

**RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving - PWGSC / Réception des
soumissions - TPSGC**
11 Laurier St. / 11, rue Laurier
Place du Portage , Phase III
Core 0A1 / Noyau 0A1
Gatineau
Québec
K1A 0S5
Bid Fax: (819) 997-9776

**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 GNSS RECEIVERS PPP/RTCM-SSR ENABLE	
Solicitation No. - N° de l'invitation 23240-140583/B	Date 2014-09-18
Client Reference No. - N° de référence du client 23240-140583	
GETS Reference No. - N° de référence de SEAG PW-\$\$QF-102-24685	
File No. - N° de dossier 102qf.23240-140583	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-10-21	Time Zone Fuseau horaire Eastern Daylight Saving Time EDT
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes	
Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Dawson, Cindy	Buyer Id - Id de l'acheteur 102qf
Telephone No. - N° de téléphone (819) 953-7336 ()	FAX No. - N° de FAX (819) 956-5650
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: MARIO BERUBE NATURAL RESOURCES CANADA 615 BOOTH STREET ROOM #04A-436 OTTAWA, ON K1A 0E9	

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

Electronics, Simulators and Defence Systems Div.
/Division des systèmes électroniques et des systèmes de
simulation et de défense
11 Laurier St. / 11, rue Laurier
8C2, Place du Portage
Gatineau
Québec
K1A 0S5

Delivery Required - Livraison exigée See Herein	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

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TITLE: GNSS RECEIVERS PPP/RTCM-SSR ENABLE

PART 1 - GENERAL INFORMATION

1. Security Requirement

There is no security requirement applicable to this Contract.

2. Requirement

The requirement is detailed under the Annex A Statement of Requirement.

3. Debriefings

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

4. Trade Agreements

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

PART 2 - BIDDER INSTRUCTIONS

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 (2014-06-26) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

2. Submission of Bids

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

3. 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 question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

4. Applicable Laws

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

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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

1. Bid Preparation Instructions

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

Section I: Technical Bid - two (2) hard copies

Section II: Financial Bid - two (2) hard copies

Section III: Certifications - one (1) hard copy

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

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

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

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

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

Section I: Technical Bid

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

Section II: Financial Bid

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

1.1 Exchange Rate Fluctuation

C3011T (2013-11-06) Exchange Rate Fluctuation

Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

1. Evaluation Procedures

- a) Bids will be assessed in accordance with the entire requirement of the bid solicitation, including the technical evaluation criteria and as detailed in Annex B, Bid Evaluation Plan.
- b) An evaluation team composed of representatives of Canada will evaluate the bids.

1.1 Technical Evaluation

1.1.1 Mandatory Technical Criteria

See the Mandatory Technical Criteria as detailed in the Annex B- Bid Evaluation Plan.

1.2 Financial Evaluation

1.2.1 Evaluation of Price - Canadian / Foreign Bidders

1. The price of the bid will be evaluated as follows:
 - a. Canadian-based bidders must submit firm prices, Canadian customs duties and excise taxes included, and Applicable Taxes excluded.
 - b. foreign-based bidders must submit firm prices, Canadian customs duties, excise taxes and Applicable Taxes excluded. Canadian customs duties and excise taxes payable by Canada will be added, for evaluation purposes only, to the prices submitted by foreign-based bidders.
2. Unless the bid solicitation specifically requires bids to be submitted in Canadian currency, bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes. The rate given by the Bank of Canada in effect on the bid solicitation closing date, or on another date specified in the bid solicitation, will be applied as a conversion factor to the bids submitted in foreign currency.
3. Although Canada reserves the right to award the Contract either on an DDP - Delivered Duty Paid (Ottawa, ON) or FCA Free Carrier (Ottawa, ON), Canada requests that bidders provide prices FCA their plant or shipping point and DDP destination. Bids will be assessed on an DDP destination basis.

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4. For the purpose of the bid solicitation, bidders with an address in Canada are considered Canadian-based bidders and bidders with an address outside of Canada are considered foreign-based bidders.

2. Basis of Selection - Mandatory Technical Criteria

2.1 A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

PART 5 - CERTIFICATIONS

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

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

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

1. Certifications Required Precedent to Contract Award

1.1 Integrity Provisions - Associated Information

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

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](http://www.labour.gc.ca/eng/standards_equality/eq/emp/fcp/list/inelig.shtml)" list (http://www.labour.gc.ca/eng/standards_equality/eq/emp/fcp/list/inelig.shtml) available from Employment and Social Development Canada (ESDC) - Labour's website.

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

PART 6 - RESULTING CONTRACT CLAUSES

1. Security Requirement

There is no security requirement applicable to this Contract.

2. Requirement

The Contractor must provide the items as detailed under the "Requirement" at the Appendix 1 - Pricing Schedule.

2.1 Excess Goods

The quantity of goods to be delivered by the Contractor is specified in the Contract. The Contractor remains liable for any shipment in excess of that quantity whether the excess quantity is shipped voluntarily or as a result of an error by the Contractor. Canada will not make any payment to the Contractor for goods shipped in excess of the specified quantity. Canada will not return the said goods to the Contractor unless the Contractor agrees to pay for all the costs related to the return, including but not limited to administrative, shipping and handling costs. Canada will have the right to deduct such costs from any invoice submitted by the Contractor.

3. Standard Clauses and Conditions

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

3.1 General Conditions

2010A (2014-06-26), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

4. Term of Contract

4.1 Complete Delivery

The Contractor must make the complete delivery within 21 calendar days from the effective date of the Contract.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Cindy Dawson

Tel: (819) 953-7336

Email: cindy.dawson@pwgsc.gc.ca

Electronics, Simulators and Defence Systems Division - QF

Defence and Major Projects Directorate

Public Works and Government Services Canada

PDP III, 11 Rue Laurier, Gatineau Quebec, K1A 0S5

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.

5.2 Project Authority

The Project Authority for the Contract is:

Name: _____

Title: _____

Organization: _____

Address: _____

Telephone : ____ ____ _____

Facsimile: ____ ____ _____

E-mail address: _____

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.

5.3 Contractor's Representative

(Fill in or delete as applicable)

6. Payment

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 firm unit prices, as specified in the Appendix 1 - Pricing Schedule, for a cost of \$ _____ *(insert the amount at contract award)*. Customs duties are excluded and Applicable Taxes are extra.

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

6.2 Single Payment

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

6.3 Taxes - Foreign-based Contractor

Unless specified otherwise in the Contract, the price includes no amount for any federal excise tax, state or local sales or use tax, or any other tax of a similar nature, or any Canadian tax whatsoever. The price, however, includes all other taxes. If the Work is normally subject to federal excise tax, Canada will, upon request, provide the Contractor a certificate of exemption from such federal excise tax in the form prescribed by the federal regulations.

Canada will provide the Contractor evidence of export that may be requested by the tax authorities. If, as a result of Canada's failure to do so, the Contractor has to pay federal excise tax, Canada will reimburse the Contractor if the Contractor takes such steps as Canada may require to recover any payment made by the Contractor. The Contractor must refund to Canada any amount so recovered.

7. Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.

2. Invoices must be distributed as follows:

a. The original and one (1) copy must be forwarded to the following address for certification and payment.

_____ (*Insert at award of contract*)

_____ (*Insert at award of contract*)

b. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

c. one (1) copy must be forwarded to the consignee.

8. Certifications

8.1 Compliance

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

9. Applicable Laws

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

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 and its appendices;
 - (b) the general conditions 2010A (2014-06-26), General Conditions - Goods (Medium Complexity);
 - (c) Annex A, Statement of Requirement;
 - (d) the Contractor's bid dated _____ (*to be inserted at contract award*)

11. Insurance

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

12. Shipping Instructions - Delivery at Destination

Goods must be consigned and delivered to the destination specified in the Contract and delivered:

Delivered Duty Paid (DDP) Ottawa, ON, Incoterms 2000 for shipments from a commercial contractor.

13. Electrical Equipment

All electrical equipment supplied under the Contract must be certified or approved for use in accordance with the *Canadian Electrical Code*, Part 1, before delivery, by a certification organization accredited by the Standards Council of Canada

**APPENDIX 1
Pricing Schedule**

All Prices are quoted FCA Plant/Shipping Point and Delivered Duty Paid (DDP) (Ottawa, Ontario). Should a discrepancy exist between the unit prices and extended unit prices, the unit pricing shall govern.

Bidder Instructions:

Bidders must complete the table by filling in the blanks providing firm unit pricing and extended pricing per item.

Bidders must indicate the currency applicable to their bid.

1. Requirement

Item	Item Description	Qty	Unit Price FCA Plant/Shipping Point	Extended Price	Unit Price DDP Destination Ottawa, Ontario	Extended Price
1	Dual Frequency GNSS Receiver with embedded PPP software using RTCM-SSR using NTRIP. GPS+GLONASS, L1/L2, integrated GSM/HSPA modem	2				
2	AC adaptor for GNSS receiver	2				
3	GNSS antenna L1/L2 GPS+GLONASS, TNC connector	2				
4	5 metre RF cable for GNSS antenna RoHS compliant	2				
5	GSM/HSPA NMO antenna	2				
6	GSM/HSPA antenna base NMO magnetic mount, 3m cable	2				
7	GPS-C006 - 5 Meter RF Cable with straight TNC male plug connectors (for GPS antennas) RoHS compliant OR Equivalent	2				
			TOTAL PRICE		TOTAL PRICE	

The currency applicable to this bid is _____.

ANNEX A

Statement of Requirement

General

Natural Resources Canada has a requirement to procure a total of two (2) high-performance dual frequency GNSS receivers and external antennas to support high accuracy geodetic measurements for field operations. These receivers must have embedded PPP software to provide phase quality (decimeter level) position solutions using the corrections in RTCM-SSR standard using NTRIP protocol.

Receivers and antennas requirements

Two (2) high accuracy dual frequency GNSS receivers that must be configured with embedded PPP software that supports access to corrections in the RTCM-SSR standard using NTRIP protocol.

Two (2) GNSS antennas that must include connectors and cables

Receivers and antennas must have all of the following characteristics:

- High accuracy dual frequency receivers must have the following:
 - L1-L2-L5 GPS
 - L1-L2 GLONASS
 - L1 C/A code better than 5cm GPS, 10cm GLONASS
 - L1 carrier phase better than 1mm GPS, 2mm GLONASS
 - L2 P(Y) code better than 10cm GPS and GLONASS
 - L2 carrier phase better than 2mm GPS and GLONASS
 - L5 code better than 5cm GPS
 - L5 carrier phase better than 1mm GPS
- Receivers must have embedded phase quality PPP software supporting access to GNSS corrections in RTCM-SSR (specifically message numbers: 1057, 1058, 1059, 1061 and 1062) format standard using the NTRIP protocol.
- Receivers must use external antenna
- Receivers and antennas must be suitable for continuous operation when subjected to harsh climate and temperature fluctuations. (-20 C to +60 C)
- Receivers must be powered by 12-28 Volts DC
- Receiver power consumption must be less than 5W
- Receivers must have removable data storage (minimum 2G)
- Communication with receivers must be through Serial, Ethernet and USB.
- Cellular Network Connectivity must be via an integrated modem. Cellular modem must support GPRS/HSPA protocols.
- Receivers must be configurable using Serial, Ethernet and USB ports
- Receivers configuration must be saved internally so that receiver can automatically resume previous tracking configuration after a power outage
- Receivers must have upgradeable firmware

- Antennas must receive L1-L2-L5 signals from GPS and L1-L2 from GLONASS.

**ANNEX B
GNSS RECEIVERS PPP/RTCM-SSR ENABLE
BID EVALUATION PLAN**

1. INTRODUCTION

This document identifies the methods and procedure by which proposals for **GNSS Receivers PPP/RTCM-SSR Enable** will be evaluated. The applicable PWGSC file number is 23240-140583/B.

This document forms a part of the Request for Proposal (RFP) for the **GNSS Receivers PPP/RTCM-SSR Enable**.

2. EVALUATION PROCESS

The evaluation process will be conducted in the following phases:

- a) Review of each bid to ensure compliance with all mandatory requirements of the Solicitation;
- b) Identify the proposal with the lowest compliant total cost.

3. EVALUATION OF MANDATORY REQUIREMENTS

A mandatory requirement is defined as a requirement that must be met in order for the Bidder's proposal to be further considered for evaluation. Mandatory requirements are assessed as either compliant or non-compliant, and any non-compliant proposals will be eliminated and no further consideration will be given to the non-compliant proposal. For the purpose of this Solicitation, mandatory requirements are those requirements identified in Appendix 1 of this Evaluation Plan.

4. SUPPORTING DOCUMENTATION

Evaluations will be based solely on the proposals submitted by bidders. Bidders are therefore advised to provide required supporting documentation in their proposal and to address each requirement in sufficient depth to permit a complete analysis and assessment by the evaluation team.

5. PRICE OF BID

The price of bid will be determined from the information provided by the bidder in Appendix 1 of the RFP.

6. CONTRACTOR SELECTION METHOD – LOWEST COMPLIANT COST

Contractor Selection will be based on the bidder offering the lowest compliant cost.

**APPENDIX 1 TO ANNEX B
GNSS RECEIVERS PPP/RTCM-SSR ENABLE**

COMPLIANCY WITH MANDATORY REQUIREMENTS

MANDATORY REQUIREMENTS - PRE-TECHNICAL

Criteria	Mandatory Bid Criteria	Met	Not Met	Comment
1	The Bidder must comply with the terms and conditions of the RFP.			
2	The Bid must be signed by an authorized representative of the Bidder.			
3	Bids must be submitted only to PWGSC Bid Receiving Unit by the date, time and place indicated on page 1 of the Solicitation.			
4	The Bidder's prices must appear in the financial bid only.			
5	The Bidder must submit all supporting documents required by the bid solicitation to determine technical responsiveness.			

Table A1

FAILURE TO MEET ANY OF THE PRE-TECHNICAL MANDATORY CRITERIA AS STATED ABOVE IN TABLE A1 WILL RESULT IN THE BIDDER'S PROPOSAL BEING CONSIDERED AS NON-COMPLIANT AND THE BIDDER'S PROPOSAL WILL NOT BE FURTHER CONSIDERED IN THE EVALUATION PROCESS.

MANDATORY REQUIREMENTS – TECHNICAL

Criteria	Requirement	Compliant	Indicate where information is found
T1	The Bidders must demonstrate that the proposed receiver has all of the following characteristics:		
	High accuracy dual frequency receivers.	YES / NO	
	L1-L2-L5 GPS.	YES / NO	
	L1-L2 GLONASS.	YES / NO	
	L1 C/A code better than 5cm GPS, 10cm GLONASS	YES / NO	
	L1 carrier phase better than 1mm GPS, 2mm GLONASS	YES / NO	
	L2 P(Y) code better than 10cm GPS and GLONASS.	YES / NO	
	L2 carrier phase better than 2mm GPS and GLONASS.	YES / NO	
	L5 code better than 5cm GPS.	YES / NO	
	L5 carrier phase better than 1mm GPS.	YES / NO	
T2	The Bidders must demonstrate that the proposed receiver has embedded phase quality PPP software supporting access to GNSS corrections in RTCM-SSR (specifically message numbers: 1057, 1058, 1059, 1061 and 1062) format standard using the NTRIP protocol.	YES / NO	
T3	The Bidders must demonstrate that the proposed receiver uses external antenna.	YES / NO	
T4	The Bidders must demonstrate that the proposed receiver and antenna are suitable for continuous operation when subjected to harsh climate and temperature fluctuations. (-20 C to +60 C).	YES / NO	
T5	The Bidders must demonstrate that the proposed receiver is powered by 12-28 Volts DC.	YES / NO	
T6	The Bidders must demonstrate that the proposed receiver's power consumption is less than 5W.	YES / NO	
T7	The Bidders must demonstrate that the proposed receiver has removable data storage (minimum 2G).	YES / NO	
T8	The Bidders must demonstrate that Communication with the proposed receiver is through Serial, Ethernet and USB.	YES / NO	
T9	The Bidders must demonstrate that Cellular Network Connectivity of the proposed receiver is via an integrated modem. Cellular modem must support GPRS/HSPA protocols.	YES / NO	

Criteria	Requirement	Compliant	Indicate where information is found
T10	The Bidders must demonstrate that the proposed receiver is configurable using Serial, Ethernet and USB ports.	YES / NO	
T11	The Bidders must demonstrate that the proposed receiver configuration is saved internally so that receiver can automatically resume previous tracking configuration after a power outage.	YES / NO	
T12	The Bidders must demonstrate that the proposed receiver has upgradeable firmware.	YES / NO	
T13	The Bidders must demonstrate that the proposed Antenna receives L1-L2-L5 signals from GPS and L1-L2 from GLONASS.	YES / NO	

Table A2

MANDATORY REQUIREMENTS – TECHNICAL - DEMONSTRATION

Criteria	Requirement	Compliant	Indicate where information is found
TD-1	Bidders must demonstrate that their receivers have embedded phase quality PPP software supporting access to GNSS corrections in the RTCM-SSR (specifically message numbers: 1057, 1058, 1059, 1061 and 1062) format standard using the NTRIP protocol. To demonstrate this mandatory requirement, Bidders must provide the following:		
	a. A complete list of steps/commands to be taken/issued in order to access a stream of RTCM-SSR messages;	YES/NO	
	b. A complete list of steps/commands to be taken/issued in order to configure the receiver to compute unconstrained phase quality PPP mode coordinates using NRCan RTCM-SSR messages.	YES/NO	
	c. A 24-hour 1 Hz file containing unconstrained kinematic PPP results including Time-of-Estimate, computed X, Y, Z and computed Sigmas X, Y, Z. All results must be based on NRCan RTCM-SSR correction messages. All coordinates and sigmas must be estimated in real-time onboard the proposed receiver beginning from a cold start. Statistics on data set must demonstrate a precision of 20cm horizontally and 30cm vertically (95%) after first convergence.	YES/NO	
	d. The associated 24-hour 1-Hz RINEX data file containing dual frequency phase and code observations used in the position solutions;	YES/NO	
	e. For the known fixed location, the precision and accuracy estimates;	YES/NO	
	f. Illustration that the specific RTCM-SSR message types (1057, 1058, 1059, 1061 and 1062) have been accessed and are being used to compute the phase quality positions. At a minimum this will be accomplished by using NRCan’s HPGPS*C RTCM-SSR corrections at the times specified in the “Time-of-Estimate” record fields in c). To request access to NRCan’s NTRIP Caster, contact Information@geod.nrcan.gc.ca .	YES/NO	

Table A3

FAILURE TO MEET ANY OF THE MANDATORY CRITERIA AS STATED ABOVE IN TABLES A1, A2 AND A3 WILL RESULT IN THE BIDDER’S PROPOSAL BEING CONSIDERED AS NON-COMPLIANT AND THE BIDDER’S PROPOSAL WILL NOT BE FURTHER CONSIDERED IN THE EVALUATION PROCESS.