

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Réception des soumissions - TPSGC / Bid
Receiving - PWGSC
1550, Avenue d'Estimauville
1550, D'Estimauville Avenue
Québec
Québec
G1J 0C7

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 AT optical design & analysis		
Solicitation No. - N° de l'invitation W7701-145740/A	Date 2014-05-08	
Client Reference No. - N° de référence du client W7701-14-5740		
GETS Reference No. - N° de référence de SEAG PW-\$QCL-018-15940		
File No. - N° de dossier QCL-3-36121 (018)	CCC No./N° CCC - FMS No./N° VME	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-06-03		Time Zone Fuseau horaire Heure Avancée de l'Est HAE
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>		
Address Enquiries to: - Adresser toutes questions à: Piras, Gabriel		Buyer Id - Id de l'acheteur qcl018
Telephone No. - N° de téléphone (418) 649-2870 ()		FAX No. - N° de FAX (418) 648-2209
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: R & D POUR LA DÉFENSE CANADA - VALCARTIER BATIMENT 53 2459 ROUTE DE LA BRAVOURE QUÉBEC Québec G3J1X5 Canada		

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

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

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

Issuing Office - Bureau de distribution

TPSGC/PWGSC
601-1550, Avenue d'Estimauville
Québec
Québec
G1J 0C7

Solicitation No. - N° de l'invitation

W7701-145740/A

Amd. No. - N° de la modif.

File No. - N° du dossier

QCL-3-36121

Buyer ID - Id de l'acheteur

qcl018

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

W7701-14-5740

CCC No./N° CCC - FMS No/ N° VME

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TITLE : PROFESSIONAL SUPPORT FOR OPTICAL DESIGN, SIMULATION AND ANALYSIS

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TITLE : PROFESSIONAL SUPPORT FOR OPTICAL DESIGN, SIMULATION AND ANALYSIS

PART 1 - GENERAL INFORMATION

PART 1 - GENERAL INFORMATION

1. Introduction

The bid solicitation 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 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 Annexes include the Statement of Work, the Basis of Payment, the Contractor Disclosure of Foreground Information Form and the DND 626, Task Authorization Form.

2. Summary

2.1 Objectives

This contract includes a firm portion and a portion to be performed on an "as and when requested basis" using a Task Authorization (TA).

Task 1: Firm portion of the Work - Optical design of eyepiece for image intensifier tube

In this task, the Contractor must design, simulate and analyse afocal optics or eyepiece for commercial available image intensifier tubes.

Portion of the Work to be performed on an "as and when requested basis" using a Task Authorization (TA). - Design, simulation, analysis and integration of optical systems

The objectives of this portion of the Work are :

- Task 2 Perform design, simulation and analysis;
- Task 3 Perform literature survey and analysis (literature survey in open literatures, patents, commercial sources such as company product information and specifications; current state-of-the-art designs, performance, advantages and disadvantages)

- Task 4 Provide support on system integration and characterization.
- Task 5 Perform electro-optical studies on devices and components
- Task 6 Perform optical and metrology characterization and measurement

This portion of the Work is related to is related to :

- Optics, which includes study, design and measurement of optics with lens and mirrors
- Optical systems, which includes study, design and measurement of optical systems which consist of multiple optical elements such as lens and mirrors
- Optical properties of optical devices and components, which includes study and measurement of optical properties of existing and novel detectors, filters and thin films .
- The optics, optical systems, optical devices and/or optical components may be part of electro-optical systems like ultra violet, visible, near infrared, shortwave infrared, midwave infrared, longwave infrared, THz and millimeter wave systems.

For information purposes: the value of a TA should rarely exceed \$ 40,000.00.

2.2 Additional Information :

The organization for which the services are to be rendered is Defence Research and Development Canada - Valcartier (DRDC - Valcartier).

The period of the Contract is from date of Contract to March 31st, 2017, inclusive. Firm portion of the Work must be completed no later than 16 weeks after Contract award.

Estimated amount of available funding for this Contract : \$850,000.00, Applicable Taxes extra.

Defence Research and Development Canada - Valcartier has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada.

Bidders must provide a list of names, or other related information as needed, pursuant to section 01 of Standard Instructions 2003.

For services requirements, Bidders in receipt of a pension or a lump sum payment must provide the required information as detailed in article 3 of Part 2 of the bid solicitation.

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

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

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 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

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 (2014-03-01) 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: one hundred twenty (120) days

1.1 SACC Manual Clauses

A7035T(2007-05-25), List of Proposed Subcontractors

2. Submission of Bids

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

Bid Receiving - PWGSC
1550, D'Estimauville Avenue
Quebec, Quebec
G1J 0C7

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

3. Former Public Servant

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

Definitions

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

- (i) an individual;
- (ii) an individual who has incorporated;
- (iii) a partnership made of former public servants; or
- (iv) 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:

- (i) name of former public servant;
- (ii) 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:

- (i) name of former public servant;
- (ii) conditions of the lump sum payment incentive;

- (iii) date of termination of employment;
- (iv) amount of lump sum payment;
- (v) rate of pay on which lump sum payment is based;
- (vi) period of lump sum payment including start date, end date and number of weeks;
- (vii) 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

4. Communications - Solicitation Period

All enquiries must be submitted in writing to the Contracting Authority, preferably via email at gabriel.piras@tpsgc-pwgsc.gc.ca, **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.

5. 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.

6. Basis for Canada's Ownership of Intellectual Property

Canada has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada on the following grounds:

The Treasury Board, granted Defence Research and Development Canada exemption from the Treasury Board Policy on "Title to Intellectual Property Arising Under Crown Procurement Contracts"

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 (5 hard copies) |
| Section II: | Financial Bid (2 hard copies) |
| Section III: | Certifications (1 hard copy) |

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

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

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

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

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

1.1 Section I : Technical Bid

- (a) In their technical 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 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.

- (b) The technical bid consists of the following:
 - (i) **All the information required to demonstrate its conformity with the Mandatory and Point Rated Technical Criteria** described in Sections 1.1.2 and 1.1.3, Part 4, of this document.

1.2 Section II : Financial Bid

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

(a) For the firm portion of the Work (Section 4 of the Statement of Work in Annex A) :

A Total Cost to a Ceiling Price. The total amount of Applicable Taxes is to be shown separately. The information must be provided in accordance with the **Financial Bid Presentation Sheet at Attachment 3.**

(b) For the portion of the Work to be performed on an "as and when requested basis" using a Task Authorization (Section 5 of the Statement of Work in Annex A) :

A firm all-inclusive hourly rate for each resource proposed, for each year of the contract period. The information must be provided in accordance with the **Financial Bid Presentation Sheet in Attachment 3.**

(c) No travel and living expenses will be paid for services provided within the Quebec Region (including DRDC Valcartier facilities.) Further, Canada will not accept any travel and living expenses for travel between the contractor's place of business and the Quebec region (including DRDC Valcartier facilities). All these cost must be included in the firm all-inclusive hourly rates.

(d) Prices must be in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

1.2.1 Exchange Rate Fluctuation

C3011T (2013-11-06), Exchange Rate Fluctuation

1.3 Section III : Certifications

Bidders must submit the certifications required under Part 5.

1.3.1 Renseignements supplémentaires

Bidders must provide a list of names, or other related information as needed, pursuant to section 01 of Standard Instructions 2003.

For services requirements, Bidders in receipt of a pension or a lump sum payment must provide the required information as detailed in article 3 of Part 2 of the bid solicitation.

Canada requests that bidders provide the following information :

Administrative representative :

Name : _____
Telephone : _____
Facsimile : _____
Email : _____

Technical representative :

Name : _____
Telephone : _____
Facsimile : _____
Email : _____

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 and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

1.1 Technical Evaluation

1.1.1 Bidder Experience

Except where expressly provided otherwise, the experience described in the bid must be the experience of the Bidder itself (which includes the experience of any companies that formed the Bidder by way of a merger but does not include any experience acquired through a purchase of assets or an assignment of contract). The experience of the Bidder's affiliates (i.e. parent, subsidiary or sister corporations), subcontractors, or suppliers will not be considered.

1.1.2 Mandatory Technical Criteria

Refer to Attachment 2, Mandatory and Point Rated Technical Criteria.

1.1.2 Point Rated Technical Criteria

Refer to Attachment 2, Mandatory and Point Rated Technical Criteria.

1.2 Financial Evaluation

1.2.1 Evaluation of Price

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

For evaluation purposes only, the price of the bid will be determined as detailed in Attachment 1, Evaluation of Price.

2. Basis of Selection

2.1 Basis of Selection - Highest Combined Rating of Technical Merit and Price

- 1. To be declared responsive, a bid must:
 - (a) comply with all the requirements of the bid solicitation;
 - (b) meet all mandatory criteria; and
 - (c) obtain the required minimum points for each criterion and each group of criteria with a pass mark; and
- 2. Bids not meeting (a) or (b) or (c) will be declared non-responsive.
- 3. The evaluation will be based on the highest responsive combined rating of technical merit and price. The ratio will be 50% for the technical merit and 50% for the price.

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 50%.
5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 50%.
6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
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 50/50 ratio of technical merit and price, respectively. The total available points equal 135, the lowest evaluated price for the firm portion of the Work is 25,000.00 \$ (25) the lowest evaluated price for the Task Authorization (TA) portion of the Work 738,210.95 \$ (738).

The weighting is as follows:
Technical Note: 50%
Price for the firm portion of the work: 20%
Price for the TA portion of the work: 30%

Basis of Selection - Highest Combined Rating Technical Merit (50%) and Price (50%)

	Bidder		
	Bidder 1	Bidder 2	Bidder 3
Overall Technical Score	115/135	89/135	92/135
Evaluated Price for the firm portion of the Work	25 000,00 \$	30 000,00 \$	35 000,00 \$
Evaluated Price for the TA portion of the Work	738 210,95 \$	762 913,89 \$	1 048 875,16 \$
	Calculs		
Technical Merit Score	$115/135 \times 50 = 42.6$	$89/135 \times 50 = 33.0$	$92/135 \times 50 = 34.1$
Pricing Score for the firm portion of the Work	$25,000/25,000 \times 20 = 20$	$25,000/30,000 \times 20 = 16.7$	$25,000/35,000 \times 20 = 14.3$
Pricing Score for the TA portion of the Work	$738,210.95 / 738,210.95 \times 30 = 30$	$738,210.95 / 762,913.89 \times 30 = 29.0$	$738,210.95 / 1,048,875.16 \times 30 = 21.1$
Combined Rating	92.6	78.7	69.5
Overall Rating	1^{er}	2^e	3^e

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 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 (*OR insert 2004, as applicable*). 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" 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.

2. Additional Certifications Required Precedent to Contract Award

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

2.1 Canadian Content Certification

This procurement is limited to Canadian services.

The Bidder certifies that:

() the service(s) offered is(are) a Canadian service as defined in paragraph 2 of clause A3050T.

2.1.1 SACC *Manual* clause A3050T (2010-01-11), Canadian Content Definition.

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, by submitting a bid, 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. Failure to comply with the request may result in the bid being declared non-responsive.

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. 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.

2.4 Language Capability

The Bidder certifies that it has the language capability required to perform the Work, as stipulated in the Statement of Work.

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Buyer ID – id de l’acheteur
qcl018

PART 6 - FINANCIAL REQUIREMENTS

1. Financial Capability

SACC Manual 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.

1. Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work at Annex A and the Contractor's technical bid entitled _____ (to be completed at Contract award), dated _____ (to be completed at Contract award).

1.1 Task Authorization

The Work or a portion of the Work to be performed under the Contract will be on an "as and when requested basis" using a Task Authorization (TA). The Work described in the TA must be in accordance with the scope of the Contract.

1.1.1 Task Authorization Process

1. The DND Procurement Authority will provide the Contractor with a description of the task using the DND 626, Task Authorization Form specified in Annex D.
2. The Task Authorization (TA) will contain the details of the activities to be performed, a description of the deliverables, and a schedule indicating completion dates for the major activities or submission dates for the deliverables. The TA will also include the applicable basis(bases) and methods of payment as specified in the Contract.
3. The Contractor must provide the DND Procurement Authority, within five (5) calendar days of its receipt, the proposed total estimated cost for performing the task and a breakdown of that cost, established in accordance with the Basis of Payment specified in the Contract. When it is required by DND Procurement Authority, the contractor must also provide a technical proposal that must include one or many of the following items :
 - (a) a description of the understanding of objectives and scope of the work,
 - (b) a description of the approach and methodology that will be put forward to perform the work,
 - (c) a description of the anticipated deliverables,
 - (d) an estimation of the level of success anticipated for the activities to be performed,
 - (e) the deviations proposed to the requirements,
 - (f) an identification of the major risks and a mitigation plan for each of them,
 - (g) a complete work schedule and a prioritization of the activities to be performed.

The Contractor will not be paid for preparing or providing its response or for providing other information required to prepare and issue the TA.

4. The Contractor must not commence work until a TA authorized by the DND Procurement Authority has been received by the Contractor. The Contractor

acknowledges that any work performed before a TA has been received will be done at the Contractor's own risk.

1.1.2 Task Authorization Limit

The DND Procurement Authority may authorize individual task authorizations up to a limit of **\$75,000.00**, Applicable Taxes included, inclusive of any revisions.

Any task authorization to be issued in excess of these limits must be authorized by the Contracting Authority before issuance.

1.1.3 Task Authorization - Department of National Defence

The administration of the Task Authorization process will be carried out by **The Procurement and Payment group at Defence Research and Development Canada - Valcartier, represented by the DND Procurement Authority**. This process includes monitoring, controlling and reporting on expenditures of the contract with task authorizations to the Contracting Authority.

1.2 Disclosure Certification

On completion of the Work, the Contractor must submit to the Technical Authority and to the Contracting Authority a copy of the Contractor Disclosure of Foreground Information attached as Annex C stating that all applicable disclosures were submitted.

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.

2.1 General Conditions

2040 (2014-03-01), General Conditions - Research & Development, apply to and form part of the Contract.

2.2 SACC Manual Clauses

K3410C (2008-12-12), Canada to Own Intellectual Property Rights in Foreground Information
K3305C (2008-05-12), License to Intellectual Property Rights in Foreground Information

3. Security Requirement

There is no security requirement applicable to this Contract.

4. Term of Contract

4.1 Period of the Contract

The period of the Contract is from date of Contract to March 31st, 2017, inclusive.

4.2 Delivery Date

For the firm portion of the Work (Section 4 of the Statement of Work in Annex A) :

All the deliverables must be received no later than 16 weeks after date of Contract.

5. Authorities

5.1 Contracting Authority

The Contracting Authority for the Contract is:

Gabriel Piras
Public Works and Government Services Canada
601-1550 D'Estimauville
Québec, QC.
G1J 0C7

Telephone: 418-649-2870
Facsimile: 418-649-2209
E-mail address: Gabriel.Piras@tps qc.pwgsc.qc.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.

5.2 Technical Authority (to be completed at Contract award)

The Technical Authority for the Contract is:

Name : _____
Organization: _____
Telephone: _____
Facsimile: _____
E-mail address: _____

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

5.3 Contractor's Representative (to be completed at Contract award)

Administrative representative :

Name : _____
Telephone : _____
Facsimile : _____

Technical representative :

Name : _____
Telephone : _____
Facsimile : _____

Email : _____

Email : _____

5.4 DND Procurement Authority (to be completed at Contract award)

The DND Procurement Authority for the Contract is:

Name : _____
Organization: _____
Telephone: _____
Facsimile: _____
E-mail address: _____

The DND Procurement Authority is the representative of the department or agency for whom the Work is being carried out under the Contract. The DND Procurement Authority is responsible for the implementation of tools and processes required for the administration of the Task Authorizations. The Contractor may discuss administrative matters identified in Task Authorizations with the DND Procurement Authority however the DND Procurement Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of Work can only be made through a contract amendment issued by the Contracting Authority.

6. Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with [Contracting Policy Notice: 2012-2](#) of the Treasury Board Secretariat of Canada.

7. Payment

7.1 Basis of Payment

(i) Basis of Payment - Ceiling Price - For the firm portion of the Work :

For the Work described in Section 4 of the Statement of Work in Annex A :

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work, plus a profit, as determined in accordance with the Basis of in Annex B, to a ceiling price of \$ _____ (insert amount at contract award). Customs duties are included and Applicable Taxes are extra.

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

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.

(ii) Professional Services provided under a Task Authorization subject to a Firm Price:

In consideration of the Contractor satisfactorily completing all of its obligations under the authorized Task Authorization (TA), the Contractor will be paid a firm price in accordance with the basis of payment, in Annex B, as specified in the authorized TA. 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 authorized, in writing, by the Contracting Authority before their incorporation into the Work.

(iii) Professional Services provided under a Task Authorization subject to a Ceiling Price :

The Contractor will be reimbursed its costs reasonably and properly incurred in the performance of the Work, plus a profit, as determined in accordance with the Basis of Payment in Annex B, to the ceiling price specified in the approved TA. Customs duties are included and Applicable Taxes are extra.

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

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.

(iv) Professional Services provided under a Task Authorization subject to a Limitation of Expenditure :

The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work specified in the authorized Task Authorization (TA), as determined in accordance with the Basis of Payment in Annex B, to the limitation of expenditure specified in the authorized TA.

Canada's liability to the Contractor under the authorized TA must not exceed the limitation of expenditure specified in the authorized TA. Customs duties are included and Applicable Taxes are extra.

No increase in the liability of Canada or in the price of the Work specified in the authorized TA resulting from any design changes, modifications or interpretations of the Work will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been authorized, in writing, by the Contracting Authority before their incorporation into the Work.

(v) Travel and Living Expenses :

There will be no travel time or travel and living expenses payable for services rendered within 50 kilometres from Defence Research and Development Canada - Valcartier, located at 2459 Pie-XI Blvd North, Quebec City, Quebec.

For services rendered further than 50 kilometres from Defence Research and Development Canada - Valcartier, the Contractor will be paid its actual travel time in accordance with the hourly rates detailed in Annex B, Basis of Payment.

The Contractor will be reimbursed for the authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for overhead or profit, in accordance with the meal, private vehicle and incidental expense allowances specified in Appendices B, C and D of the Travel Directive, and with the other provisions of the directive referring to "travellers", rather than those referring to "employees".

All travel must have the prior authorization of the Technical Authority.

7.2 Canada's Obligation - Portion of the Work - Task Authorizations

Canada's obligation with respect to the portion of the Work under the Contract that is performed through task authorizations is limited to the total amount of the actual tasks performed by the Contractor.

7.3 Limitation of Expenditure

1. Canada's total liability to the Contractor under the Contract must not exceed **\$850,000.00**. Customs duties are included and Applicable Taxes are extra.
2. No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Work, will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been approved, in writing, by the Contracting Authority before their incorporation into the Work. The Contractor must not perform any work or provide any service that would result in Canada's total liability being exceeded before obtaining the written approval of the Contracting Authority. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:
 - (a) when it is 75 percent committed, or
 - (b) four (4) months before the contract expiry date, or
 - (c) as soon as the Contractor considers that the contract funds provided are inadequate for the completion of the Work,whichever comes first.
3. If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

7.4 Method of Payment

7.4.1 Payments will be made not more frequently than once a month.

7.4.2 For the firm portion of the Work (Section 4 of the Statement of Work in Annex A) :

7.4.2.1 Progress Payments

- (a) Canada will make progress payments in accordance with the payment provisions of the Contract, no more than once a month, for cost incurred in the performance of the Work, up to 90 percent of the amount claimed and approved by Canada if:

- (i) an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment (<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;
 - (ii) the amount claimed is in accordance with the basis of payment;
 - (iii) the total amount for all progress payments paid by Canada does not exceed 90 percent of the total amount to be paid under the Contract;
 - (iv) all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.
- (b) The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of the item if the Work has been accepted by Canada and a final claim for the payment is submitted.
- (c) Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the rights to make adjustments to the Contract from time to time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

7.4.3 For the portion of the Work to be performed on an "as and when requested basis" using a Task Authorization (Section 5 of the Statement of Work in Annex A) :

Depending on the method of payment specified in the applicable TA, one of the following methods of payment clauses will apply.

7.4.3.1 Single Payment (For a Firm Price TA, for a TA subject to a Limitation of Expenditure or a Ceiling Price)

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

- (a) an accurate and complete claim for payment using PWGSC-TPSGC 1111, Claim for Progress Payment, and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- (b) all such documents have been verified by Canada;
- (c) the Work delivered has been accepted by Canada.

7.4.3.2 Milestone Payments (For a Firm Price TA)

For any task authorization issued under the Contract that includes a schedule of milestone payments to be made once specific portions of the work have been completed and accepted, Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Task Authorization and the payment provisions of the Contract if:

- (a) an accurate and complete claim for milestone payment using PWGSC-TPSGC 1111, Claim for Progress Payment, 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.

7.4.3.3 Progress Payments (For a TA subject to a Limitation of Expenditure or a Ceiling Price)

- (a) Canada will make progress payments in accordance with the payment provisions of the Task Authorization and the Contract, no more than once a month, for costs incurred in the performance of the Work up to 90 percent of the amount claimed and approved by Canada if:
 - (i) an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
 - (ii) the amount claimed is in accordance with the Basis of Payment and the Task Authorization;
 - (iii) the total amount for all progress payments paid by Canada does not exceed 90 percent of the total amount to be paid under the Task Authorization.
 - (iv) all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.
- (b) The balance of the amount payable will be paid in accordance with the payment provisions of the Task Authorization and the Contract upon completion and delivery of all work required under the Task Authorization if the Work has been accepted by Canada and a final claim for the payment is submitted.
- (c) Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the right to make adjustments to the Contract from time to time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

7.5 SACC Manual Clauses

A9117C (2007-11-30), T1204 - Direct Request by Customer Department
C0305C (2008-05-12), Cost Submission

7.6 Discretionary Audit

SACC Manual Clause C0705C (2010-01-11), Discretionary Audit

8. Invoicing Instructions

1. The Contractor must submit a claim for payment using form PWGSC-TPSGC 1111. Form PWGSC-TPSGC 1111 is available at the following Website <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>

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 Task Authorization (TA) number, as applicable;
 - (d) the description of the milestone invoiced, as applicable.
2. For the firm portion of the Work (Section 4 of the Statement of Work in Annex A) and for TAs subject to a Limitation of Expenditure, a Ceiling Price or a Firm Price, each invoice must be supported by :
 - (a) a list of all expenses, in accordance with the TA;
 - (b) a copy of time sheets to support the time claimed;
 - (c) a copy of the invoices, receipts, vouchers for all direct expenses, travel and living expenses;
 - (d) a copy of the monthly progress report.
 3. 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.
 4. The Contractor must prepare and certify one original and two (2) copies of the claim on form PWGSC-TPSGC 1111, and forward it to the Contracting Authority for certification.

ATTN: Mrs Micheline Naud
Public Works and Government Services Canada
601-1550 D'Estimauville
Québec, QC.
G1J 0C7

The Contracting Authority will then forward the original and two (2) copies of the claim to the Technical Authority for appropriate certification after inspection and acceptance of the Work takes place, and onward submission to the Payment Office for the remaining certification and payment.

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

9. Certifications

9.1 Compliance

Compliance with the certifications and related documentation provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the Contract. If the Contractor does not comply with any certification, provide the related documentation 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.

9.2 SACC Manual Clauses

A3060C (2008-05-12), Canadian Content Certification

10. Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____. (*The province or territory will be specified at Contract award.*)

11. Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the general conditions 2040 (2014-03-01), General Conditions - Research & Development;
- (c) Annex A, Statement of Work;
- (d) Annex B, Basis of Payment;
- (e) Annex C, Contractor Disclosure of Foreground Information;
- (f) Annex D, DND 626, Task Authorization Form;
- (g) the signed Task Authorizations (including all of its annexes, if any);
- (h) the Contractor's bid dated _____ (*date of bid to be inserted at Contract award*)

12. Defence Contract

SACC Manual clause A9006C (2008-05-12), Defence Contract

13. Foreign Nationals (Canadian Contractor)

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

14. Insurance

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

15. Progress Reports

1. The Contractor must submit monthly reports, on the first business day of each month, in electronic format, on the progress of the Work, to both the Technical Authority and the Contracting Authority.
2. The progress report must contain two parts:

(a) PART 1 : The Contractor must answer the following three questions:

- (i) Is the project on schedule?
- (ii) Is the project within budget?
- (iii) Is the project free of any areas of concern in which the assistance or guidance of Canada may be required?

Each negative response must be supported with an explanation.

(b) PART 2 : A narrative report, brief, yet sufficiently detailed to enable both the Technical Authority and the Contracting Authority to evaluate the progress of the Work, containing as a minimum:

- (i) A description of the progress of each task and of the Work as a whole during the period of the report. Sufficient sketches, diagrams, photographs, etc., must be included, if necessary, to describe the progress accomplished.
- (ii) An explanation of any variation from the work plan.
- (iii) A description of trips or conferences connected with the Contract during the period of the report.
- (iv) A description of any major equipment purchased or constructed during the period of the report.

ANNEX A

STATEMENT OF WORK

1. General

1.1 Title

Design, simulation, analysis and integration of optical systems

1.2 Background

Optics and optical systems are important to all electro-optical devices and systems, optical surveillance and soldier systems in military operations. These optical systems may be part of electro-optical systems like wide band, multispectral or hyperspectral imaging or non-imaging systems, laser systems, interferometric systems, polarization imaging or non-imaging systems, etc. of spectrum in one or several bands covering ultra violet, visible, near infrared, shortwave infrared, midwave infrared, longwave infrared and teraHertz (THz) and millimeter wave. As this is for military systems, we are particularly keen to perform a complete optical analysis including tolerance and stray light analysis of an optical system in order to realize the best design and systems. Other topics in this work will be to study the optics, including freeform optics, and optical system characteristics including optical measurement and metrology, and assess the performance of such systems, studies of optical properties of novel optical devices and components such as electro-optical detectors and arrays, optical filters and gratings are also important in order to estimate the characteristics and performance, and to iterate the device designs, before committing to costly device fabrication phase. From selection of COTS optical components to custom optical design in a prototype systems for rapid concept demonstration, to performance validation of prototype and existing devices and systems, professional support in optical design, simulation and analysis are a must. As the requirement of military systems are in general more demanding comparing to commercial systems, it is understood that this support should be delivered by highly skilled personnel with many years of relevant experiences in optics and optical engineering. In order to support ongoing and future R&D activities at DRDC, as a result, DRDC is soliciting professional support for optical design, simulation, analysis and integration for devices and systems in this contract.

1.3 Objectives

This contract includes a firm portion and a portion to be performed on an "as and when requested basis" using a Task Authorization (TA).

Task 1: Firm portion of the Work - Optical design of eyepiece for image intensifier tube

In this task, the Contractor must design, simulate and analyse afocal optics or eyepiece for commercial available image intensifier tubes.

Portion of the Work to be performed on an "as and when requested basis" using a Task Authorization (TA). - Design, simulation, analysis and integration of optical systems

The objectives of this portion of the Work are :

- Task 2 Perform design, simulation and analysis;

- Task 3 Perform literature survey and analysis (literature survey in open literatures, patents, commercial sources such as company product information and specifications; current state-of-the-art designs, performance, advantages and disadvantages)
- Task 4 Provide support on system integration and characterization.
- Task 5 Perform electro-optical studies on devices and components
- Task 6 Perform optical and metrology characterization and measurement

This portion of the Work is related to is related to :

- Optics, which includes study, design and measurement of optics with lens and mirrors
- Optical systems, which includes study, design and measurement of optical systems which consist of multiple optical elements such as lens and mirrors
- Optical properties of optical devices and components, which includes study and measurement of optical properties of existing and novel detectors, filters and thin films .
- The optics, optical systems, optical devices and/or optical components may be part of electro-optical systems like ultra violet, visible, near infrared, shortwave infrared, midwave infrared, longwave infrared, THz and millimeter wave systems.

For information purposes: the value of a TA should rarely exceed \$ 40,000.00.

2. ACRONYMS

THz	teraHertz
PST	Point-source-transmittance
CAD	Computer aided design
MTF	Modulation Transfer Function
PSF	Point Spread Function
OPD	Optical path difference
EFL	Effective focal length

3. RELATED DOCUMENTS

No reference is provided.

4. TASK 1: FIRM PORTION OF THE WORK - OPTICAL DESIGN OF EYEPiece FOR IMAGE INTENSIFIER TUBE

4.1 Statement of Work

The Contractor must design, simulate and analyse afocal optics or eyepiece for commercially available image intensifier tubes. The image intensifier tubes used in this task must have these typical characteristics:

(1) The image orientation of the image intensifier could be either right-side-up or up-side-down with the use of inverting or non-inverting fiber optic element at the exit of the image intensifier. The choice of image orientation will be considered based on designs of the afocal optics.

(2) The surface of this fiber optic element is curved for improved image quality for the entire field-of-view.

In addition, the afocal optics must

- (1) provide 1X magnification;
- (2) provide 40 degrees field-of-view to the eye;
- (3) have diopter adjustment of +4 to -6;
- (4) have an eye relief about 25mm, or between 20 and 30mm.
- (5) have image distortion of less than 2%;
- (6) have a brightness distribution of larger than 85% at the image edge;
- (7) have optical transmission in the green spectrum of over 90%;
- (8) have stray light ratio of less than 3%;

As such, this task consists of the following activities:

The Contractor must:

- Perform optical design of afocal optics for image intensifier tube
- Perform optical simulation of such design over the entire field-of-view for Modulation Transfer Function (MTF), Point Spread Function (PSF), image distortion, optical path difference (OPD), Ray-Fan, brightness distribution
- Perform opto-mechanical design for the lens barrel
- Perform athermalization analysis between -51 and 49 degree C
- Perform tolerance analysis on afocal optics and lens barrel between -51 and 49 degree C
- Perform stray light analysis
- Report all technical data and analysis

The dimension and the curvature of the output image surface of the image intensifier tube will be provided to the Contractor by DRDC at the beginning of the task.

4.2 Reports and Other Deliverables

The deliverables of Task 1 will consist of materials of the corresponding activities which are to be included in two progress reports and one final report. More specifically,

Progress Report 1 (Six weeks after Contract Award)

- Methodology
- Optical design for afocal optics

- Simulation results (Zemax, CodeV) of MTF, PSF, OPD, Ray-Fan, image distortion, brightness distribution, athermalization

Progress Report 2 (Ten weeks after Contract Award)

- Methodology
- Opto-mechanical design of lens barrel
- Results on athermalization analysis
- Tolerance analysis, and stray light analysis by ASAP tool of the optical design

Final Report (Sixteen weeks after Contract award)

- Objective
- Methodology
- Final design (lens materials, coatings, sketches and drawings) of afocal optics and lens barrel
- Athermalization analytical results
- Tolerance analytical results (surface roughness, temperatures, dimension, lens element position and alignment)
- Stray light analysis results

The simulation work must be performed by recognized, commercial optical modelling software such as Zemax, CodeV, ASAP.

The above information requested in progress reports or final report must be included each in two paper copies and one electronic copy in Adobe PDF or MSWord in either official language.

5. TASKS 2 TO 6 : PORTION OF THE WORK TO BE PERFORMED ON AN "AS AND WHEN REQUESTED BASIS" USING A TASK AUTHORIZATION (TA)

Design, simulation, analysis and integration of optical systems

5.1 Statement of Work

The Contractor must provide the services described in tasks 2 to 6 below. The tasks will be carried out on an "as and when requested basis" through task authorizations (TAs). A TA may refer to more than one task and the same task may be repeated several times during the term of the contract.

Task 2 Perform design, simulation and analysis

The Contractor must perform design, simulation and analysis regarding optics and optical systems. DRDC will select optics and optical systems for study, simulation and analysis in this task.. The task may include, but is not limited to the following activities:

- Propose design and specification of optics and optical systems
- Perform preliminary study on selected optics and optical systems such as parameters and optical properties of various components

- Perform optical simulations on selected optics and optical systems
- Analyze simulation results for optimisation purposes and modify the simulated optics and optical systems for subsequent simulations and analysis if required
- Provide technical support on opto-mechanical design regarding integration aspect between the optics, optical systems and camera systems
- Perform stray light analysis to identify ghost and scatter paths, point-source-transmission (PST) analysis
- Perform tolerance analysis on selected optics and optical systems

Task 3 Perform literature survey and analysis

The Contractor must perform literature survey and subsequent analysis regarding optics, optical systems and devices. This task may include, but is not limited to the following activities:

- Perform literature survey in open literatures, patents, commercial sources such as company product information and specifications
- Perform analysis on the findings including but not limited to current state-of-the-art designs, performances, advantages and disadvantages in general and specifically regarding the project requirements

Task 4 Provide support on system integration and characterization

The Contractor must provide support on system integration and characterization. This task may include, but is not limited to the following activities:

- Provide technical support on opto-mechanical design regarding integration aspect between the optics, optical systems and camera systems such as dimensions and CAD drawings of optics and optical systems; modifying designs (forms, spacing, mounting schemes and fixing points, etc.) according to global system design to facilitate integration;
- Provide support on integrating optics and optical systems to camera systems such as mounting components and global system integration
- Provide support on optical analysis of performance characterization of the final camera systems

Task 5 Perform optical device and component studies

The Contractor must provide service to study optical properties on optical devices and detectors, filters and thin films. This task may include, but is not limited to the following activities:

- Perform optical simulation and analysis on existing and novel detector designs to determine detector efficiency such as spectral transmission and reflection
- Perform optical simulation and analysis on existing and novel optical filters to determine its optical properties such as spectral transmission and reflection
- Perform optical simulation and analysis on existing and novel thin films to determine its optical properties such as spectral transmission and reflection
- Provide recommendation regarding the design to alter and modify the properties above

Task 6 Perform optical and metrology characterization and measurement

The Contractor must provide service to perform optical measurement and metrology on optics and optical systems. This task may include, but is not limited to the following activities:

- Characterize and measure optical components and optical systems such as effective focal length (EFL), refractive index, magnification, aberrations, axial color, F-number, Modulation Transfer Function (MTF)
- Characterize and measure optical metrology such as surface form, waviness and roughness

5.2 Reports and Other Deliverables

Deliverables for Task 2 - Perform design, simulation and analysis

- Design and specification of optics and optical systems
- Results of preliminary study on selected optics and optical systems such as parameters and optical properties of various components
- Results of optical simulations on selected optics and optical systems
- Analysis results for optimisation purposes and technical details of modifications on the simulated optics and optical systems for subsequent simulations and analysis if required
- Technical details on opto-mechanical design regarding integration aspect between the optics, optical systems and camera systems such as recommendations and drawings/schematics with respect to existing designs/requirements
- Results of ghost and scatter paths analysis, stray light path identification analysis and point-source-transmittance (PST) analysis
- Results of tolerance analysis
- Results of optical design, simulation and analysis must be presented on Zemax (latest version) or equivalent, CodeV (version 10.3 or later) or ASAP (Version 2010 or later).
- Results of design and simulation must be presented on ASAP (Version 2010 or later) for stray light analysis.

Deliverables for Task 3 - Perform literature survey and analysis

- Open literatures, patents, commercial sources such as company product information and specifications
- Analysis on the findings may include, but not limited to current state-of-the-art designs, performance, advantages and disadvantages in general and specifically regarding to project requirements

Deliverables for Task 4 - Provide support on system integration and characterization

- Lists of identified sources and selected components
- Results of optical measurement and characterization of procured optics and optical systems as well as custom design optics and optical systems

Deliverables for Task 5 - Perform optical device and component studies

- Results of optical simulation and analysis on existing and novel detector designs such as optical transmission and reflection
- Results of optical simulation and analysis on existing and novel optical filters on optical properties (spectral transmission and reflection)

- Results of optical simulation and analysis on existing and novel thin films on optical properties (spectral transmission and reflection)
- Recommendations on alternating designs of existing and novel optical device

Deliverables for Task 6 - Perform optical measurement and metrology

- Results of optical measurement of components and systems such as effective focal length (EFL), refractive index, magnification, aberrations, axial color, F-number, Modulation Transfer Function (MTF)
- Results of metrology measurement such as surface form, waviness and roughness

Deliverables for each task authorization

- Monthly progress report as specified in the section entitled "Periodic Reports."
- The contractor must summarise and describe the project and the results obtain during task authorization. A copy must be initially submitted as draft in electronic version to the Technical Authority for review and comments. The Technical Authority will take approximately 10 working days to review and return comments to the Contractor. The final version of the report must be delivered in 2 printed and unbounded copies and formatted in accordance with DRDC standard. These standards are available through the Technical Authority. A PDF and an MS office (Word) electronic version must be included with the printed final report.

The report must include at least, but not limited to, the following information :

Abstract and Executive summary in both English and French;

Introduction

Main sections including:

- Description and features of the concepts;
- Concepts drawings;
- Assumptions;
- All data and results which include design, simulation, analysis, test, integration procedures, lists of components and parts, CAD files and source codes
- Advantages, disadvantages, challenges, technology readiness and risk level evaluation and assessment; and
- Any risk reduction activities

Recommendations and conclusion

6 PUBLICATIONS

Any manuscript for publication in magazines, newspapers or other, including presentation summaries or other types of publication, must be submitted to the Technical Authority for revision and approval at least ninety (90) days before the date of the presentation or publication. An explicit reference regarding federal government funding must be included, and it must be clearly mentioned that the content is the authors' responsibility. The Technical Authority will provide a written objection if there are specific elements (e.g. audience) that are not in the federal government's best interests. If the Technical Authority objects in writing, he/she shall send the written objection to the organization responsible for publication (the newspaper or conference).

7. MEETINGS

One kickoff meeting will be held at the beginning of the Contract.

Meetings will be held at the start and end of the work performed for a given task. During the process of carrying out a task, meetings will be held monthly. It is not required to separate meetings by task, and every effort should be made to ensure that if two or more tasks are carried out simultaneously, the meetings will be held at the same time. The meetings may be held in person, by teleconference or by videoconference. A meeting in person will be held on beginning of the first task and thereafter at least once a year.

The Contractor will be responsible for the agendas and the minutes of these meetings.. The Contractor must deliver the minutes of the meetings within one week from the meeting occurrence. The minutes of meetings must be provided in electronic copy in PDF and MS Office software suite format.

8. GOVERNMENT SUPPLIED MATERIAL (GSM)

None.

9. GOVERNMENT FURNISHED EQUIPMENT (GFE)

None.

10. SPECIAL CONSIDERATIONS

The Contractor must provide the equipments and software required to perform the work (E.g. : Zemax (latest version) or equivalent, ASAP (2010 version or later), CodeV (version 10.3 or later), NvThermIP (Jan 2006 version or later) or equivalent e.g. Triangle Orientation Discrimination (TOD) or Thermal Range Model (TRM3), optical test bench, interferometer, confocal microscope, confocal chromatic aberration, optical profilometer, stylus contact profilometer, etc.)

11. WORK LOCATION

The work will be performed at the Contractor site.

DELIVERABLES

In addition to the disclosure obligation under Section 28 of the general conditions 2040, any Foreground Information must be fully disclosed and documented by the Contractor in the technical reports delivered by the Contractor to the Technical Authority under this Contract.

ANNEX A

BASIS OF PAYMENT

(to be completed at Contract award)
**(Bidders must submit their financial bid in accordance with
the Financial Bid Presentation Sheet at Attachment 3)**

Part A - For the firm portion of the Work (Section 4 of the Statement of Work in Annex A) :

A1. LABOUR: at firm all-inclusive rates, Applicable Taxes extra, in accordance with the following:

Proposed Resources	Firm Hourly Rate
Project manager 1. _____	\$ _____
Category "Senior Scientist / Senior Engineer" 1. _____ 2. _____ 3. _____	\$ _____ \$ _____ \$ _____
Category "Intermediate Scientist / Intermediate Engineer" 1. _____ 2. _____ 3. _____	\$ _____ \$ _____ \$ _____
Category Technologist 1. _____ 2. _____ 3. _____	\$ _____ \$ _____ \$ _____

Est.: \$ _____

A2. EQUIPMENT: at laid down cost without markup

Est.: \$ _____

A3. RENTALS: at actual cost without markup

Est.: \$ _____

A4. MATERIALS AND SUPPLIES: at laid down cost without markup

Est.: \$ _____

A5. TRAVEL AND LIVING EXPENSES: in accordance with Section 7.1(v)
of the Contract.

Est.: \$ _____

A6. SUBCONTRACTS (EXCEPT RESOURCES PROPOSED IN SECTION 1 - LABOUR): at actual
cost without markup

Est.: \$ _____

A7. OTHER DIRECT CHARGES: at actual cost without markup

Est.: \$ _____

CEILING PRICE - **\$ _____ (Applicable Taxes extra)**
FIRM PORTION OF THE WORK *(Amount to be inserted at Contract Award)*

With the exception of the firm rate(s) and price(s), the amounts shown in the various items specified above are estimates only. Minor changes to these estimates will be accepted for billing purposes as the Work proceeds, provided that these changes have the prior approval of the Technical Authority, and provided that the cost does not exceed the aforementioned Ceiling Price.

Part B - Portion of the Work to be performed on an "as and when requested basis" using a Task Authorization (Section 5 of the Statement of Work in Annex A) :

B1. LABOUR :

The Contractor agrees to provide the following resources as and when requested by Canada at the following firm all inclusive rates (in accordance with the Payment provisions of the Contract) :

Proposed Resources	Firm Hourly Rate		
	Date of Award to 31 March 2015	From 2015-04-01 to 2016-03-31	From 2016-04-01 to 2017-03-31
Project manager 1. _____	\$ _____	\$ _____	\$ _____
Category "Senior Scientist / Senior Engineer" 1. _____ 2. _____ 3. _____	\$ _____ \$ _____ \$ _____	\$ _____ \$ _____ \$ _____	\$ _____ \$ _____ \$ _____
Category "Intermediate Scientist / Intermediate Engineer" 1. _____ 2. _____ 3. _____	\$ _____ \$ _____ \$ _____	\$ _____ \$ _____ \$ _____	\$ _____ \$ _____ \$ _____
Category Technologist 1. _____ 2. _____ 3. _____	\$ _____ \$ _____ \$ _____	\$ _____ \$ _____ \$ _____	\$ _____ \$ _____ \$ _____

B2. EQUIPMENT: at laid down cost without markup

B3. RENTALS: at actual cost without markup

B4. MATERIALS AND SUPPLIES: at laid down cost without markup

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Client Ref No. – N° de réf. du client
W7701-14-5740

Amd. No. – N° de la modif.
File No. – N° du dossier
QCL-3-36121

Buyer ID – id de l'acheteur
qcl018

-
- B5. TRAVEL AND LIVING EXPENSES:** in accordance with Section 7.1(v) of the Contract.
- B6. SUBCONTRACTS (EXCEPT RESOURCES PROPOSED IN SECTION 1 - LABOUR):** at actual cost without markup
- B7. OTHER DIRECT CHARGES:** at actual cost without markup

**Estimated Cost to a Limitation of Expenditure-
"Task Authorization" portion of the Work**

**\$ _____ (Applicable
Taxes extra)**
*(Amount to be inserted at
Contract Award)*

ANNEX C

CONTRACTOR DISCLOSURE OF FOREGROUND INFORMATION

Please refer to **Article 1 - Interpretation of 2040 General Conditions** for the definition of Foreground Information to determine what information must be disclosed.

The Contractor must provide the following information::

1. Contract No.:
2. What is the descriptive title of the FIP (Foreground Intellectual Property)?
3. Abbreviated description of the FIP and, if applicable, of the different systems and sub-systems.
4. What is or was the objective of the project?
5. Explain how the FIP meets the objective of the project (for example: the advantage of the new solution, what problem did the FIP resolve or what benefits did the FIP deliver).
6. Under which category (ies) would you best describe the FIP and why: Patents, Inventions, Trade Secrets, Copyright, Industrial Designs, Rights in Integrated Circuit Topography, Know-how, Other?
7. Describe the features or aspects of the FIP that are novel, useful and not obvious.
8. Has the FIP been tested or demonstrated? If yes, please summarise the results.
9. Has any publication or disclosure to others been made? If so, to whom, when, where and how?
10. Provide names and addresses of the inventors.
11. Provide an explicit and detailed description of the FIP developed during the contract (Refer to pertinent section of the technical report, if necessary).

Please specify name and position of person approving / authorizing this disclosure. This person is to sign and date the disclosure.

Signature	Date
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Name	Title
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(Internal DRDC Valcartier)

Signature	Date
-----------	------

Name	Title (Technical authority)
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ANNEX D

DND 626 TASK AUTHORIZATION FORM

The DND 626, *Task Authorization Form*, which is enclosed, is to be inserted at this point and forms part of this document.

ATTACHMENT 1

EVALUATION OF PRICE

For evaluation purposes only, the price of the bid will be determined as follows :

1 - Financial Bid

Bidders must submit their financial bid in accordance with the **Financial Bid Presentation Sheet in Attachment 3**.

2 - Price for the firm portion of the Work (Section 4 of the Statement of Work in Annex A) :

The "Price for the firm portion of the Work" for a given bid is equal to the estimated cost subject to a Ceiling Price indicated in the Financial Bid for the firm portion of the Work.

3 - Price for the TA portion of the Work (Section 5 of the Statement of Work in Annex A) :

The "Price for the TA portion of the Work" for a given bid is equal to the evaluated price for the Portion of the Work to be performed on an "as and when requested basis" using a Task Authorization. The "Price for the TA portion of the Work" for a given bid will be calculated as follows :

Price for the TA portion of the Work = Cost of labour for the TA portion of the Work

The Cost of labour for the TA portion of the Work will be calculated as set out in section 4 below

The Cost of labour for the TA portion of the Work will be evaluated on the basis of the following estimated level of effort :

Project manager	10%
Category "Senior Scientist / Senior Engineer"	35%
Category "Intermediate Scientist / Intermediate Engineer"	35%
Category Technologist	20%

4 - Cost of labour for the TA portion of the Work :

To establish labour costs, the effort available in terms of hours (see last column in Table 5.1, below) must be determined. The effort available for each resource category will be calculated as follows:

$$\text{Effort available} = \frac{[\text{Total anticipated available funding}] \times [\text{Approximate percentage use}]}{[\text{Average hourly rate for the resource category}]}$$

The cost of labour for a given category (for a given bid) is then obtained by multiplying the effort available by the average hourly rate provided for the given category (for a given bid).

Lastly, the cost of labour is calculated by adding the labour costs per category for a given bid.

For example:

- Anticipated funding for the work = \$850,000

- Percentage of use for “PM” = 10%
- If the average hourly rate for bid A = \$90, that for bid B = \$75 and that for bid C = \$120, then the average hourly rate for the resource category = \$95.00.

Therefore,

- Effort available $\$850,000 \times 0.10 / \$95.00 = 894.7$ hours

and

- Labour costs for PM, bid a
=894.7 hours x \$90 = \$80 526,32.
- Labour costs for PM, bid b
=894.7 hours x \$75 = \$67 105,26
- Labour costs for PM, bid c
=894.7 hours x \$120 = \$107 368,42.

5- Sample calculations for the price of the three bids

Table 5.1 - Sample calculations for the three bids

Resource category	% of use	Rate A	Price for A	Rate B	Price for B	Rate C	Price for C	Qty
Project manager	10%	90,00 \$	80 526,32 \$	75,00 \$	67 105,26 \$	120,00 \$	107 368,42 \$	894,7
Category “Senior Scientist / Senior Engineer”	35%	60,00 \$	218 571,43 \$	75,00 \$	273 214,29 \$	110,00 \$	400 714,29 \$	3642,9
Category “Intermediate Scientist / Intermediate Engineer”	35%	90,00 \$	303 113,21 \$	75,00 \$	252 594,34 \$	100,00 \$	336 792,45 \$	3367,9
Category Technologist	20%	60,00 \$	136 000,00 \$	75,00 \$	170 000,00 \$	90,00 \$	204 000,00 \$	2266,7
TOTAL :			738 210,95 \$		762 913,89 \$		1 048 875,16 \$	

The “percentages of use” listed in the table are provided solely for the purpose of determining the estimated price for each bid. They represent approximate needs, provided in good faith, and should not be considered as a contractual guarantee.

These rates are provided as an example only and must not be interpreted as an indicator of the experience of the labour categories.

ATTACHMENT 2

MANDATORY AND POINT RATED TECHNICAL CRITERIA

1. Mandatory Technical Criteria

At bid closing time, the Bidder must comply with the following mandatory technical criteria and provide the necessary documentation to support compliance. Any bid which fails to meet the following mandatory technical criteria will be declared non-responsive. Each criterion should be addressed separately.

Note : Listing experience without providing any supporting data to describe where and how such experience was obtained will result in the experience not being included for evaluation

- a) The bidder must propose one or more project manager(s) with a minimum of 24 months of experience in R&D project management. The project manager(s) can also work on technical tasks in the contract.
- b) The bidder must propose the minimum number of resources indicated below for each of the following categories (the same individual can be proposed for more than one resource category):
 - 1. Category: “Senior Scientist / Engineer” (minimum 3 resources)
 - 2. Category: “Intermediate Scientist / Engineer” (minimum 2 resources)
 - 3. Category: “Technologist” (minimum 1 resource)
- c) Resources proposed as “Senior Scientist / Engineer” or “Intermediate Scientist / Engineer” must have completed a Master degree or a PhD degree in Optical Sciences, Optical Engineering, Physics or engineering physics. Some of the resources proposed as “Senior Scientist / Engineer” must have completed a PhD degree in Optical Sciences, Optical Engineering, Physics or engineering physics.
- d) Resource(s) proposed as “Technologist” must have completed technical diploma in a program relevant to this Contract (e.g. : electrical, electronic, mechanical or computer technologist diploma).

2. Point Rated Technical Criteria

Each technical offer that meets all the mandatory requirements defined above will be evaluated and rated in terms of the following evaluation criteria:

EVALUATION CRITERIA	MIN.	MAX.
1 – Risks, Methodology, Clarity and Resources Control System	36	60
2 - TRAINING AND EXPERIENCE OF PROPOSED RESOURCES	46	94
2.1 - Category: "Senior Scientist / Engineer"	36	74
2.2 - Category: "Intermediate Scientist / Engineer"	8	16
2.3 - Category: "Technologist"	2	4
3 - BIDDER FACILITIES AND EQUIPMENT ACCESS	50	90
4 - QUALIFICATIONS OF THE BIDDER	8	20

Total score : 264 points

Section 1 criteria will be scored as follows:

Each item evaluated of the section 1 criteria will be scored out of 10 points, according to **Table 1: Qualitative Criteria Evaluation Grid** attached at the end of Section 1, and then weighted as a function of the maximum scores indicated in the table below.

Section 2, 3 and 4 criteria will be scored according to the description accompanying each of the criteria listed in the table below. Technical Bids must obtain the minimum number of points required as indicated in the table below.

DESCRIPTION	MINIMUM SCORE	MAXIMUM SCORE	EVALUATION FACTORS
1 – Risks, Methodology, Clarity and Resources Control System	36	60	
1.1 - Identification of risks	6	10	<u>For the firm portion of the Work</u> (Section 4 of the Statement of Work in Annex A), the Bidder should clearly describe all project components that could pose a risk and provide a plan for risk mitigation that would allow for the project objectives to be reached in terms of cost and schedule. The components described should be suitable and the mitigation plan realistic.

DESCRIPTION	MINIMUM SCORE	MAXIMUM SCORE	EVALUATION FACTORS
1.2 - Strategy and methodology proposed	6	10	<u>For the firm portion of the Work</u> (Section 4 of the Statement of Work in Annex A), the Bidder should clearly present its proposed technical approach and methodology. The technical approach and methodology should be coherent, relevant for carrying out the project, complete and realistic.
1.3 Phase/time allocation	6	10	<u>For the firm portion of the Work</u> (Section 4 of the Statement of Work in Annex A), the Bidder should clearly describe how they intend to allocate hours of work to each project phase. The phase/time allocation should be appropriate and realistic for this type of project. The allocation of effort to phases should be documented clearly and completely.
1.4 Assignment of personnel	6	10	<u>For the firm portion of the Work</u> (Section 4 of the Statement of Work in Annex A), the Bidder should clearly describe how they intend to assign the various tasks to their personnel and define each person's role in each task. Personnel should be assigned to tasks in a manner that is realistic, relevant and appropriate for the project. The assignment of personnel should be described clearly and completely. All personnel should be assigned a level of effort that is appropriate for the tasks. All project tasks should be covered.
1.5 - Clarity and accuracy of information provided	6	10	The bidder will be evaluated on the clarity and accuracy of the content of its proposal. The proposal should be well structured and easy to understand.

DESCRIPTION	MINIMUM SCORE	MAXIMUM SCORE	EVALUATION FACTORS
1.6 - Resource control system	6	10	The bidder should propose an appropriate resource control system. The bidder should describe how it plans to control the management of the project with regards to the evaluation of priorities, work overload, availability of resources and the quality of services offered within the task authorization process.

Table 1 : Qualitative Criteria Evaluation Grid

Non-responsive	Extremely weak	Very weak	Weak	Acceptable	Average	Above average	Exceptional
0 points	1-2 points	3-4 points	5 points	6 points	7-8 points	9 points	10 points
Did not submit information which could be evaluated	Does not meet requirements	Generally does not meet requirements	Lack of details	Just meets requirements	Meets requirements	Exceeds requirements	Far exceeds requirements
	Weaknesses cannot be corrected	Generally doubtful that weaknesses can be corrected	Weaknesses can be corrected	Weaknesses can be easily corrected	No significant weaknesses	No apparent weaknesses	No weaknesses
	Unacceptable	Extremely weak; insufficient to meet performance requirements	Little capability to meet performance requirements	Minimum acceptability; should meet minimum performance requirements	Average acceptability; should be adequate for effective results	Superior capability; should ensure effective results	Exceptional capability; should ensure extremely effective results

TRAINING AND EXPERIENCE OF PROPOSED RESOURCES

- For each category of resources (“Senior Scientist / Engineer”, “Intermediate Scientist / Engineer” and Technologist”) the bidder should provide the names and curriculum vitae of the resources proposed.
- The same person can be proposed for more than one resource category. Each individual will be evaluated separately and the total score for the criterion will be the average.
- The minimum score indicated should be achieved by the team average and not by each of the resources proposed.
- The months experience is defined by the number of months that the proposed resource has worked on projects relevant with the rated items. Therefore, the Bidder should describe each project as follows:
 - title
 - client name, including the name and telephone number of a client contact person who can confirm the information;
 - start and end dates;
 - brief description;
 - relevant involvement and responsibility of the proposed resources within the project
 - number of months that the proposed resources worked on the project.

DESCRIPTION	MINIMUM SCORE	MAXIMUM SCORE	EVALUATION FACTORS
2 - TRAINING AND EXPERIENCE OF PROPOSED RESOURCES	46	94	
2.1 - Category: “Senior Scientist / Engineer”			
2.1.1 – Months of experience in design, simulation and analysis of optics	2	4	<ul style="list-style-type: none"> - less than 36 months of experience : 0 point - between 36 and 59 months experience : 2 points - between 60 and 96 months experience : 3 points - more than 96 months experience : 4 points
2.1.2 – Number of projects directly related to design, simulation and analysis of optics To be considered, the value of the project must be at least 10000,00\$ and it must have been completed since 1995. Also, and the resource must have been directly involved in the design, simulation and analysis part of the project.	4	10	<ul style="list-style-type: none"> - less than 5 projects : 0 point - between 5 and 9 projects : 4 points - between 10 and 14 projects : 6 points - more than 14 projects : 10 points

DESCRIPTION	MINIMUM SCORE	MAXIMUM SCORE	EVALUATION FACTORS
<p>2.1.3– Number of projects involving in freeform optical design, simulation or analysis</p> <p><u>Only two individuals will be evaluated for this criterion. One of two must have a PhD degree in Optical Sciences, Optical Engineering, Physics or engineering physics. The Bidder should specify the name of the two individuals.</u></p> <p>To be considered, the value of the project must be at least 10000,00\$ and it must have been completed since 1995. Also, and the resource must have been directly involved in freeform optical design, simulation or analysis part of the project.</p>	2	4	<ul style="list-style-type: none"> - between 1 and 3 projects : 2 points - more than 3 projects : 4 points
<p>2.1.4 – Number of projects involving in wide angle (larger than 80 degrees in horizontal field-of-view) or panoramic optical design, simulation or analysis</p> <p><u>Only two individuals will be evaluated for this criterion. One of two must have a PhD degree in Optical Sciences, Optical Engineering, Physics or engineering physics. The Bidder should specify the name of the two individuals.</u></p> <p>To be considered, the value of the project must be at least 10000,00\$ and it must have been completed since 1995. Also, and the resource must have been directly involved in wide angle or panoramic optical design, simulation or analysis part of the project.</p>	4	8	<ul style="list-style-type: none"> - between 1 and 3 projects : 2 points - between 4 and 6 projects: 4 points - more than 6 projects : 8 points

DESCRIPTION	MINIMUM SCORE	MAXIMUM SCORE	EVALUATION FACTORS
<p>2.1.5 – Number of projects involving in afocal optical design, simulation or analysis</p> <p><u>Only two individuals will be evaluated for this criterion. One of two must have a PhD degree in Optical Sciences, Optical Engineering, Physics or engineering physics. The Bidder should specify the name of the two individuals.</u></p> <p>To be considered, the value of the project must be at least 10000,00\$ and it must have been completed since 1995. Also, and the resource must have been directly involved in afocal optical design, simulation or analysis part of the project.</p>	4	8	<ul style="list-style-type: none"> - between 1 and 3 projects : 2 points - between 4 and 6 projects: 4 points - more than 6 projects : 8 points
<p>2.1.6 - Experiences of the resource with optical softwares</p> <ul style="list-style-type: none"> - 60 months of experience with Zemax or equivalent - 60 months of experience with CodeV or equivalent - 36 months of experience with ASAP or equivalent - 12 months of experience with NvThermIP or equivalent e.g. Triangle Orientation Discrimination (TOD) or Thermal Range Model (TRM3) 	8	16	<ul style="list-style-type: none"> - Zero software : 0 point - One softwares : 4 point - Two software : 8 points - Three softwares : 12 points - Four softwares : 16 points

DESCRIPTION	MINIMUM SCORE	MAXIMUM SCORE	EVALUATION FACTORS
<p>2.1.7 – Number of projects involving in stray light analysis</p> <p><u>Only one individual will be evaluated for this criterion. The individual must have a PhD degree in Optical Sciences, Optical Engineering, Physics or engineering physics. The Bidder should specify the name of the individual.</u></p> <p>To be considered, the value of the project must be at least 10000,00\$ and it must have been completed since 1995. Also, and the resource must have been directly involved in the stray light analysis part of the project.</p>	4	8	<ul style="list-style-type: none"> - between 1 and 3 projects : 2 points - between 4 and 6 projects: 4 points - more than 6 projects : 8 points
<p>2.1.8 – Number of projects involving in tolerance analysis</p> <p><u>Only two individuals will be evaluated for this criterion. One of two must have a PhD degree in Optical Sciences, Optical Engineering, Physics or engineering physics. The Bidder should specify the name of the two individuals.</u></p> <p>To be considered, the value of the project must be at least 10000,00\$ and it must have been completed since 1995. Also, and the resource must have been directly involved in the tolerance analysis part of the project.</p>	4	8	<ul style="list-style-type: none"> - between 1 and 3 projects : 2 point - between 4 and 6 projects: 4 - more than 6 projects : 8 points
<p>2.1.9 – Months of experience involved in analyzing results of optical measurement such as effective focal length (EFL), refractive index, magnification, aberrations, axial color, F-number, Modulation Transfer Function (MTF).</p>	2	4	<ul style="list-style-type: none"> - less than 12 months of experience : 0 point - between 12 and 35 months experience : 2 points - between 36 and 60 months experience : 3 points - more than 60 months experience : 4 points

DESCRIPTION	MINIMUM SCORE	MAXIMUM SCORE	EVALUATION FACTORS
2.1.10 – Months of experience involved in analyzing results of metrology such as Interferometry, surface form, waviness or roughness. <u>Only one individual will be evaluated for this criterion. . The individual must have a PhD degree in Optical Sciences, Optical Engineering, Physics or engineering physics. The Bidder should specify the name of the individual.</u>	2	4	<ul style="list-style-type: none"> - less than 12 months of experience : 0 point - between 12 and 23 months experience : 2 points - between 24 and 36 months experience : 3 points - more than 36 months experience : 4 points
2.2 - Category: "Intermediate Scientist / Engineer"			
2.2.1 – Months of experience in design, simulation and analysis of optics	2	4	<ul style="list-style-type: none"> - less than 12 months of experience : 0 point - between 12 and 23 months experience : 2 points - between 24 and 36 months experience : 3 points - more than 36 months experience : 4 points
2.2.2 – Number of projects directly related to design, simulation and analysis of optics To be considered, the value of the project must be at least 10000,00\$ and it must have been completed since 1995. Also, and the resource must have been directly involved in the design, simulation and analysis part of the project.	2	4	<ul style="list-style-type: none"> - less than 3 projects : 0 point - between 3 and 5 projects : 2 points - more than 5 projects : 4 points
2.2.3 - Experiences of the resource with optical softwares <ul style="list-style-type: none"> - 30 months of experience with Zemax or equivalent - 30 months of experience with CodeV or equivalent - 12 months of experience with ASAP or equivalent 	4	8	<ul style="list-style-type: none"> - Zero software : 0 point - One software : 4 points - Two or three softwares : 8 points
2.3 - Category: "Technologist"			

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DESCRIPTION	MINIMUM SCORE	MAXIMUM SCORE	EVALUATION FACTORS
2.3.1 – Months of experience in the field of optics and optical measurement	2	4	<ul style="list-style-type: none">- less than 24 months of experience : 0 point- between 24 and 35 months experience : 2 points- between 36 and 47 months experience : 3 points- more than 48 months experience : 4 points

DESCRIPTION	MINIMUM SCORE	MAXIMUM SCORE	EVALUATION FACTORS
4.1 - Experience of the bidder in the field of optical design, simulation or analysis of optical components and optical systems To be considered, the value of the project must be at least 10000.00\$ and it must have been completed since 1995.	4	10	- less than 5 projects : 0 point - between 5 and 9 projects : 4 point - between 10 and 15 projects : 6 point - more than 15 projects : 10 point
4.2 – Experience of the bidder in the field of optical design, simulation or analysis of ruggedized optical systems for military and/or space applications To be considered, the value of the project must be at least 10000.00\$ and it must have been completed since 1995.	4	10	- less than 2 projects : 0 point - between 2 and 3 projects : 4 point - between 4 and 6 projects : 6 point - more than 7 projects : 10 point

ATTACHMENT 3
FINANCIAL BID PRESENTATION SHEET

Part A - For the firm portion of the Work (Section 4 of the Statement of Work in Annex A) :

- A1.** LABOUR: At the following firm all inclusive rates (Applicable Taxes not included, including profit and overhead, including the travel and living fees for the work performed at DRDC Valcartier facility and the work performed in the Quebec City area) as follows :

BIDDERS ARE REQUESTED TO QUOTE ONE RATE PER PROPOSED RESOURCE.

If the resource works for a subcontractor, bidders must also provide the name of the subcontractor.

Proposed Resources	Firm Hourly Rate	Total Est. Hours	Extended Total per Resource
Project manager 1. _____	\$ _____	_____	\$ _____
Category "Senior Scientist / Senior Engineer" 1. _____ 2. _____ 3. _____	\$ _____ \$ _____ \$ _____	_____ _____ _____	\$ _____ \$ _____ \$ _____
Category "Intermediate Scientist / Intermediate Engineer" 1. _____ 2. _____ 3. _____	\$ _____ \$ _____ \$ _____	_____ _____ _____	\$ _____ \$ _____ \$ _____
Category Technologist 1. _____ 2. _____ 3. _____	\$ _____ \$ _____ \$ _____	_____ _____ _____	\$ _____ \$ _____ \$ _____

TOTAL ESTIMATED LABOUR: \$ _____

Items A2. through A7. shall be completed if the Bidder's rates in A1. above do not include the following:

- A2.** **EQUIPMENT:** at laid down cost without markup

Description

Price

Solicitation No – N° de l'invitation
W7701-145740/A
Client Ref No. – N° de réf. du client
W7701-14-5740

Amd. No. – N° de la modif.
File No. – N° du dossier
QCL-3-36121

Buyer ID – id de l'acheteur
qcl018

TOTAL ESTIMATED EQUIPMENT: \$ _____

A3. RENTALS: at actual cost without markup

Description

Price

TOTAL ESTIMATED RENTALS: \$ _____

A4. MATERIALS AND SUPPLIES: at laid down cost without markup

Description

Price

TOTAL ESTIMATED MATERIALS AND SUPPLIES: \$ _____

A5. SUBCONTRACTS (EXCEPT RESOURCES PROPOSED IN SECTION 1 – LABOUR) : at actual cost without markup

Support for the proposed subcontractor's price is required in the same details as that required for the Bidder's price. The estimated price for subcontracts should include all direct charges and travel & living expenses which would be to the account of the subcontractor.

TOTAL ESTIMATED SUBCONTRACTS: \$ _____

A6. TRAVEL & LIVING: in accordance with Section 7.1(v) of the Contract.
Details are to be provided.

TOTAL ESTIMATED TRAVEL & LIVING: \$ _____

A7. OTHER DIRECT CHARGES: at actual cost without markup

TOTAL ESTIMATED OTHER DIRECT CHARGES: \$ _____

CEILING PRICE - FIRM PORTION OF THE WORK :

**\$ _____
(Applicable Taxes extra)**

Part B - Portion of the Work to be performed on an "as and when requested basis" using a Task Authorization (Section 5 of the Statement of Work in Annex A) :

- B1. LABOUR :** At the following firm all inclusive rates (Applicable Taxes not included, including profit and overhead, including the travel and living fees for the work performed at DRDC Valcartier facility and the work performed in the Quebec City area) as follows :

BIDDERS ARE REQUESTED TO QUOTE ONE RATE PER PROPOSED RESOURCE, PER PERIOD.

If the ressource works for a subcontractor, bidders must also provide the name of the subcontractor.

Proposed Resources	Firm Hourly Rate		
	Proposed Contract Period		
	Date of Award to 31 March 2015	From 2015-04-01 to 2016-03-31	From 2016-04-01 to 2017-03-31
Project manager 1. _____	\$_____	\$_____	\$_____
Category "Senior Scientist / Senior Engineer" 1. _____ 2. _____ 3. _____	\$_____ \$_____ \$_____	\$_____ \$_____ \$_____	\$_____ \$_____ \$_____
Category "Intermediate Scientist / Intermediate Engineer" 1. _____ 2. _____ 3. _____	\$_____ \$_____ \$_____	\$_____ \$_____ \$_____	\$_____ \$_____ \$_____
Category Technologist 1. _____ 2. _____ 3. _____	\$_____ \$_____ \$_____	\$_____ \$_____ \$_____	\$_____ \$_____ \$_____

- B2. EQUIPMENT:** at laid down cost without markup
- B3. RENTALS:** at actual cost without markup
- B4. MATERIALS AND SUPPLIES:** at laid down cost without markup
- B5. TRAVEL AND LIVING EXPENSES:** in accordance with Section 7.1(v) of the Contract.
- B6. SUBCONTRACTS (EXCEPT RESOURCES PROPOSED IN SECTION 1 – LABOUR) :** at actual cost without markup
- B7. OTHER DIRECT CHARGES:** at actual cost without markup

TASK AUTHORIZATION
AUTORISATION DES TÂCHES

All invoices/progress claims must show the reference Contract and Task numbers. Toutes les factures doivent indiquer les numéros du contrat et de la tâche.		Contract no. – N° du contrat	
		Task no. – N° de la tâche	
Amendment no. – N° de la modification		Increase/Decrease – Augmentation/Réduction	Previous value – Valeur précédente
To – À	TO THE CONTRACTOR You are requested to supply the following services in accordance with the terms of the above reference contract. Only services included in the contract shall be supplied against this task. Please advise the undersigned if the completion date cannot be met. Invoices/progress claims shall be prepared in accordance with the instructions set out in the contract. À L'ENTREPRENEUR Vous êtes prié de fournir les services suivants en conformité des termes du contrat mentionné ci-dessus. Seuls les services mentionnés dans le contrat doivent être fournis à l'appui de cette demande. Prière d'aviser le signataire si la livraison ne peut se faire dans les délais prescrits. Les factures doivent être établies selon les instructions énoncées dans le contrat.		
Delivery location – Expédiez à			
Delivery/Completion date – Date de livraison/d'achèvement	<div>Date</div> <div>for the Department of National Defence pour le ministère de la Défense nationale</div>		
Contract item no. N° d'article du contrat	Services	Cost Prix	
		GST/HST TPS/TVH	
		Total	
APPLICABLE ONLY TO PWGSC CONTRACTS: The Contract Authority signature is required when the total value of the DND 626 exceeds the threshold specified in the contract.			
NE S'APPLIQUE QU'AUX CONTRATS DE TPSGC : La signature de l'autorité contractante est requise lorsque la valeur totale du formulaire DND 626 est supérieure au seuil précisé dans le contrat.			
<div>for the Department of Public Works and Government Services pour le ministère des Travaux publics et services gouvernementaux</div>			

Instructions for completing DND 626 - Task Authorization

Contract no.

Enter the PWGSC contract number in full.

Task no.

Enter the sequential Task number.

Amendment no.

Enter the amendment number when the original Task is amended to change the scope or the value.

Increase/Decrease

Enter the increase or decrease total dollar amount including taxes.

Previous value

Enter the previous total dollar amount including taxes.

To

Name of the contractor.

Delivery location

Location where the work will be completed, if other than the contractor's location.

Delivery/Completion date

Completion date for the task.

for the Department of National Defence

Signature of the DND person who has delegated **Authority** for signing DND 626 (level of authority based on the dollar value of the task and the equivalent signing authority in the PAM 1.4). **Note:** the person signing in this block ensures that the work is within the scope of the contract, that sufficient funds remain in the contract to cover this task and that the task is affordable within the Project/Unit budget.

Services

Define the requirement briefly (attach the SOW) and identify the cost of the task using the contractor's quote on the level of effort. The Task must use the basis of payment stipulated in the contract. If there are several basis of payment then list here the one(s) that will apply to the task quote (e.g. milestone payments; per diem rates/labour category hourly rates; travel and living rates; firm price/ceiling price, etc.). All the terms and conditions of the contract apply to this Task Authorization and cannot be ignored or amended for this task. Therefore it is not necessary to restate these general contract terms and conditions on the DND 626 Task form.

Cost

The cost of the Task broken out into the individual costed items in **Services**.

GST/HST

The GST/HST cost as appropriate.

Total

The total cost of the task. The contractor may not exceed this amount without the approval of DND indicated on an amended DND 626. The amendment value may not exceed 50% (or the percentage for amendments established in the contract) of the original value of the task authorization. The total cost of a DND 626, including all amendments, may not exceed the funding limit identified in the contract.

Applicable only to PWGSC contracts

This block only applies to those Task Authorization contracts awarded by PWGSC. The contract will include a specified threshold for DND sole approval of the DND 626 and a percentage for DND to approve amendments to the original DND 626. Tasks that will exceed these thresholds must be passed to the PWGSC Contracting Authority for review and signature prior to authorizing the contractor to begin work.

Note:

Work on the task may not commence prior to the date this form is signed by the DA Authority - for tasks within the DND threshold; and by both DND and PWGSC for those tasks over the DND threshold.

Instructions pour compléter le formulaire DND 626 - Autorisation des tâches

N° du contrat

Inscrivez le numéro du contrat de TPSGC en entier.

N° de la tâche

Inscrivez le numéro de tâche séquentiel.

N° de la modification

Inscrivez le numéro de modification lorsque la tâche originale est modifiée pour en changer la portée.

Augmentation/Réduction

Inscrivez le montant total de l'augmentation ou de la diminution, y compris les taxes.

Valeur précédente

Inscrivez le montant total précédent, y compris les taxes.

À

Nom de l'entrepreneur.

Expédiez à

Endroit où le travail sera effectué, si celui-ci diffère du lieu d'affaires de l'entrepreneur.

Date de livraison/d'achèvement

Date d'achèvement de la tâche.

pour le ministère de la Défense nationale

Signature du représentant du MDN auquel on a délégué le **pouvoir d'approbation** en ce qui a trait à la signature du formulaire DND 626 (niveau d'autorité basé sur la valeur de la tâche et le signataire autorisé équivalent mentionné dans le MAA 1.4). **Nota :** la personne qui signe cette attache de signature confirme que les travaux respectent la portée du contrat, que suffisamment de fonds sont prévus au contrat pour couvrir cette tâche et que le budget alloué à l'unité ou pour le projet le permet.

Services

Définissez brièvement le besoin (joignez l'ET) et établissez le coût de la tâche à l'aide de la soumission de l'entrepreneur selon le niveau de difficulté de celle-ci. Les modalités de paiement stipulées dans le contrat s'appliquent à la tâche. Si plusieurs d'entre elles sont prévues, énumérez ici celle/celles qui s'appliquera/ront à la soumission pour la tâche à accomplir (p.ex. acompte fondé sur les étapes franchies; taux quotidien ou taux horaire établi selon la catégorie de main-d'œuvre; frais de déplacement et de séjour; prix fixe ou prix plafond; etc.). Toutes les modalités du contrat s'appliquent à cette autorisation de tâche et ne peuvent être négligées ou modifiées quant à la tâche en question. Il n'est donc pas nécessaire de répéter ces modalités générales afférentes au contrat sur le formulaire DND 626.

Prix

Mentionnez le coût de la tâche en le répartissant selon les frais afférents à chaque item mentionné dans la rubrique **Services**.

TPS/TVH

Mentionnez le montant de la TPS/TVH, s'il y a lieu.

Total

Mentionnez le coût total de la tâche. L'entrepreneur ne peut dépasser ce montant sans l'approbation du MDN, formulaire DND 626 modifié à l'appui. Le coût de la modification ne peut pas être supérieur à 50 p. 100 du montant initial prévu dans l'autorisation de tâche (ou au pourcentage prévu dans le contrat pour les modifications). Le coût total spécifié dans le formulaire DND 626, y compris toutes les modifications, ne peut dépasser le plafond de financement mentionné dans le contrat.

Ne s'applique qu'aux contrats de TPSGC

Le présent paragraphe s'applique uniquement aux autorisations de tâche accordées par TPSGC. On inscrira dans le formulaire DND 626 un plafond précis qui ne pourra être approuvé que par le MDN et un pourcentage selon lequel le MDN pourra approuver des modifications au formulaire DND 626 original. Les tâches dont le coût dépasse ces plafonds doivent être soumises à l'autorité contractante de TPSGC pour examen et signature avant qu'on autorise l'entrepreneur à débiter les travaux.

Nota :

Les travaux ne peuvent commencer avant la date de signature de ce formulaire par le responsable du MDN, pour les tâches dont le coût est inférieur au plafond établi par le MDN, et par le MDN et TPSGC pour les tâches dont le coût dépasse le plafond établi par le MDN.