern software engineering standards and methodologies such as ISO, ECSS, CMMi, or NASA Standards;</li> <li>3) Must have a Bachelor's Degree in Computer Science or Electrical Engineering</li> </ol>
4B) Spacecraft Software Simulation	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience developing spacecraft or spacecraft subsystems high fidelity simulators using software tools such as Matlab/Simulink, DYMOLA, SIMSAT, EUROSIM, ViaSim, or STK;</li> <li>2) Must have a Bachelor's Degree in Computer Science or Electrical Engineering</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience developing spacecraft or spacecraft subsystems simulators using software tools such as Matlab/Simulink, DYMOLA, SIMSAT, EUROSIM, ViaSim, or STK;</li> <li>2) Must have a Bachelor's Degree in Computer Science or Electrical Engineering</li> </ol>

### **Stream 5) Electronics, RADAR & Optics Engineering**

<b>Resource Category</b>	<b>Level</b>	<b>Minimum Requirements</b>
5A) Digital Electronics Design	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in each of the following:               <ol style="list-style-type: none"> <li>i. design with microprocessors, microcontrollers, FPGAs and DSPs;</li> <li>ii. digital design of computer or controller boards;</li> <li>iii. developing digital boards for space applications, using related space standards;</li> </ol> </li> <li>2) Must have at least four(4) years experience with Cadence/Orcad/Pspice or equivalent. Optional software are Matlab and LabView;</li> <li>3) Must have a Bachelor's Degree in Electrical Engineering</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience in the following:               <ol style="list-style-type: none"> <li>i. design with microprocessors, microcontrollers (. FPGAs and DSPs;</li> <li>ii. digital design of computer or controller boards;</li> <li>iii. developing digital boards for space applications, using related space standards;</li> </ol> </li> <li>2) Must have at least two(2) years experience with Cadence/Orcad/Pspice or equivalent. Optional software are Matlab and LabView;</li> <li>3) Must have a Bachelor's Degree in Electrical Engineering</li> </ol>
	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in the design, analysis and test of power subsystems and circuits for space applications, using related space standards;</li> <li>2) Must have at least four (4) years experience with Cadence/Orcad/Pspice or equivalent. Optional software are Matlab or LabView;</li> <li>3) Must have a Bachelor's Degree in Electrical Engineering</li> </ol>
5B) Power Electronics	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience in the design, analysis and test of power subsystems and circuits for space applications, using related space standards;</li> <li>2) Must have at least two (2) years experience with Cadence/Orcad/Pspice or equivalent. Optional software are Matlab or LabView;</li> <li>3) Must have a Bachelor's Degree in Electrical Engineering</li> </ol>
	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in the design, analysis and test of analog, data acquisition and control subsystems and circuits for space applications, using related space standards;</li> <li>2) Must have at least four (4) years experience with Cadence/Orcad/Pspice or equivalent. Optional software are Matlab or LabView;</li> <li>3) Must have a Bachelor's Degree in Electrical Engineering</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience in the design, analysis and test of analog, data acquisition and control subsystems and circuits for space applications, using related space standards;</li> <li>2) Must have at least two (2) years experience with Cadence/Orcad/Pspice or equivalent. Optional software are Matlab or LabView;</li> <li>3) Must have a Bachelor's Degree in Electrical Engineering</li> </ol>
5C) Control Electronics	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in the design, analysis and test of analog, data acquisition and control subsystems and circuits for space applications, using related space standards;</li> <li>2) Must have at least four (4) years experience with Cadence/Orcad/Pspice or equivalent. Optional software are Matlab or LabView;</li> <li>3) Must have a Bachelor's Degree in Electrical Engineering</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience in the design, analysis and test of analog, data acquisition and control subsystems and circuits for space applications, using related space standards;</li> <li>2) Must have at least two (2) years experience with Cadence/Orcad/Pspice or equivalent. Optional software are Matlab or LabView;</li> <li>3) Must have a Bachelor's Degree in Electrical Engineering</li> </ol>
	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in Electromagnetic Compatibility (EMC), Electromagnetic Interference (EMI), Electrostatic Discharge (ESD) and grounding expertise for spacecraft and space applications, using related space standards;</li> <li>2) Must have at least four (4) years experience with Matlab or Mathcad. Optional software is LabView;</li> <li>3) Must have a Bachelor's Degree in Electrical Engineering</li> </ol>
5D) EMC-EMI- ESD	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience in EMC/EMI, ESD and grounding expertise for spacecraft and space applications, using related space standards;</li> <li>2) Must have at least two (2) years experience with Matlab OR MathCad. Optional software is: LabView;</li> <li>3) Must have a Bachelor's Degree in Electrical Engineering</li> </ol>

Resource Category		Level	Minimum Requirements
5E) Optics/Electro - Optics/Laser	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience in the design, evaluation, testing and characterization of optical systems, including optical detection components for imaging and non-imaging space applications including laser sources for visible and near-IR projection and detection;</li> <li>2) Must have at least ten (10) years experience in optics including at least one of the following fields:                             <ol style="list-style-type: none"> <li>i. géométriques and physical optics</li> <li>ii. laser technology</li> <li>iii. opto-electronics</li> <li>iv. opto-mechanical design</li> <li>v. non-linear optics</li> <li>vi. physical optics</li> <li>vii. optical materials</li> <li>viii. holography</li> <li>ix. image processing</li> <li>x. optical scanning methods</li> <li>xi. optical calibration; and</li> <li>xii. spectrometry.</li> </ol> </li> <li>3) Must have at least four (4) years experience using Code V, Zemax or other equivalent professional optical design software.</li> <li>4) Must have a Bachelor's Degree in Electrical Engineering, Physics or Engineering Physics</li> </ol>	
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience in the design, evaluation, testing and characterization of optical systems, including optical detection components for imaging and non-imaging space applications including laser sources for visible and near-IR projection and detection;</li> <li>2) Must have at least five (5) years experience in optics including at least one of the following fields:                             <ol style="list-style-type: none"> <li>i. geometrical and physical optics</li> <li>ii. laser technology</li> <li>iii. opto-electronics</li> <li>iv. opto-mechanical design</li> <li>v. non-linear optics</li> <li>vi. physical optics</li> <li>vii. optical materials</li> <li>viii. holography</li> <li>ix. image processing</li> <li>x. optical scanning methods</li> <li>xi. optical calibration; and</li> <li>xii. spectrometry.</li> </ol> </li> <li>3) Must have at least two (2) years experience using Code V OR Zemax OR Other professional optical design software;</li> <li>4) Must have a Bachelor's Degree in Electrical Engineering or Engineering physics.</li> </ol>	
5F) Electronics Technician	Technician	<ol style="list-style-type: none"> <li>1) Must have at least one (1) year experience in the following:                             <ol style="list-style-type: none"> <li>i. assembly at flight level (NASA Standard STD 8739.3 and STD 8739.2) of electronic printed circuit boards, electronic units and subsystems;</li> <li>ii. assembly at flight level (NASA Standard STD 8739.4 or equivalent) of cables and harnesses;</li> </ol> </li> <li>2) Must have a college's degree in a relevant technical field</li> </ol>	

### **Stream 6) Program & Project Management**

<b>Resource Category</b>	<b>Level</b>	<b>Minimum Requirements</b>
6A) Transfer Payment Program Management Support	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience providing advice and assistance in planning, implementing and administering space science and technology transfer payment programs (Grants and Contribution). Such advice and assistance includes but is not limited to:               <ol style="list-style-type: none"> <li>i. Planning documents such as budgets and schedules;</li> <li>ii. Preparing documentation in support of publication of Announcements of Opportunity (AOs);</li> <li>iii. Coordinating proposals' solicitation (AOs) and the corresponding evaluation process;</li> <li>iv. Funding Agreement (grant or contribution) implementation, monitoring, and closing;</li> <li>v. Preparing documents such as but not limited to: Communication Plan, Recipient/ project Risk Assessment Framework, Audit Framework, Delivery and Program Risk Framework, G&amp;C processes, policies, procedures, guidelines, operational templates and checklists;</li> <li>vi. Design and delivery of G&amp;C training courses;</li> </ol> </li> <li>2) Must have at least four(4) years experience with Microsoft Office;</li> <li>3) Must have a Bachelor's Degree in Science, Engineering or Administration</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least five (5) years experience providing advice and assistance in planning, implementing and administering space science and technology programs including transfer payment programs (Grants and Contribution). Such advice and assistance includes but is not limited to:               <ol style="list-style-type: none"> <li>i. Planning documents such as budgets and schedules;</li> <li>ii. Preparing documentation in support of publication of Announcements of Opportunity (AOs);</li> <li>iii. Coordinating proposals' solicitation (AOs) and the corresponding evaluation process;</li> <li>iv. Funding Agreement (grant or contribution) implementation, monitoring, and closing;</li> <li>v. Preparing documents such as but is not limited to: Communication Plan, Recipient/ project Risk Assessment Framework, Audit Framework, Delivery and Program Risk Framework, G&amp;C processes, policies, procedures, guidelines, operational templates and checklists;</li> <li>vi. Design and delivery of G&amp;C training courses;</li> </ol> </li> <li>2) Must have at least two(2) years experience with Microsoft Office;</li> <li>3) Must have a Bachelor's Degree in Science, Engineering or Administration</li> </ol>
6B) Socio Economic Studies on technology transfer and commercialization (TTC)	Senior	<ol style="list-style-type: none"> <li>1) Must have at least ten (10) years experience performing socio-economic studies and trend analyses in the sectors of Earth Observation, Satellite Communications and/or Space Science and Exploration;</li> <li>2) Must have a Bachelor's Degree in a relevant field</li> </ol>
	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least eight (8) years experience performing socio-economic studies and trend analyses;</li> <li>2) Must have a Bachelor's Degree in a relevant field</li> </ol>
6C) Technology Requirements and Planning	Intermediate	<ol style="list-style-type: none"> <li>1) Must have at least 5 years experience in technology planning, prioritization and road mapping processes, for large industrial or government organizations;</li> <li>2) Must have experience in developing space technology roadmaps;</li> <li>3) Must have at least 5 years experience in space science or technology development</li> </ol>

Resource Category	Level	Minimum Requirements
6D Project Management Support	Senior	<p>1) Must have at least ten (10) years of experience advising and assisting in the planning, implementation and administration of space projects. Such advice and assistance includes:</p> <ul style="list-style-type: none"> <li>i. Development of project planning documents such as project management plans, project approval documents, cost-benefit analyzes and stakeholder identification;</li> <li>ii. budgeting, work plan and schedule;</li> <li>iii. preparation of documentation in support of the publication of Request for Proposal;</li> <li>iv. coordination of calls for proposals and related evaluation processes;</li> <li>v. preparation of various documents, for example: communication plans, project risk assessment frameworks, audit frameworks, program and delivery risk assessment frameworks, processes, policies, procedures, guidelines.</li> </ul> <p>2) Must have at least four (4) years of Microsoft Office experience (Word, Project, Power Point, Visio) ; ;</p> <p>3) Must have a Bachelor's degree in Science, Engineering or Administration.</p>
	Intermediate	<p>1) Must have at least five (5) years of experience providing advice and support for the planning, implementation and administration of space projects. Such advice and assistance includes:</p> <ul style="list-style-type: none"> <li>i. Development of project planning documents such as project management plans, project approval documents, cost-benefit analyzes and stakeholder identification;</li> <li>ii. budgeting, work plan and schedule;</li> <li>iii. document planning such as budgets, timelines, cost-benefit analysis and stakeholder identification</li> <li>iv. preparation of documentation in support of the publication of Request for Proposal;</li> <li>v. coordination of calls for proposals and related evaluation processes;</li> <li>vi. preparation of various documents, for example: communication plans, project risk assessment frameworks, audit frameworks, program and delivery risk assessment frameworks, processes, policies, procedures, guidelines</li> </ul> <p>2) Must have at least four (2) years of Microsoft Office experience (Word, Project, Power Point, Visio)</p> <p>3) Must have a Bachelor's degree in Science, Engineering or Administration.</p>

### **Stream 7) Mission Management**

<b>Resource Category</b>	<b>Level</b>	<b>Minimum Requirements</b>
7A) Expert EO applications and utilization Support	Senior	<p>1) Must have at least ten (10) years experience of the following:</p> <ul style="list-style-type: none"> <li>i. coordinating work with the EO communities;</li> <li>ii. analyzing EO mission/projects or EO applications outcomes</li> <li>iii. producing EO applications and data utilization requirements documents in support of missions and projects;</li> <li>iv. analyzing and making recommendations related to EO applications by the Canadian EO community;</li> </ul> <p>2) Must have a Bachelor degree from a recognized university in areas such as Physical sciences, Environment, Earth sciences, Geography, Remote sensing, or any disciplines relevant to Earth Observation applications.</p>
	Intermediate	<p>1) Must have at least five (5) years experience of the following:</p> <ul style="list-style-type: none"> <li>i. coordinating work with the EO communities;</li> <li>ii. analyzing EO mission/projects or EO applications outcomes</li> <li>iii. producing EO applications and data utilization requirements documents in support of missions and projects;</li> <li>iv. analyzing and making recommendations related to EO applications by the Canadian EO community;</li> </ul> <p>2) Must have a Bachelor degree from a recognized university in areas such as Physical sciences, Environment, Earth sciences, Geography, Remote sensing, or any disciplines relevant to Earth Observation applications.</p>
7B) Expert Scientific Support	Senior	<p>1) Must have at least ten (10) years experience following receipt of PhD in each of the following:</p> <ul style="list-style-type: none"> <li>i. coordinating work with the Canadian space science or medical communities;</li> <li>ii. analyzing space science mission/project outcomes;</li> <li>iii. producing science requirements documents in support of space missions and projects;</li> <li>iv. analyzing and making recommendations related to research work by the Canadian scientific community;</li> <li>v. providing support to the operations of Space Science / Technology instruments and experiments;</li> </ul> <p>2) Must have a doctorate from a recognized university relevant to the area of expertise</p>
	Intermediate	<p>1) Must have at least five (5) years experience following receipt of PhD in each of the following:</p> <ul style="list-style-type: none"> <li>i. Coordinating work with the Canadian space scientific or medical communities;</li> <li>ii. analyzing space science mission/project outcomes;</li> <li>iii. producing science requirements documents in support of space missions and projects;</li> <li>iv. analyzing and making recommendations related to research work by the Canadian scientific community;</li> <li>v. providing support to the operations of Space Science / Technology instruments and experiments;</li> </ul> <p>2) Must have a doctorate from a recognized university relevant to the area of expertise</p>

**ANNEX B**

**BASIS OF PAYMENT**

**1. LABOUR:** at the following, all-inclusive, firm rates:

A work day is defined as 7.5 hours of work, exclusive of meal breaks. Payment shall be made for days actually worked, with no provision for annual leave, statutory holidays and sick leave. If time worked is more or less than a day, the per diem rate shall be prorated to reflect the actual time worked.

Category	Level	Firm All-Inclusive Per Diem Rate				
		1 Nov 2018 to 31 Oct 2019	1 Nov 2019 to 31 Oct 2020	1 Nov 2020 to 31 Oct 2021	1 Nov 2021 to 31 Oct 2022	1 Nov 2022 to 31 Oct 2023
1A) Space Systems Definition, Development, and Review	Senior					
	Intermediate					
1B) Space Systems Assembly, Integration and Test	Senior					
	Intermediate					
1C) Space Engineering Policies, Procedures and Practices	Senior					
	Intermediate					
1D) Designer/Drafter Technician	Technician					
2A) SATCOM & Navigation	Senior					
	Intermediate					
2B) RF and Microwave Subsystems	Senior					
	Intermediate					
2C) Antennas	Senior					
	Intermediate					
2D) Interference analysis and spectrum management	Senior					
	Intermediate					

Category	Level	Firm All-Inclusive Per Diem Rate				
		1 Nov 2018 to 31 Oct 2019	1 Nov 2019 to 31 Oct 2020	1 Nov 2020 to 31 Oct 2021	1 Nov 2021 to 31 Oct 2022	1 Nov 2022 to 31 Oct 2023
3A) Structure	Senior					
	Intermediate					
3B) Materials	Senior					
	Intermediate					
3C) Thermal	Senior					
	Intermediate					
4A) Software Development	Senior					
	Intermediate					
4B) Spacecraft Software Simulation	Senior					
	Intermediate					
5A) Digital Electronics Design	Senior					
	Intermediate					
5B) Power Electronics	Senior					
	Intermediate					
5C) Control Electronics	Senior					
	Intermediate					
5D) EMC-EMI-ESD	Senior					
	Intermediate					
5E) Optics/Electro-Optics/Laser	Senior					
	Intermediate					
5F) Electronics Technician	Technician					
6A) Transfer Payment Program	Senior					

Category	Level	Firm All-Inclusive Per Diem Rate				
		1 Nov 2018 to 31 Oct 2019	1 Nov 2019 to 31 Oct 2020	1 Nov 2020 to 31 Oct 2021	1 Nov 2021 to 31 Oct 2022	1 Nov 2022 to 31 Oct 2023
Management Support	Intermediate					
6B) Socio Economic Studies on technology transfer and commercialization (TTC)	Senior					
	Intermediate					
6C) Technology Requirements and Planning	Intermediate					
6D) Project Management Support	Senior					
	Intermediate					
7A) Expert EO applications and utilization Support	Senior					
	Intermediate					
7B) Expert Scientific Support	Senior					
	Intermediate					

The firm, all-inclusive per diem rates will be adjusted annually at the commencement of each period (1<sup>st</sup> August 2019 to 31<sup>st</sup> July 2020, as well as Option Period 1 through Option Period 3) by an amount established based on the percentage increase (decrease), nearest two decimal places, in the annual average index of the Consumer Price Index for Canada, All-Items (Not Seasonally Adjusted), from the 12-month base period ending December, two years prior to the option period start year, to the same 12-month period ending December, one year prior to the option period start year. This will be calculated using the following formula:

$$EPA = \left( \frac{A}{B} - 1 \right) \times 100$$

B

Where:

**A** = Annual Average Index for the 12 months ending December, 1 year prior to the option period start year.

**B** = Annual Average Index for the 12 months ending December, 2 years prior to the option period start year.

Upon application of the above formula, the firm all-inclusive hourly rates calculated for each option period exercised will be incorporated into the Basis of Payment above, by contract amendment.

**\*Example of calculation:**

In Option Period 1 commencing August, 2020, the firm all-inclusive hourly rates would be increased by 2.40% based on the following assumptions:

**A** = Annual Average Index for the 12 months ending December 2019 (1 year prior to the option period start year) = 145.3

**B** = Annual Average Index for the 12 months ending December 2018 (2 years prior to the option period start year) = 141.9

$$\text{EPA} = \frac{(A - B)}{B} \times 100$$

$$\text{EPA} = \frac{(145.3 - 141.9)}{141.9} \times 100 = 2.40\%$$

**2. TRAVEL AND LIVING EXPENSES:**

The Offeror will be reimbursed its authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for profit and/or administrative overhead, in accordance with the meal and private vehicle provided in Appendices B, C and D of the Treasury Board Travel Directive (<http://www.njc-cnm.gc.ca/directive/travel-voyage/index-eng.php>), and with the other provisions of the directive referring to "travellers", rather than those referring to "employees".

All travel must have prior authorization of the Project Authority. All payments are subject to government audit.

**3. OTHER DIRECT CHARGES:** at actual cost without markup

## APPENDIX 1 TO ANNEX B - FINANCIAL PRESENTATION SHEET

Stream	Resource Category	Level	Firm, all-inclusive per diem rate	Weighting	Weighted per diem rate
1) Space Systems Engineering	1A) Space Systems Definition, Development and Review	Senior		60 %	
		Intermediate		40 %	
	1B) Space Systems Assembly, Integration and Test	Senior		60 %	
		Intermediate		40 %	
	1C) Space Systems Engineering Policies, Procedures and Practices	Senior		60 %	
		Intermediate		40 %	
	1D) Designer/Drafter Technician	Technician		100%	
	2) SATCOM and RF Engineering	2A) SATCOM & Navigation	Senior		60 %
Intermediate				40 %	
2B) RF and Microwave Subsystems		Senior		60 %	
		Intermediate		40 %	
2C) Antennas		Senior		60 %	
		Intermediate		40 %	
2D) Interference analysis and spectrum management		Senior		60%	
		Intermediate		40%	
3) Mechanical /Thermal Engineering	3A) Structure	Senior		60 %	
		Intermediate		40 %	
	3B) Materials	Senior		60 %	
		Intermediate		40 %	
	3C) Thermal	Senior		60 %	
		Intermediate		40 %	
4) Software Engineering	4A) Software Development	Senior		60 %	
		Intermediate		40 %	
	4B) Spacecraft Software Simulation	Senior		60 %	
		Intermediate		40 %	
5) Electronics & Optics Engineering	5A) Digital Electronics Design	Senior		60 %	
		Intermediate		40 %	
	5B) Power Electronics	Senior		60 %	
		Intermediate		40 %	
	5C) Control Electronics	Senior		60 %	
		Intermediate		40 %	
	5D) EMC-EMI-ESD	Senior		60 %	
		Intermediate		40 %	
5E) Optics/Electro -	Senior		60 %		

Stream	Resource Category	Level	Firm, all-inclusive per diem rate	Weighting	Weighted per diem rate
	Optics/Laser	Intermediate		40 %	
	5F) Electronics Technician	Technician		100 %	
6) Program Management	6A) Transfer Payment Program Management Support	Senior		60 %	
		Intermediate		40 %	
	6B) Socio Economic Studies on technology transfer and commercialization (TTC)	Senior		60 %	
		Intermediate		40 %	
	6C) Technology Requirements and Planning	Intermediate		100 %	
	6D) Project Management Support	Senior		60%	
Intermediate			40 %		
7) Mission Management	7A) Expert EO Applications and Utilization Support	Senior		60 %	
		Intermediate		40 %	
	7B) Expert Scientific Support	Senior		60 %	
		Intermediate		40 %	

Solicitation No. - N° de l'invitation  
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9F052-160448

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File No. - N° du dossier  
mtb-7-40004

Buyer ID - Id de l'acheteur  
mtb770  
CCC No./N° CCC - FMS No./N° VME

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## **ANNEX C**

### **SECURITY REQUIREMENTS CHECK LIST**

The Security Requirements Check List, appended to the bid solicitation package, is to be inserted at this point and forms part of this document.

Solicitation No. - N° de l'invitation  
9F052-160448/A  
Client Ref. No. - N° de réf. du client  
9F052-160448

Amd. No. - N° de la modif.  
File No. - N° du dossier  
mtb-7-40004

Buyer ID - Id de l'acheteur  
mtb770  
CCC No./N° CCC - FMS No./N° VME

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## **ANNEX D**

### **ELECTRONIC PAYMENT INSTRUMENTS**

The Offeror accepts to be paid by any of the following Electronic Payment Instrument(s):

- Direct Deposit (Domestic and International);
- Electronic Data Interchange (EDI);

## **ANNEX E**

### **STANDING OFFER REPORT REQUIREMENTS**

Suppliers must report on a quarterly basis on the call-up/contract activities. Such reports may contain, but are not limited to, the following information:

1. The standing offer/supply arrangement number;
2. The supplier name;
3. The reporting period;
4. The call-up/contract number for each call-up/contract, including amendments;
5. The client department;
6. The contracting authority;
7. The date of the call-up/contract;
8. The call-up/contract period;
9. The line items acquired/services provided;
10. The value of the call-up/contract, Goods or Services Tax/Harmonized Sales Tax included, as applicable.