



RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Bid Receiving Public Works and Government
Services Canada/Réception des
soumissions/Travaux publics et Services
gouvernementaux Canada
See herein for bid submission
instructions/
Voir la présente pour les
instructions sur la présentation
d'une soumission
NA
Ontario

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 High Speed Camera	
Solicitation No. - N° de l'invitation W6448-22C019/A	Date 2022-01-18
Client Reference No. - N° de référence du client W6448-22C019	
GETS Reference No. - N° de référence de SEAG PW-\$KIN-555-8577	
File No. - N° de dossier KIN-1-56142 (555)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM Eastern Standard Time EST on - le 2022-02-02 Heure Normale du l'Est HNE	
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: Webster, Sean	Buyer Id - Id de l'acheteur kin555
Telephone No. - N° de téléphone (873) 354-9545 ()	FAX No. - N° de FAX (613) 545-8067
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATIONAL DEFENCE . PETAWAWA Ontario 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

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

Delivery Required - Livraison exigée See Herein – Voir ci-inclus	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

TABLE OF CONTENTS

PART 1 - GENERAL INFORMATION	4
1.1 REQUIREMENT	4
1.2 DEBRIEFINGS	4
1.3 EPOST CONNECT SERVICE	4
PART 2 - BIDDER INSTRUCTIONS	5
2.1 STANDARD INSTRUCTIONS, CLAUSES AND CONDITIONS.....	5
2.2 SUBMISSION OF BIDS.....	5
2.3 ENQUIRIES - BID SOLICITATION.....	5
2.4 APPLICABLE LAWS.....	5
2.5 BID CHALLENGE AND RECOURSE MECHANISMS.....	6
PART 3 - BID PREPARATION INSTRUCTIONS.....	7
3.1 BID PREPARATION INSTRUCTIONS	7
PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION	8
4.1 EVALUATION PROCEDURES.....	8
4.2 BASIS OF SELECTION.....	9
PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION	10
5.1 CERTIFICATIONS REQUIRED WITH THE BID	10
5.2 CERTIFICATIONS PRECEDENT TO CONTRACT AWARD AND ADDITIONAL INFORMATION	10
PART 6 - RESULTING CONTRACT CLAUSES	11
6.1 SECURITY REQUIREMENTS	11
6.2 REQUIREMENT	11
6.3 STANDARD CLAUSES AND CONDITIONS.....	11
6.4 TERM OF CONTRACT	11
6.5 AUTHORITIES	11
6.6 PAYMENT	12
6.7 INVOICING INSTRUCTIONS	13
6.8 CERTIFICATIONS AND ADDITIONAL INFORMATION.....	13
6.9 APPLICABLE LAWS.....	13
6.10 PRIORITY OF DOCUMENTS	13
6.11 DEFENCE CONTRACT	14
6.12 <i>SACC MANUAL</i> CLAUSES	14
6.13 DISPUTE RESOLUTION.....	14
6.14 INSPECTION AND ACCEPTANCE.....	14
6.15 CONDITION OF MATERIAL – CONTRACT.....	14
ANNEX A	15
REQUIREMENT.....	15
ANNEX B	19
BASIS OF PAYMENT	19
ANNEX C TO PART 3 OF THE BID SOLICITATION	20
ELECTRONIC PAYMENT INSTRUMENTS.....	20

Solicitation No. - N° de l'invitation
W6448-22C019/C
Client Ref. No. - N° de réf. du client
W6448-22-C019

Amd. No. - N° de la modif.
File No. - N° du dossier
KIN-1-56142

Buyer ID - Id de l'acheteur
KIN555
CCC No./N° CCC - FMS No./N° VME

ANNEX D	21
ADDITIONAL CERTIFICATIONS	21

Solicitation No. - N° de l'invitation
W6448-22C019/C
Client Ref. No. - N° de réf. du client
W6448-22-C019

Amd. No. - N° de la modif.
File No. - N° du dossier
KIN-1-56142

Buyer ID - Id de l'acheteur
KIN555
CCC No./N° CCC - FMS No./N° VME

PART 1 - GENERAL INFORMATION

1.1 Requirement

The requirement is detailed under Annex A of the resulting contract clauses.

1.2 Debriefings

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

1.3 epost Connect service

This bid solicitation requires bidders to use the epost Connect service provided by Canada Post Corporation to transmit their bid electronically. Bidders must refer to Part 2 entitled Bidder Instructions, and Part 3 entitled Bid Preparation Instructions, of the bid solicitation, for further information.

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

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

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

The [2003](#) (2020-05-28) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

2.2 Submission of Bids

Bids must be submitted only through the Epost Connect electronic submission system by the date and time indicated on page 1 of the bid solicitation:

Epost Email Address:

TPSGC.orreceptiondessoumissions-orbidreceiving.PWGSC@tpsgc-pwgsc.gc.ca

Note: Bids will not be accepted if emailed directly to this email address. This email address is to be used to open an epost Connect conversation, as detailed in Standard Instructions [2003](#), or to send bids through an epost Connect message if the bidder is using its own licensing agreement for epost Connect.

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than 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.

2.4 Applicable Laws

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

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.

2.5 Bid Challenge and Recourse Mechanisms

- (a) Several mechanisms are available to potential suppliers to challenge aspects of the procurement process up to and including contract award.
- (b) Canada encourages suppliers to first bring their concerns to the attention of the Contracting Authority. Canada's [Buy and Sell](#) website, under the heading "[Bid Challenge and Recourse Mechanisms](#)" contains information on potential complaint bodies such as:
- Office of the Procurement Ombudsman (OPO)
 - Canadian International Trade Tribunal (CITT)
- (c) Suppliers should note that there are **strict deadlines** for filing complaints, and the time periods vary depending on the complaint body in question. Suppliers should therefore act quickly when they want to challenge any aspect of the procurement process.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

Canada requests that the Bidder submits its bid in accordance with section 08 of the 2003 standard instructions. The epost Connect system has a limit of 1GB per single message posted and a limit of 20GB per conversation.

The bid must be gathered per section and separated as follows:

Section I: Technical Bid
Section II: Financial Bid
Section III: Certifications

Due to the nature of the bid solicitation, bids transmitted by facsimile and hard copy will not be accepted.

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

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

Bidders must submit their financial bid in accordance with the Basis of Payment.

3.1.1 Electronic Payment of Invoices – Bid

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

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

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

3.1.2 Exchange Rate Fluctuation

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

Section III: Certifications

Bidders must submit the certifications and additional information 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 and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation

4.1.1.1 Mandatory Technical Criteria

The Bidder must demonstrate that their proposed product meets or exceeds the following Mandatory Technical Evaluation Criteria. For each specification for which the bidder intends to bid, the bidder must include a reference to supporting technical documents included with their bid, such as literature, brochures, and/or specifications of their proposed product, where it is clearly demonstrated that their proposed product meets the specification. If any of the product specifications are missing from the supporting technical documentation, then the Bidder must provide a narrative to demonstrate how that equipment meets that particular specification.

MTC #	Mandatory Technical Criterion (MTC)	Page # of Bid Demonstrating MTC
MTC1	The High Speed Camera shall operate fully in the following environmental conditions: a. Temperature: 0 to 40 C (32 to 104 F); and b. Relative Humidity: up to 85% (no condensation).	The Bidder shall provide results of performance tests and/or third party certifications that the High Speed Camera is capable of operation throughout the range of environmental conditions listed in section 5.3.
MTC2	The High Speed Camera shall: a. Have an on/off switch; b. Be compatible with the following power sources (via external adapter(s)); i. AC Voltage: 100-240 VAC at 50-60 hz; and ii. DC Voltage: 18-36 VDC c. Have an internal or external battery to permit operation and retention of data loss of AC power.	The Bidder shall provide a brochure, technical specification and operator manual, as required, that confirms the High Speed Camera being offered meets the power requirements as specified in section 5.5.
MTC3	Sensor a. A 12 bit ADC CMOS image sensor with the following specifications: i. Color depth: RGB, each 12-bit (Bayer color filter method; and ii. Resolution: 20um pixels. b. Have adjustable ISO settings;	The Bidder shall provide a brochure, technical specification and operator manual, as required, that confirms the High Speed Camera being offered meets the general features as specified in section 6.2.

	c. Have an integrated active cooling device; d. Have a low light operations mode equal to or better than ISO; and sensitivity of 50,000 (monochrome) and 15,000 (full color)	
MTC4	Resolution a. Have a minimum resolution of 1024 x 1024 at a frame rate of 12,000 frames per second (fps); b. Permit operation at a frame rate of up to no less than 1,000,000 fps at lower resolution; and c. Operate throughout the range of shutter speeds independent of frame rate.	The Bidder shall provide a brochure, technical specification and operator manual, as required, that confirms the High Speed Camera being offered meets the resolution features as specified in section 6.3.

4.1.2 Financial Evaluation

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

The evaluated price will be the firm unit price for Annex B – Basis of Payment item 1.

4.2 Basis of Selection

4.2.1 Basis of Selection – Mandatory Technical Criteria

SACC Manual Clause A0031T (2010-08-16), Basis of Selection – Mandatory Technical Criteria

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

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

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, 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 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 will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

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

5.2 Certifications Precedent to Contract Award and Additional Information

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

5.2.1 Integrity Provisions – Required Documentation

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

5.2.2 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 available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#) website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>).

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

PART 6 - RESULTING CONTRACT CLAUSES

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

6.1 Security Requirements

6.1.1 There is no security requirement applicable to the Contract.

6.2 Requirement

The Contractor must provide the items detailed under the "Requirement" at Annex A.

6.3 Standard Clauses and Conditions

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

6.3.1 General Conditions

[2010A](#) (2020-05-28), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

6.4 Term of Contract

6.4.1 Period of the Contract

The period of the Contract is from date of Contract to 2022-05-31 inclusive.

6.4.2 Delivery Date

All the deliverables must be received on or before 2022-03-31.

6.4.3 Delivery Points

Delivery of the requirement will be made to delivery point(s) specified at Annex A of the Contract.

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Sean Webster
Title: Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch
Directorate: Ontario Region – Kingston Acquisitions
Address: N/A
Telephone: 873-354-9545
Facsimile: N/A
E-mail address: Sean.Webster@pwgsc.gc.ca

Solicitation No. - N° de l'invitation
W6448-22C019/C
Client Ref. No. - N° de réf. du client
W6448-22-C019

Amd. No. - N° de la modif.
File No. - N° du dossier
KIN-1-56142

Buyer ID - Id de l'acheteur
KIN555
CCC No./N° CCC - FMS No./N° VME

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

6.5.2 Project Authority

The Project Authority for the Contract is **(To be completed prior to contract award)**:

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.

6.5.3 Contractor's Representative

Name: _____
Title: _____
Telephone: _____
Facsimile (if available): _____
E-mail address: _____

6.6 Payment

6.6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm lot price as specified in Annex B for a cost of \$ _____. Customs duties are included and Applicable Taxes are extra.

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

6.6.2 Limitation of Price

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

6.6.3 Single Payment

SACC Manual Clause H1000C (2008-05-12) Single Payment

6.6.4 Electronic Payment of Invoices – Contract

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

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI);
- e. Wire Transfer (International Only);

6.7 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 address shown on page 1 of the Contract for certification and payment.
 - b. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

6.8 Certifications and Additional Information

6.8.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

6.9 Applicable Laws

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

6.10 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 2010A (2020-05-28) Goods (Medium Complexity);
- (c) Annex A, Requirement;

- (d) Annex B, Basis of Payment; and
- (e) the Contractor's bid dated _____ (

6.11 Defence Contract

SACC Manual clause [A9006C](#) (2012-07-16) Defence Contract

6.12 SACC Manual Clauses

SACC Manual Clause G1005C (2016-01-28) Insurance – No Specific Requirement

6.13 Dispute Resolution

- (a) The parties agree to maintain open and honest communication about the Work throughout and after the performance of the contract.
- (b) The parties agree to consult and co-operate with each other in the furtherance of the contract and promptly notify the other party or parties and attempt to resolve problems or differences that may arise.
- (c) If the parties cannot resolve a dispute through consultation and cooperation, the parties agree to consult a neutral third party offering alternative dispute resolution services to attempt to address the dispute.
- (d) Options of alternative dispute resolution services can be found on Canada's Buy and Sell website under the heading "[Dispute Resolution](#)".

6.14 Inspection and Acceptance

The Project Authority is the Inspection Authority. All reports, deliverable items, documents, goods and all services rendered under the Contract are subject to inspection by the Inspection Authority or representative. Should any report, document, good or service not be in accordance with the requirements of the Statement of Work and to the satisfaction of the Inspection Authority, as submitted, the Inspection Authority will have the right to reject it or require its correction at the sole expense of the Contractor before recommending payment.

6.15 Condition of Material – Contract

The Contractor must provide material that is new production of current manufacture supplied by the principal manufacturer or its accredited agent. The material must conform to the latest issue of the applicable drawing, specification and part number, as applicable, that was in effect on the bid closing date.

ANNEX A

REQUIREMENT

TITLE: High Speed Camera

1. Scope

The Department of National Defence (DND) has a requirement for the supply and delivery of a High Speed Camera.

2. Delivery

- 2.1 Delivery of the High Speed Camera must take place on or before 31 March 2022
- 2.2 Delivery Location:
DDP Incoterms 2010
CFB Petawawa,
46 Centurion Rd.
K8H 2X3
Attn: Dean Hiscock

3. Acronyms

ADC	Analog to Digital Conversion
BNC	Bayonet Neill-Concelman Connector
CMOS	Complementary Metal Oxide Semiconductor
HD-SDI	High Definition Serial Digital Interface
IRIG	Inter-Range Instrumentation Group
ISO	International Standards Organization
NTSC	National Television System Committee
I/O	Input/ Output
SSD	Solid State Drive
TTL	Transistor to Transistor Logic

4. Requirements High Speed Camera

4.1 Parts and service

The contractor must have a distributor for parts and services in Canada and/or the United States.

4.2 Environmental Specifications

The High Speed Camera must operate fully in the following environmental conditions:

- a. Temperature: 0 to 40 C (32 to 104 F); and
- b. Relative Humidity: up to 85% (no condensation).

4.3 Weight/ Size

The High Speed Camera must have a weight and size that permits portability and is compatible with existing operating jigs and carrying cases:

Have a maximum body size (excluding protrusions) as follows:

- a. Length: a maximum of 30.48 cm (12 in);
- b. Width: a maximum of 15.24 cm (6 in);
- c. Height: a maximum of 15.24 cm (6 in); and
- d. Have a weight (including batteries) of no more than 7 kg (15.4 pounds).

4.4 Power

The High Speed Camera must:

- a. Have an on/off switch;
- b. Be compatible with the following power sources (via external adapter(s));
 - i. AC Voltage: 100-240 VAC at 50-60 hz; and
 - ii. DC Voltage: 18-36 VDC
- c. Have an internal or external battery to permit operation and retention of data loss of AC power.

General Features

5. The high Speed Camera must have the following features:

5.1 Body

A rugged, sealed body to prevent dust and other particles damaging electronics and withstand environmental or manufactured pressure.

5.2 Sensor

- a. A 12 bit ADC CMOS image sensor with the following minimum specifications:
 - i. Color depth: RGB, each 12-bit (Bayer color filter method; and
 - ii. Resolution: 20um pixels.
- b. Have adjustable ISO settings;
- c. Have an integrated active cooling device;
- d. Have a low light operations mode equal to or better than ISO; and sensitivity of 50,000 (monochrome) and 15,000 (full color)

5.3 Resolution

- a. Have a minimum resolution of 1024 x 1024 at a frame rate of 12,000 frames per second (fps);
- b. Permit operation at a frame rate of up to no less than 1,000,000 fps at lower resolution; and
- c. Operate throughout the range of shutter speeds independent of frame rate.

5.4 Shutter

- a. Have an electric shutter capable of operating at a minimum of 1ms to 0.2us;
- b. Have a finger activated trigger that connects to the camera via a BNC cable;

- c. Be capable of using event markers within an image sequence in real time;
- d. Be capable of synchronization to a master camera and other external triggering devices (such as a global positioning device) via TTL;
- e. Have an internal synchronous clock; and
- f. Accept external synchronization and signal sources that are IRIG compatible.

5.5 Input/Output

- a. Have the following inputs (minimum):
 - i. High-speed Gigabit Ethernet port for interfacing to a personal computer;
 - ii. I/O port for external triggering; and
 - iii. I/O port for the remote keypad.
- b. Have the following outputs (minimum):
 - i. NTSC video out via BNC connector; and
 - ii. HD-SDI video out via BNC connector.

5.6 File Formatting

- a. Have an uncompressed video native file format;
- b. Permits saving images in formats including (but not limited to):
 - i. Joint Photographic Experts Group;
 - ii. Audio Visual Interleave;
 - iii. Tagged Image File Format;
 - iv. Bitmap;
 - v. Raw; and
 - vi. Portable Network Graphics.
- c. Store the following metadata for each image:
 - i. Frame rate;
 - ii. Shutter speed;
 - iii. Trigger mode;
 - iv. Date and time;
 - v. Status;
 - vi. Real time;
 - vii. Frame count; and
 - viii. Resolution.
- d. Capable of displaying caption information within each frame.

5.7 Lens compatibility

- a. Compatible with Nikon G-Type, C-mount lenses utilizing removable adapters.

5.8 Memory

- a. Have an internal recording memory of a minimum 16 Gigabytes;
- b. If the internal recording memory is less than 64 gigabytes, it must be upgradable to 64 by DND personnel without the use of technical or repair services;

- b. have a removable SSD of at least 1 Terabyte, upgradable to 4 Terabytes;
- c. Permits partitioning of the memory; and
- d. Permits image data to be downloaded while simultaneously recording to a new partition.

5.9 Software

- a. Compatible with Windows 10 (64 bit).

6. Accessories

- 6.1 The following accessories compatible with the High Speed Camera must be provided:
- a. Licensed software for the operation and calibration of the camera, and image replay and analysis;
 - b. One (1) mechanical shutter that permits remote black balance;
 - c. One (1) hard copy and one (1) electronic copy of the Operators Manual, in English, with illustrated operating, preventive and user maintenance and safety instructions;
 - d. One (1) hard copy and one (1) electronic copy of the Maintenance Manual, in English, with first and second line repairs; and
 - e. The Operator and Maintenance Manuals may be provided in one manual.

Solicitation No. - N° de l'invitation
W6448-22C019/C
Client Ref. No. - N° de réf. du client
W6448-22-C019

Amd. No. - N° de la modif.
File No. - N° du dossier
KIN-1-56142

Buyer ID - Id de l'acheteur
KIN555
CCC No./N° CCC - FMS No./N° VME

ANNEX B

BASIS OF PAYMENT

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit prices, as specified below. All prices are in Canadian Dollars, applicable taxes excluded, if applicable, and to be shown as a separate item on any resulting invoice. Canadian customs duties and excise taxes included, DDP Incoterms 2010. Pricing must be in firm unit prices including all costs associated with providing the following requirement.

Pricing Basis A

Items to be delivered on or before March 31st 2022.

Item	Description	Product Information	Quantity	Firm Unit Price
1	High Speed Camera <ul style="list-style-type: none">- A High speed camera as per the requirements in Annex A;- Licensed software for the Operation and Calibration of the camera, replay, and analysis;- One mechanical shutter that permits remote black balance	Manufacturer: _____ Model: _____	1	\$ _____

Solicitation No. - N° de l'invitation
W6448-22C019/C
Client Ref. No. - N° de réf. du client
W6448-22-C019

Amd. No. - N° de la modif.
File No. - N° du dossier
KIN-1-56142

Buyer ID - Id de l'acheteur
KIN555
CCC No./N° CCC - FMS No./N° VME

ANNEX C to PART 3 OF THE BID SOLICITATION

ELECTRONIC PAYMENT INSTRUMENTS

The Bidder accepts any of the following Electronic Payment Instrument(s):

- VISA Acquisition Card;
- MasterCard Acquisition Card;
- Direct Deposit (Domestic and International);
- Electronic Data Interchange (EDI);
- Wire Transfer (International Only);

ANNEX D

ADDITIONAL CERTIFICATIONS

1. Board of Directors

In accordance with the [Ineligibility and Suspension Policy](#), Section 17, Offerors are required to provide a list of their Board of Directors before Standing Offer issuance. Offerors are requested to provide this information in their bid.

Director Name/Position - _____ Director
Name/Position - _____ Director
Name/Position - _____ Director
Name/Position - _____ Director
Name/Position - _____ Director
Name/Position - _____ Director
Name/Position - _____ Director
Name/Position - _____ Director

2. Procurement Business Number (PBN)

In accordance with Section 2, Procurement Business Number, of the Standard Instructions, Offerors are required to have a Procurement Business Number (PBN) before Standing Offer issuance.

Procurement Business Number - _____

Offerors may register for a PBN online at [Supplier Registration Information](#). For non-Internet registration, Offerors may contact the InfoLine at 1-800-811-1148 to obtain the telephone number of the nearest Supplier Registration Agent.