

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**
Travaux publics et Services gouvernementaux
Canada
Place Bonaventure, portail Sud-Est
800, rue de La Gauchetière Ouest
7^{ème} étage
Montréal
Québec
H5A 1L6
FAX pour soumissions: (514) 496-3822

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

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

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

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

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

Comments - Commentaires

Title - Sujet Techniques Mapping&Characterization	
Solicitation No. - N° de l'invitation T8129-130001/A	Date 2014-02-13
Client Reference No. - N° de référence du client T8129-13-0001	
GETS Reference No. - N° de référence de SEAG PW-\$MTB-540-12606	
File No. - N° de dossier MTB-3-36384 (540)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-03-03	
Time Zone Fuseau horaire Heure Normale du l'Est HNE	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Dubé, Denis	Buyer Id - Id de l'acheteur mtb540
Telephone No. - N° de téléphone (514) 496-3886 ()	FAX No. - N° de FAX (514) 496-3822
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: MINISTERE DES TRANSPORTS Place de Ville 330 Sparks Street Tower C, 28th Floor OTTAWA Ontario K1A0N5 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

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

Issuing Office - Bureau de distribution

Travaux publics et Services gouvernementaux Canada
Place Bonaventure, portail Sud-Est
800, rue de La Gauchetière Ouest
7^{ème} étage
Montréal
Québec
H5A 1L6

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



Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Unit Price/Prix unitaire FOB/FAM	Destination	Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
1	Techniques Mapping&Characterization	T8129	T8129	1	Chaque	\$				

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PART 1 - GENERAL INFORMATION

1.1 Introduction

The bid solicitation document is divided into seven parts plus attachments and annexes as follows:

Part 1 General Information: provides a general description of the requirement;

Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;

Part 3 Bid Preparation Instructions: provides bidders with instructions on how to prepare their bid;

Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;

Part 5 Certifications: includes the certifications to be provided;

Part 6 Financial and Other Requirements: includes specific requirements that must be addressed by bidders; and

Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The following attachments:

Attachment 1 to Part 4 - Point Rated Evaluation Criteria.

And the following Annexes:

Annex A: Statement of Work and Requirement

Annex B: Basis of Payment: Schedule of Milestones

1.2 Summary

Project title

Techniques for Mapping and Characterization of Ice Wedges

Description

Public Works and Government Services Canada (PWGSC) on behalf of Transport Canada located in Ottawa, (Ontario), is seeking bids to evaluate various techniques for mapping and characterization of ice wedges along highway alignments in continuous permafrost

Period of Contract

From date of Contract award until August 29, 2015.

Security Requirements

There are no security requirements applying to this project.

Code of Conduct for Procurement

The Code of Conduct for Procurement applies to this requirement.

Canadian Content

This requirement is limited to Canadian goods and/or services.

Trade agreements

The requirement is subject to the provisions of the Agreement on Internal Trade (AIT).

Intellectual Property

The Intellectual Property will vest with the Contractor.

1.3 Debriefings

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

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

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

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

The 2003 (2013-06-01) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: sixty (60) days
Insert: ninety (90) days

2.2 SACC Manual Clauses

A7035T (2007-05-25), List of Proposed Subcontractors
A list of subcontractors is needed for regional distribution report.

2.3 Submission of Bids

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

Due to the nature of the bid solicitation, bids transmitted by facsimile or by electronic mail to PWGSC will not be accepted.

2.4 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 with FPS, bidders must provide the information required below before contract award.

Definitions

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

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

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

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

Former Public Servant in Receipt of a Pension

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

If so, the Bidder must provide the following information, for all 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, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts.

Work Force Adjustment Directive

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

If so, the Bidder must provide the following information:

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

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

2.5 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than five (5) calendar days before the bid closing date. Enquiries received after that time may not be answered.

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

2.6 Applicable Laws

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

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

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

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

(a) Each bid must contain the following sections:

Section I: Technical and Managerial Bid as well as the Executive Summary: (1 hard copy and 2 soft copies on CD)

Section II: Financial Bid (1 hard copy and 1 soft copy on CD)

Section III: Certifications (1 hard copy)

(b) For the hard copies, each section must be bound separately;

(c) 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;

(d) For the soft copies of Section I (Technical and Managerial as well as the Executive Summary), all of the information must be contained in one file. The only acceptable formats are: MS Word, PDF and HTML;

(e) For the soft copy of Section II (Financial Bid), all of the information must be contained in one file. The only acceptable formats are: MS Word, PDF and HTML;

(f) The soft copy of Section II must be submitted on a separate CD than the soft copy submitted for Section I;

(g) Prices must appear in Section II (financial bid) only. No prices must be indicated in any other section of the bid;

(h) The total number of pages for Section I should not exceed 60 pages (8.5 X 11 inches) (216 mm X 279 mm) paper excluding bid appendices;

(i) The bid should use a numbering system that corresponds to the bid solicitation;

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

To assist Canada in reaching its objectives, bidders should:

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

3.2 Section I: Technical and Managerial Bid

In their Technical and Managerial Bid, bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the Work.

The Technical and Managerial Bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

Part 4, Evaluation Procedures contains additional instructions that bidders should consider when preparing their technical Bid.

3.3 Section II: Financial Bid

3.3.1 Bidders must submit their financial bid in accordance with the following:

- (a) A firm, all inclusive lot price for the Work. Prices must be in Canadian funds, Customs duties included, as applicable. Applicable taxes must be shown separately.
- b) Section 4.3, Financial Evaluation of Part 4 Evaluation Procedures and Basis of Selection.

3.3.2 Bidder must provide a price breakdown as follows:

- (a) Labour: For each individual and (or) labour category to be assigned to the Work, Bidder must indicate: i) the hourly rate, inclusive of overhead and profit; and ii) the estimated number of hours corresponding to working hours.
- (b) Equipment: Bidder must specify each item required to purchase and complete the Work and provide the pricing basis of each one, Canadian customs duty and excise taxes included, as applicable. These items will be deliverable to Canada upon completion of the contract.
- (c) Materials and Supplies: Bidder must identify each category of materials and supplies required to purchase and provide the pricing basis of each one in order to complete the Work.
- (d) Travel and Living Expenses: Bidder must Indicate the number of trips and the number of days for each trip, the cost, destination and purpose of each journey, together with the basis of these costs which must not exceed the limits of the National Joint Council (NJC) Travel Directive. With respect to the TB Directive, only the meal, private vehicle and incidental allowances specified in Appendices B, C and D of the Directive <http://www.njc-cnm.gc.ca/directive/travel-voyage/index-eng.php>, and the other provisions of the Directive referring to "travellers", rather than those referring to "employees", are applicable.
- (e) Subcontracts: Bidder must identify all of the proposed subcontractor and provide in the Financial bid for each one a price breakdown as contained in paragraph 3.3.4 of Part 3 of the bid solicitation.
- (f) Other Direct Charges if applicable: Bidder must identify all other direct charges anticipated, such as long distance communications and rentals, and provide the pricing basis for each.

-
- (g) GST and QST: Bidder must identify any applicable GST and QST separately.

3.5 Section III: Certifications

In Section III, Bidders must include the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

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

4.2 Technical and Management Evaluation

4.2.1 Point Rated Technical and Management Criteria

Point rated Technical and Management Evaluation Criteria are described in Attachment 1 to Part 4 –Point Rated Technical and Management criteria. A score of zero will be given to any criteria not addressed.

4.3.2 Evaluation of Price

The price of the bid will be evaluated in Canadian dollars, the applicable taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

4.4 Basis of Selection

4.4.1 To be declared responsive, a proposal must:

- a. comply with all the requirements of the bid solicitation; and
- b. meet all mandatory criteria; and
- c. obtain the required minimum of 75 points overall for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of 100.

4.4.2 Bids not meeting (a) or (b) or (c) will be declared non-responsive.

- 4.4.3** The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 70% for the technical merit and 30% for the price.
- 4.4.4** To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 70%.
- 4.4.5** To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 30%.
- 4.4.6** For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
- 4.4.7** Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 70/30 ratio of technical merit and price, respectively. The total available points equals 100 and the lowest evaluated price is \$45,000.

Method of Selection - Highest Combined Rating Technical Merit (70%) and Price (30%)

		Bidder 1	Bidder 2	Bidder 3
Overall Technical Score		90/100	77/100	80/100
Bid Evaluated Price		\$55,000.00	\$50,000.00	\$45,000.00
Calculation	Technical Merit Score	$90/100 \times 70 = 63$	$77/100 \times 70 = 53.9$	$80/100 \times 70 = 56$
	Pricing Score	$\$45,000/\$55,000 \times 30 = 24.55$	$\$45,000/\$50,000 \times 30 = 27$	$\$45,000/\$45,000 \times 30 = 30$
Combined Rating		87.55	80.9	86
Overall Rating		1st	3rd	2nd

PART 5 - CERTIFICATIONS

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

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

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with this request will also render the bid non-responsive or will constitute a default under the Contract.

5.1. Mandatory Certifications Precedent to Contract Award

5.1.1 Code of Conduct and Certifications - Related documentation

By submitting a bid, the Bidder certifies that the Bidder and its affiliates are in compliance with the provisions as stated in Section 01 Code of Conduct and Certifications - Bid of Standard Instructions 2003. The related documentation therein required will assist Canada in confirming that the certifications are true.

5.1.2 Federal Contractors Program for Employment Equity - Bid Certification

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

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

5.2 Additional Certifications Precedent to Contract Award

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

5.2.1 Canadian Content Certification

This procurement is conditionally limited to Canadian goods and Canadian services.

Subject to the evaluation procedures contained in the bid solicitation, bidders acknowledge that only bids with a certification that the goods and services offered are Canadian goods and Canadian services, as defined in clause A3050T, may be considered.

Failure to provide this certification completed with the bid will result in the goods and services offered being treated as non-Canadian goods and non-Canadian services.

The Bidder certifies that:

() a minimum of 80 percent of the total bid price consist of Canadian goods and Canadian services as defined in paragraph 5 of clause A3050T.

For more information on how to determine the Canadian content for a mix of goods, a mix of services or a mix of goods and services, consult Annex 3.6.(9), Example 2, of the Supply Manual. (<https://buyandsell.gc.ca/policy-and-guidelines/supply-manual/annex/3/6>).

5.2.1.1 Canadian Content Certification (Definition)

SACC Manual Clause A3050T (2010-01-11) Canadian Content Definition.

5.2.2 Status and Availability of Resources

The Bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the Bidder is unable to provide the services of an individual named in its bid, the Bidder may propose a substitute with similar qualifications and experience. The Bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the Bidder has proposed any individual who is not an employee of the Bidder, the Bidder certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the Bidder and of his/her availability.

5.2.3 Education and Experience

The Bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the Bidder to be true and accurate.

Solicitation No. - N° de l'invitation

T8129-130001/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

mtb540

Client Ref. No. - N° de réf. du client

T8129-13-0001

File No. - N° du dossier

MTB-3-36384

CCC No./N° CCC - FMS No/ N° VME

Furthermore, the Bidder warrants that every individual proposed by the Bidder for the requirement is capable of performing the Work described in the resulting contract.

PART 6 - FINANCIAL AND OTHER REQUIREMENTS

6.1 Financial Capability

Manual SACC clause A9033T (2012-07-16) Financial Capability

PART 7 - RESULTING CONTRACT CLAUSES

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

7.1 Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work in Annex A and the Contractor's technical and Managerial Bid entitled _____, dated _____ (will be inserted at contract award).

7.2. Standard Clauses and Conditions

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

7.2.1 General Conditions

2040 (2013-06-27), General Conditions - Research & Development, apply to and form part of the Contract.

7.3. Term of Contract

7.3.1 Period of Contract

From date of Contract award until 29 August, 2015.

7.4 Authorities

7.4.1 Contracting Authority

The Contracting Authority for the Contract is:

Denis Dubé
Procurement Officer
Public Works and Government Services Canada
Acquisitions Branch
Science Procurement Directorate
Quebec Region

Place Bonaventure, South-East Portal
800 de La Gauchetière Street West, Suite 7300
Montreal, Quebec H5A 1L6

Telephone: (514) 496-3886
Facsimile: (514) 496-3822
E-mail: denis.dube@tpsgc-pwgsc.gc.ca

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

7.4.2 Project Authority

The Project Authority for the Contract is:

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: _____ - _____ - _____
Facsimile: _____ - _____ - _____
E-mail: _____

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

7.4.3 Contractor's Representative

TO BE COMPLETED AND INSERTED WITH YOUR PROPOSAL

The Contractor's Representative for the Contract is:

Name: _____

Title: _____

Organization: _____

Address: _____

Telephone: _____ - _____ - _____

Facsimile: _____ - _____ - _____

E-mail: _____

7.5 Proactive Disclosure of Contracts with Former Public Servants (if applicable)

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.

7.6. Payment

7.6.1 Basis of Payment - Firm Price

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price of \$ _____. Customs duties are included and applicable taxes are extra.

7.6.2 Limitation of Price

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

7.6.3 Method of Payment

7.6.3.1 Milestone Payments

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in Annex B - Basis of Payment and the payment provisions of the Contract if:

- (a) an accurate and complete claim for payment using form PWGSC-TPSGC 1111 (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf>) 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.

7.6.3.2 Schedule of Milestones

The schedule of milestones for which payments will be made in accordance with the Contract is detailed in Annex B.

7.6.4 SACC Manual Clauses

SACC Manual Clause A9117C (2007-11-30), T1204 - Direct Request by Customer Department

7.7 Invoicing Instructions

7.7.1 Invoicing Instructions - Progress Claim - Firm Price

1. The Contractor must submit a claim for progress 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) the description and value of the milestone claimed as detailed in the Contract.

2. Applicable Taxes, 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 Applicable Taxes payable as it was claimed and payable under the previous claims for progress payments.

3. The Contractor must prepare and certify one (1) original and two (2) copies of the claim on form PWGSC-TPSGC 1111, forward:

a) the original and one (1) copy to Transport Canada 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 to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

4. The Transport Canada'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.

7.8 Certifications

7.8.1 Compliance with the certifications provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the entire contract period. If the Contractor does not comply with any certification or it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

7.8.2 Federal Contractors Program for Employment Equity - Default by the Contractor

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and HRSDC-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "FCP Limited Eligibility to Bid" list. The imposition of such a sanction by HRSDC will constitute the Contractor in default as per the terms of the Contract.

7.8.3 Canadian Content Certification

SACC Manual Clause A3060C (2008-05-12), Canadian Content Certification

7.9 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____ (to be inserted at contract award).

7.10 Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the general conditions 2040 (2013-06-27), General Conditions - Research & Development;
- (c) Annex A, Statement of Work;
- (d) Annex B, Basis of Payment;
- (e) the Contractor's bid dated _____ as clarified / amended (if applicable) on _____.

7.11 Foreign Nationals (Canadian Contractor)

SACC Manual clause A2000C (2006-06-16), Foreign Nationals (Canadian Contractor)

7.12 Insurance

SACC Manual clause G1005C (2008-05-12), Insurance

Solicitation No. - N° de l'invitation

T8129-130001/A

Client Ref. No. - N° de réf. du client

T8129-13-0001

Amd. No. - N° de la modif.

File No. - N° du dossier

MTB-3-36384

Buyer ID - Id de l'acheteur

mtb540

CCC No./N° CCC - FMS No/ N° VME

ANNEX B

BASIS OF PAYMENT

SCHEDULE OF MILESTONES

The schedule of milestones for which payments will be made in accordance with the Contract is as follows:

Milestone No.	Deliverable	Delivery Date	Firm Amount
1			
2			
3			
Etc	Add lines if necessary		

Total Firm Price \$ _____
(Applicable Taxes Extra)

Annex A

Statement of Work

Evaluate Various Techniques for Mapping and Characterization of Ice Wedges along Highway Alignments in Continuous Permafrost

1 Objective:

The objective of this project is to better understand the limitations and applicability of remote sensing and geophysical techniques in the mapping and characterization of ice wedges. Evaluation of promising techniques, together with field testing along the planned Inuvik-Tuktoyaktuk Highway, the Dempster Highway and other Canadian regions (e.g., Quebec's Nunavik region), will help to advance the knowledge of these techniques and build expertise in northern highway agencies.

2 Background:

The Department of Transport is responsible for ensuring a safe, efficient and reliable transportation system in Canada's Northern Regions. The Department supports research and development activities to design, develop and implement innovative technologies, tools and best practices; improve and enhance knowledge and understanding of the impacts of climate change on the Northern transportation system; improve the resiliency and adaptability of both existing and future Northern transportation infrastructure and operations to climate change; and encourage the development of Northern expertise. The Department works collaboratively with provincial and territorial governments, academia, and private industry to ensure that limited Northern resources are maximized and that the knowledge, best practices and adaptive solutions gained from this initiative benefit Canada's North.

Permafrost is an integral component of the terrain in Canada's North, and it often contributes to the underlying strength and stability of transportation infrastructure. As a result of a changing climate, transportation infrastructure in the North is becoming more susceptible to permafrost thaw and degradation.

As part of the Government of Canada's Helping Canadians Adapt to a Changing Climate suite of programs, Transport Canada received funding for its Northern Transportation Adaptation Initiative (NTAI). The NTAI is supported by a Network of Expertise on Permafrost, which is comprised of individuals from provincial and territorial government, academia and the private industry. Through engagement with the Network of Expertise, Transport Canada has identified a number of high-level research needs to be addressed. The ultimate goal of this research is to support northerners with decision-making for their transportation infrastructure and operations.

One such research need that has been identified is the need to better understand the limitations and applicability of various techniques used for the mapping and characterization of ice wedges. Such techniques include remote sensing technologies, ground-penetrating radar, electrical resistivity, and electromagnetic induction sensors, amongst others.

Unpredictability in the nature and distribution of ground ice in permafrost terrain is a major challenge to developing and operating transportation infrastructure in Northern Canada. Destabilization of near surface ground ice as a result of construction and/or climate warming typically results in significantly increased construction and maintenance costs and significantly decreased infrastructure performance compared to non-permafrost regions.

Even in continuous permafrost along the Arctic coast which has been considered stable, ice wedges are particularly susceptible to degradation because only a very thin layer of permafrost exists between the ice and the bottom of the active layer. An increase in the active layer during unusually warm periods causes the thawing front to encounter the underlying ice wedges and initiate degradation.

The Soil Atlas of the Northern Circumpolar Regions describes an ice wedge as a broadly triangular-shaped piece of ground ice that occupies a frost crack. Ice wedges vary in size from less than 10 cm to 3 m in width at the top, tapering to a feather edge at depth of 1 - 10 m . Such ice wedges are more typical of epigenetic permafrost . More massive and irregularly shaped ice wedges are found in syngenetic permafrost . When these ice wedges thaw they leave large voids in the earth which can have disastrous consequences for highways and other transportation infrastructure built over them and pose a severe threat to the safety of travelers.

Historically, engineers have relied on borehole drilling to characterize ground conditions for the purpose of highway design, however drilling is an expensive, time consuming process and, while it provides accurate information at the borehole location, assumptions are necessary to interpolate ground conditions between boreholes. Geophysical methods, on the other hand, are non-destructive and geophysical field surveys are relatively inexpensive to conduct; however, their success in accurately portraying ground ice conditions is affected by factors such as salinity, ice structure, seasonal dependence, unfrozen water content and model assumptions . Also the interpretation and manipulation of the geophysical measurements is complex and highly specialized with the result that the final output is not readily understood / accepted by infrastructure designers and managers.

Table A.1 in the Transportation Association of Canada (TAC) Guidelines for the Development and Management of Transportation Infrastructure in Permafrost Regions provides a summary of different geophysical methods used in permafrost regions . This table is seen as a starting point for the current research project, the goal being to build on this information based on the current state of knowledge on the use of geophysical methods to characterize and map ice wedges and on an evaluation of the effectiveness of these methods in terms of the ground conditions along the

planned Inuvik-Tuktoyaktuk highway and the north end of the Dempster highway, as well as in other regions of Canada (i.e., where permafrost exists).

It is generally accepted that, while useful information can be obtained from geophysical surveys, they have limitations and can be misleading in some conditions . Consequently, another objective of this research project is to provide clear guidance to highway planners and designers on the use of geophysical surveys for mapping and characterizing ice wedges and on how these methods can be most effectively applied.

Geophysical methods, particularly Ground Penetrating Radar (GPR), have been in use for several decades for mapping subsurface lithologic and permafrost structures, including such features as massive ground ice bodies. GPR is frequently used for general site investigations in northern regions as it performs well in resistive soils, provides high resolution information and is quick and inexpensive to use.

Some examples of recent studies using geophysical methods and remote sensing are briefly mentioned in the following paragraphs. The research contractor should consider the findings of these and other relevant studies.

In a 2008 study (De Pascale et al), capacitive-coupled resistivity (CCR) and ground penetrating radar were used to map ground ice in a variety of locations in the Mackenzie Delta. The study concluded that the complementary use of these two geophysical tools facilitated the detection and mapping of massive ground ice, ice-rich sediments, ice wedges, thermokarst, and basic stratigraphic relationships. The study also indicated that undertaking the field work in winter conditions simplified both the fieldwork and the data interpretation.

The Alaska University Transportation Centre (AUTC) recently investigated the use of geophysical methods to assess the spatial distribution of permafrost conditions along a planned realignment of the Dalton Highway . This project involved field tests of Electrical Resistivity Tomography (ERT) and Ground Penetrating Radar along an alignment with detailed borehole information. The final report of this work is pending.

Large scale remote sensing is being extensively used in mapping and monitoring the impacts of climate change on permafrost. Arctic lowland landscapes underlain by permafrost are often characterized by polygon-like patterns such as ice wedge polygons outlined by networks of ice wedges. The ice wedges can push up the overlying soil, resulting in rims that surround low-centered polygons. When the ice wedges thaw and subside, they become troughs that surround high-centered polygons. Polygonal patterns and corresponding features are relatively easy to recognize in high spatial resolution satellite imagery such as WorldView 2 with a resolution of 0.6 m.

At a field site in the Arctic tundra near Barrow, Alaska, several research studies are exploring the relationships between land surface, active layer, and permafrost properties using remote sensing and surface geophysical (electrical, electromagnetic and ground penetrating radar) measurements. These studies are part of the U.S. Department of Energy Next-Generation Ecosystem Experiments.

One such study conducted in 2011 on the Alaskan Arctic coastal plain explored the combination of point measurements, which are direct but spatially sparse, with LiDAR and surface geophysical datasets, which are indirect but spatially extensive, for characterizing land surface and subsurface variabilities and their linkages. The findings suggest the potential of using LiDAR and geophysical based information for fine-scale characterization of land surface and subsurface properties that are likely to play a role in landscape deformation and drainage.

While the thrust of this latter research is to support modelling of climate change impacts on permafrost, the findings may have application in mapping and characterizing ground conditions, particularly ice wedges, along highway alignments such as the proposed Inuvik - Tuktoyaktuk Highway.

3 Scope:

The work will involve a literature review followed by development and implementation of a comprehensive program to evaluate the most promising remote sensing and geophysical techniques for mapping and characterizing ice wedges along transportation infrastructure alignments (i.e., long linear applications). A field testing and verification program will be a key component.

4 Tasks to be Performed:

4.1 Literature Review

- 4.1.1** Undertake a review of all relevant literature from Canadian and international sources relating to the usage of remote sensing and geophysical techniques for the mapping and characterization of ice wedges.
- 4.1.2** Provide a clearly written report documenting the sources reviewed; summarizing and synthesizing each source; discussing the findings, and in particular how they relate to the current research project. Present conclusions based on the knowledge gained through the review.
- 4.1.3** Complete the literature review and submit to the Technical Authority within 6 weeks of award of the contract.

4.2 Evaluation and Field Test Program

- 4.2.1** Develop a program to evaluate the most promising remote sensing and geophysical techniques for mapping and characterizing ice wedges along transportation corridors with specific emphasis on the Dempster and Inuvik - Tuktoyaktuk highways, and other regions where ice wedges are observed (e.g., Quebec's Nunavik Region). Only techniques suitable for long linear applications should be considered.
- 4.2.2** Address the types of data and the levels of accuracy necessary for transportation route planning, design and opération.
- 4.2.3** In consultation with the Technical Authority, select two (2) sites along the Dempster and Inuvik-Tuktoyaktuk highways, and one (1) site at a different location (e.g., Quebec's Nunavik region) to field test each of the techniques under evaluation. Select the sites based on physical conditions (e.g. terrain features, soil type, vegetation, ice content, etc.). Where possible, sites should be selected based on availability of soil and ground ice characterization from previous drilling and coring.
- 4.2.4** Provide equipment and personnel to undertake the field testing program. Allow for drilling and core sampling at the Dempster and ITH test sites as necessary to verify actual soil and ground ice conditions. The Technical Authority will make the final decision on the extent of drilling and coring to be undertaken and payments for that component of the work will be pro-rated as necessary.
- 4.2.5** Analyze and synthesize all of the data collected in the field testing and verification stage.
- 4.2.6** Include an opportunity for geotechnical engineering staff from the territorial/provincial highway departments to observe and obtain hands-on experience in the application of the techniques in the field and in the interpretation and analysis of the data.
- 4.2.7** Clearly document the proposed evaluation program in an interim report and submit to the Technical Authority prior to implementation and no later than 3 months following the contract award. Include clear justification for the proposed program as well as details of the field tests including test site locations, schedule and budget.
- 4.2.8** Document the field testing activities in a second interim report and submit to the Technical Authority within two weeks of completion of the field testing.

4.3 Final Report

- 4.3.1** Clearly document and synthesise the work completed and the conclusions reached as a result of the evaluation program.
- 4.3.2** Provide specific guidance relating to the application of remote sensing and geophysical techniques for use in the planning, design and operation of transportation infrastructure in continuous permafrost, particularly in relation to mapping and characterization of ice wedges.
- 4.3.3** Include a flow chart or similar decision support tool to assist transportation engineers in the appropriate application of remote sensing and geophysical methods to highway planning and design in permafrost.
- 4.3.4** Provide recommendations for further research based on the results of this project.
- 4.3.5** Submit a draft final report to the Technical Authority within 2 months of completion of the field testing. Submit the final report no later than August 29, 2015.

4.4 Half Day Seminar

- 4.4.1** Develop materials to support a half day seminar based on the findings of the research project. The theme of the seminar will focus on the application of remote sensing and geophysical techniques to support highway planning, design and operation in continuous permafrost with emphasis on the results of the research project.
- 4.4.2** Present the seminar either during Transport Canada's 2015 annual workshop of the Network of Expertise on Permafrost or at another time specified by the Technical Authority.
- 4.4.3** Prepare and provide seminar handout materials.
- 4.4.4** Provide an outline of the seminar to the Technical Authority by no later than July 30, 2015.

5 Travel:

The contractor will have to travel at least once to the field test sites during the course of the project. Travel will also be required to present the half-day seminar to the Network of Expertise on Permafrost, or during another time specified by the Technical Authority. The contractor will provide for this travel in the project budget.

6 Meetings:

In addition to providing the reports as noted above, meetings will be required over the course of the project to exchange information, monitor progress, and provide a timely response to issues arising from the work.

Following award of the contract, a meeting will be held with the contractor to review the project requirements and ensure that there is a clear understanding amongst the parties. This will be a face-to-face meeting at the offices of the Technical Authority.

Progress meetings will occur monthly and will be accomplished via telephone conferences, video telephone conferences, or via web- based collaboration tools.

Following submission of the draft final report, a face-to-face meeting with the Technical Authority will be convened at which the contractor will present the project findings and respond to any questions that need to be considered in order to achieve satisfactory completion of the project.

7 Deliverables:

7.1 Start-up Meeting

Date: Within 2 weeks of the contract award
Location: Transport Canada Head Office, Ottawa
Purpose: To discuss and clarify the proposed approach, work plan and schedule to ensure achievement of the contract objectives. The contractor shall make a presentation with the above purpose in mind.

7.2 Literature Review

Date: Within 6 weeks of the contract award
Copies: One bound copy and one electronic copy on CD
Format: Follow the requirements set out for the final report.

7.3 Interim Report 1 - Document Proposed Evaluation Program

Date: Within 3 months of contract award
Copies: One electronic copy on CD
Format: Follow the requirements set out for the final report.

7.4 Interim Report 2 - Document the Field Testing Completed

Date: Within 2 weeks of completion of field testing
 Copies: One electronic copy on CD
 Format: Follow the requirements set out for the final report.

7.5 Draft Final Report

Date: Within 2 months of completion of field testing
 Copies: One electronic copy on CD
 Format: Follow the requirements set out for the final report.

7.6 Presentation

Date: Within 2 weeks of submission of draft final report.
 Location: Transport Canada Head Office, Ottawa.
 Purpose: To present the project findings, conclusions and recommendations documented in the draft final report.

7.7 Final Report

Date: August 29, 2015
 Copies: One electronic copy on CD
 Five bound copies
 One unbound, unpunched, single-sided reproducible master.
 Format: Compatible with Microsoft Word 2000 or newer.
 As a minimum the final report will contain the following sections:

- Executive Summary
- Table of Contents
- Introduction
- Literature Review Findings
- Evaluation Program
 - Program rationale
 - Detailed description of program components
 - Documentation of fieldwork
 - Data Analysis
 - Evaluation program findings
- Guidance for transportation engineers and planners
- Conclusions
- Recommendations for further research
- Appendices as necessary

7.8 Seminar Outline

Date: July 30, 2015
Copies: One electronic copy on CD
Format: Follow the requirements set out for the final report.

7.9 Seminar Presentation

Date: To be determined in consultation with the Technical Authority
Location: 2015 annual workshop of the Network of Expertise on Permafrost or at another venue specified by the Technical Authority.
Copies: Seminar handout - One (1) electronic copy and Twenty five (25) hard copies.
Purpose: Presentation on the application of remote sensing and geophysical techniques to support highway planning, design and operation in continuous permafrost with emphasis on the results of the research project.

Submit all deliverables to the Technical Authority

Provide all reports in English.

The final report must be submitted in both English and French.

Changes to timelines for deliverables (after contract award) require both parties to agree in writing.

APPENDIX C

EVALUATION CRITERIA

Any proposal which meets all mandatory requirements of the Request for Proposals (RFP) will be evaluated and scored as specified in the table below.

Proposals should address each point rated technical criterion separately. This section of the proposal should not exceed thirty (30) pages in length.

Point Rated Technical Criteria		
Number	Technical Criterion	Max. Available Points
R1	The Proponent should demonstrate an understanding of scope and objective. The Proponent should include a short introduction with a brief explanation of the: need for the project; objectives of the proposed work; reasons for carrying it out as proposed; and benefits that will be derived.	5
R2	The Proponent should identify potential major problems and/or difficulties that could affect the outcome of this specific work and address how these will be resolved	10
R3	The Proponent should clearly outline its approach and proposed methodology to meet the requirements as well as the degree of success expected. The proposed approach is to be compliant with the requirements of the Statement of Work provided as part of the RFP. Sufficient detail should be provided to demonstrate the Proponent's grasp of the requirements and the Proponent's competence to meet them	20
R4	The Proponent should provide a work plan including a list of specific tasks and deliverables, the level of effort (per person, per task), and the proposed schedule for completion or delivery	20
R5	The Proponent should demonstrate relevant experience and qualifications of the proposed project team	40
R6	Proposal quality - the proposal will be assessed for overall clarity, organization and completeness	5
criteria (75%)	Total of all the point rated technical Minimum required score is 75 points	100

No	Rated Criteria	Max Points	Scores to be assigned based on the following	Weight Factor	Page number in your proposal
R1	The Proponent should demonstrate an understanding of the objectives and scope	5	<p>0 Points - incorrect understanding of scope and objectives.</p> <p>1 Point - incorrect understanding of scope or objectives, or given verbatim from RFP and understanding not fully demonstrated.</p> <p>3 Points - good general understanding of scope and objectives.</p> <p>5 Points - In-depth understanding of scope and objectives fully demonstrated.</p>	x1	
R2	The Proponent should identify potential major problems and/or difficulties that could affect the outcome of the work and address how these will be resolved	10	<p>0 Points - fails to identify any potential problems.</p> <p>1 Point - 1 to 2 major difficulties identified; proposed solutions will not adequately resolve all.</p> <p>2 Points - 1 to 2 major difficulties identified; proposed solutions adequately resolve</p> <p>3 Points - 3 to 4 major difficulties identified; proposed solutions will not adequately resolve all</p> <p>4 Points - 3 to 4 major difficulties identified; proposed solutions adequately resolve all.</p> <p>5 Points - 5 or more difficulties identified; proposed solutions are innovative and adequate.</p>	x2	
R3	The Proponent should clearly outline the approach and proposed methodology to meet the requirements as	20	<p>0 Points - not addressed in proposal</p> <p>1 Point - approach and methodology does not expand from RFP.</p> <p>5 Points - approach and methodology address the RFP requirements with adequate level of success.</p>	x2	

	well as the degree of success expected.		<p>8 Points - approach and methodology address the RFP requirements with a high level of success.</p> <p>10 Points - approach and methodology supplemented with novel suggestions that address the RFP requirements with a high level of success</p>		
R4	The Proponent should provide a work plan including a list of specific tasks and deliverables, the level of effort (per person, per task), and the proposed schedule for completion or delivery.	20	<p>Work Plan / Tasks to be Performed:</p> <p>0 Points - not addressed in proposal. 1 Point - work plan does not expand from RFP. 2 Points - work plan is well explained and meets the requirements of the RFP.</p> <p>Schedule:</p> <p>0 Points - not addressed in proposal. 1 Point - schedule is as per RFP with no indication that Proponent feels it is realistic. 2 Points - schedule is adequate and clearly explained.</p> <p>Level of Effort:</p> <p>0 Points - not addressed in proposal. 2 Points - adequate total level of effort; critical work performed by junior personnel. 4 Points - adequate total level of effort; critical work performed by appropriate mix of junior/senior personnel. 6 Points - adequate total level of effort; critical work performed by recognized subject matter experts.</p>	x2	
For the specific experience identified in R5.1 through R5.5, the main resource assigned to perform the related task(s) will be evaluated for the associated experience required. If the main resource has not been identified and two or more resources with different experience levels have been named, the score assigned will be the average of the sum of the individual resource scores.					
R 5.1	Experience in geotechnical / permafrost engineering	10	<p>0 Points - no demonstrated experience 1 Point - less than 2 years demonstrated experience.</p>	x2	

			<p>2 Points - 2 to 4 years demonstrated experience.</p> <p>3 Points - 5 to 10 years demonstrated experience.</p> <p>4 Points - more than 10 years demonstrated experience</p> <p>5 points - recognized subject matter expert.</p>		
R 5.2	Experience in geophysics	10	<p>0 Points - no demonstrated experience</p> <p>1 Point - less than 2 years demonstrated experience.</p> <p>2 Points - 2 to 4 years demonstrated experience.</p> <p>3 Points - 5 to 10 years demonstrated experience.</p> <p>4 Points - more than 10 years demonstrated experience</p> <p>5 Points - recognized subject matter expert.</p>	x2	
R 5.3	Experience in remote sensing	5	<p>0 Points - no demonstrated experience</p> <p>1 Point - less than 2 years demonstrated experience.</p> <p>2 Points - 2 to 4 years demonstrated experience</p> <p>3 Points - 5 to 10 years demonstrated experience</p> <p>4 Points - more than 10 years demonstrated experience.</p> <p>5 Points - recognized subject matter expert</p>	x1	
R 5.4	Experience in highway/airport planning and design	5	<p>0 Points - no demonstrated experience</p> <p>1 Point - less than 2 years demonstrated experience</p> <p>2 Points - 2 to 4 years demonstrated experience.</p> <p>3 points - 5 to 10 years demonstrated experience</p> <p>4 Points - more than 10 years demonstrated experience</p> <p>5 Points - recognized subject matter expert</p>	x1	

R 5.5	Project Experience (details of two similar projects)	10	<p>The Proponent is asked to provide the following detailed information for two similar, ongoing or completed, projects:</p> <p>Project 1</p> <p>a) relevance of the referenced project (maximum of 8 pts)</p> <ul style="list-style-type: none"> - project description; - relevance of the project to the requirements outlined in the statement of work; <p>b) scope and complexity of the project (maximum of 8 pts)</p> <ul style="list-style-type: none"> - name and description of client organization; - name and phone number of client reference; - scope, size in dollars and resources, and project time frame; <p>c) contribution of the individual/organization to the project (maximum of 9 pts)</p> <ul style="list-style-type: none"> - contribution of the individual/organization to the project; - objective and outcome of the project; <p>and, other experience gained that could be relevant to this requirement.</p> <p>Project 2</p> <p>a) relevance of the referenced project (maximum of 8 pts)</p> <ul style="list-style-type: none"> - project description; - relevance of the project to the requirements outlined in the statement of work; <p>b) scope and complexity of the project (maximum of 8 pts)</p> <ul style="list-style-type: none"> - name and description of client organization; 	x1	
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			<ul style="list-style-type: none"> - name and phone number of client reference; - scope, size in dollars and resources, and project time frame; c) contribution of the individual/organization to the project (maximum of 9 pts) - contribution of the individual/organization to the project; - objective and outcome of the project; <p>And, other experience gained that could be relevant to this requirement.</p>		
R6	Proposal Quality	5	<p>Up to a maximum of five (5) points will be awarded for presenting Proposals in a clear and logical fashion, and in a manner which facilitates a clear and straightforward evaluation, based on the information requested in the RFP, as evidenced by the following factors:</p> <ul style="list-style-type: none"> - 1 point for including tabs between the section of the Proposal; - 2 points for ordering/structuring the Proposal to match the order and sequence of the Mandatory and Point-Rated Requirements in the RFP; <p>And</p> <ul style="list-style-type: none"> - 2 points for the overall quality of the Proposal as it relates to presentation of information and ease-of-use 	x1	
	TOTAL	100			