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Place du Portage, Phase III

Core 0B2 / Noyau 0B2

Gatineau, Québec K1A 0S5

Bid Fax: (819) 997-9776

**SOLICITATION AMENDMENT  
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

**Vendor/Firm Name and Address**

Raison sociale et adresse du  
fournisseur/de l'entrepreneur

**Issuing Office - Bureau de distribution**

Defence Communications Division. (QD)

11 Laurier St./11, rue Laurier

Place du Portage, Phase III, 8C2

Gatineau, Québec K1A 0S5

<b>Title - Sujet</b> LAND COMMAND SUPPORT SYSTEM	
<b>Solicitation No. - N° de l'invitation</b> W8486-173534/B	<b>Amendment No. - N° modif.</b> 003
<b>Client Reference No. - N° de référence du client</b> W8486-173534	<b>Date</b> 2019-08-20
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$QD-035-27369	
<b>File No. - N° de dossier</b> 035qd.W8486-173534	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2019-09-06</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Eastern Daylight Saving Time EDT
<b>F.O.B. - F.A.B.</b>	
<b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Weronski, Radek	<b>Buyer Id - Id de l'acheteur</b> 035qd
<b>Telephone No. - N° de téléphone</b> (819) 420-1774 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

Instructions: See Herein

Instructions: Voir aux présentes

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

The purpose of Amendment 003 is to extend the solicitation closing date, respond to potential Bidders' questions and make changes to the RFP:

**A. Questions and Answers**

**Q4**

Annex A: SOW

Annex B: Logistics SOW

Annex C: Basis of Payment

App 1 to Annex G

Canada has provided for nine (9) Labour Categories (Annex C), having experience and education is as defined in App 1 to Annex G, to complete the work described in Annexes A and B that will be used for the evaluation of this solicitation. The requested engineering experience for the Labour Categories is too restrictive to allow the variety of disciplines that are required to fulfill the SOW requirements. For example, the requirement for "a minimum of four years of demonstrated work experience within the last eight years testing RF and/or network communication systems," precludes the needs for hardware, software, mechanical and quality engineers.

Please confirm that this list of Labour Categories is for evaluation purposes only and is not intended to be the exhaustive list of rate categories to be used for the resulting contract.

**A4**

Annex C, Annex G, and Appendix 1 to Annex G have been amended to reflect the required Labour Categories for the evaluation process and to be used in the resulting contract.

**Q5**

Ref Q&A1

App 2 to Annex A

Section 4.3 PDRTS list of components

Annex D SRCL

The PDRTS includes a RT Radio RT-1915(C/G) which in accordance with Canada COMSEC policy needs to be handled within COMSEC channels. Will the PDRTS be modified to remove the EPLRS radio before it is sent to the LTS-ISS contractor?

**A5**

The RT-1915(C/G) will be removed from the PDRTS prior to being sent to the LTS-ISS contractor.

Solicitation No. - N° de l'invitation  
W8486-173534/B  
Client Ref. No. - N° de réf. du client  
W8486-173534

Amd. No. - N° de la modif.  
003  
File No. - N° du dossier  
035qd. W8486-173534

Buyer ID - Id de l'acheteur  
035qd  
CCC No./N° CCC - FMS No./N° VME

## Q6

### Annex G Section 4

SACC G1005C states it is up to the Contractor to determine if it requires insurance coverage to perform the Work. The Mandatory Bid Deliverables Checklist identifies that a letter outlining insurance requirements is required. Please clarify the requirement for the Mandatory Bid Deliverable.

## A6

There are no insurance requirements and no letter will be required as part of the bid. Annex G has been amended to reflect this.

## B. Amendment to the RFP

1. On the cover page of the RFP, under SOLICITATION CLOSES,  
  
REPLACE 2019-08-23 WITH 2019-09-06.
2. REPLACE Annex C, Annex G, and Appendix 1 to Annex G WITH the updated Annex C, Annex G, and Appendix 1 to Annex G in this Amendment 003.

\*\*\*\*\* All other terms and conditions remain unchanged \*\*\*\*\*

**ANNEX C**

**W8486-173534**

**LAND COMMAND, CONTROL, COMMUNICATIONS,  
COMPUTERS, INTELLIGENCE, SURVEILLANCE AND  
RECONNAISSANCE (LC4ISR)  
TEST SYSTEM (LTS)  
IN-SERVICE SUPPORT (LTS-ISS)**

**BASIS OF PAYMENT**



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**1. Introduction**

The basis of payment is established herein for the following considerations:

- a. Payment for Repairs (Category 1 Work), and
- b. Payment for Additional Work Arisings (Category 2 Work).

Work Categories are defined in Annex A.

## 2. Basis of Payment

### 2.1 Payment for Repairs – Category 1

Payment for completed Category 1 Work will be made in accordance with the Monthly Payment provisions of the Contract. Canada will make monthly payments for completed approved repairs as follows:

- a. Labour charges must be based on Firm Fixed Daily Labour Rates in Table 1 below.
- b. Mark-up charges for sub-contractor services must be based on Percentage Mark-ups in Table 2 below.
- c. Mark-up charges for material must be based on Percentage Mark-ups in Table below.

**Table 1 – Firm Fixed Daily Labour Rates**

Item No.	Labour Category	Contract per diem (Based on 7.5 hours/day)		
		Year 1	Year 2	Year 3
1	Senior Project Manager	\$	\$	\$
2	Intermediate Project Manager	\$	\$	\$
3	Senior Test System Engineer	\$	\$	\$
4	Senior Software Specialist	\$	\$	\$
5	Intermediate Engineer	\$	\$	\$
6	Draftsman / Designer	\$	\$	\$
7	Technician	\$	\$	\$
8	Technologist	\$	\$	\$
9	Product Support Specialist	\$	\$	\$
10	Senior Hardware Designer Engineer	\$	\$	\$
11	Intermediate Hardware Designer Engineer	\$	\$	\$
12	Junior Hardware Designer Engineer	\$	\$	\$
13	Senior Test Engineer	\$	\$	\$
14	Intermediate Test Engineer	\$	\$	\$
15	Junior Test Engineer	\$	\$	\$
16	Intermediate Software Specialist	\$	\$	\$
17	Junior Software Specialist	\$	\$	\$
18	Senior System Engineer	\$	\$	\$



19	Intermediate System Engineer	\$	\$	\$
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**Table 2 – Sub-contractor Services Mark-up**

Percentage Mark-up
%

**Table 3 – Material Mark-up**

Percentage Mark-up
%

**2.2 Payment for Additional Work Arisings – Category 2**

Payment for Category 2 Work will be made in accordance with the provisions of the Task Authorization (TA). Should there be a requirement for General Maintenance and Engineering Support (GEMS), Software Engineering Support (SES), Operator/Technical Maintenance Training, or Replacements, Canada will reimburse the Contractor as follows:

- a. The Technical Authority through Contracting Authority (CA) will provide the Contractor with a description of the task using the Task Authorization Form DND 626 found in Annex E.
- b. The 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.
- c. The Contractor must provide the PA and CA, within 15 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.
- d. The Contractor must not commence work until a TA authorized by the CA 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.

**2.2.1 Pricing Options**

- a. Firm Price: For AWAs, the Contractor must submit a "Firm Price" excluding travel and living expenses to the PA when the scope of Work is clearly understood by both parties and no changes are anticipated in the scope of the Work. Where a firm price has been established, the Contractor will be obliged to complete the Work for the specified firm price. Travel and living expenses will be paid based on actual expenditure incurred by the Contractor in accordance with the Basis of Payment and [TB Policies](#).
- b. Ceiling Price: AWAs, the Contractor may submit a "Ceiling Price" quote to the PA when the scope of the Work cannot be clearly defined. The term Ceiling Price is the maximum price that is to be paid to the Contractor and beyond which the Contractor will not receive additional compensation for the defined Work and in return for which the Contractor is obligated to complete the Work. No additional funds will be made available.

When the "Ceiling Price" approach is used both parties agree prior to the Work authorization that the price is subject to downward revision on completion of the task, based on the actual cost and verification of the actuals. Travel and living expenses will be paid based on actual expenditure incurred by the contractor IAW the Basis of Payment and [TB Policies](#). Each Task Authorization for AWAs must clearly state whether the price is a "Firm Fixed Price" or a "Ceiling Price".

- c. Limitation of Expenditure Price: When it is not possible for the Contractor to submit a "Firm Price" or a "Ceiling Price" as described above, the Contractor may submit a "Limitation of Expenditure" quote.
- d. The "Firm Price", "Ceiling Price" and/or the "Limitation of Expenditure" quote must be based on the rates in Canadian Funds. All proposed prices and cost estimates must be supported by a detailed cost breakdown.
- e. For a task which is subject to a "Limitation of Expenditure" as described in Sub-paragraph c. above, the Contractor must notify the proper authority in writing as to the inadequacy of its "Limitation of Expenditure" when:
  - i. the resources required for its timely completion reaches 75% of the authorized task funding; or
  - ii. if during the execution of the authorized tasking it appears to the Contractor that the Scope of Work is greater than had been anticipated and that the funds provided for a task are inadequate.
- f. When providing the notification described in Sub-article e. above, the Contractor must, as a minimum, identify:
  - i. estimated labour hours and schedule forecast to complete;
  - ii. work around plan; and
  - iii. risk assessment.
- g. A revised proposal and proper justification for the requested amendment must be submitted to the proper approval Authority for consideration. Under no circumstance is the authorized level of expenditure to be exceeded. Canada is under no obligation to pay for any Work that exceeds the authorized funding limitation.
- h. All amounts charged on a "Ceiling price" or "Limitation of Expenditure" basis must be subject to Government audit before or after payment of an invoice.

### **2.2.2 Task Subject to Limitation of Expenditure**

For a task which is subject to a "Limitation of Expenditure" the Contractor must:

- a. monitor the cost of Work and advise the PA (one copy to the CA) when 75% of the funds authorized for each task have been expended, and provide an estimate with backup support indicating if the remaining 25% will be sufficient to cover the balance of the Work forecasted for the task;
- b. if at any time during the Work it becomes evident to the Contractor that the authorized level of expenditure will be exceeded, the Contractor must immediately submit a written request for a Task Authorization Amendment in accordance with the Contract sub-article entitled "Tasking Procedure";
- c. when expenditures reach the authorized level of the DND 626, the Contractor must stop Work, notify the PA and await further written instructions from the PA and/or CA. Under

no circumstances must the authorized level of the DND 626 be exceeded without prior written approval by the PA and/or CA; and

- d. the Contractor must not be obliged to perform any Work or provide any services that would cause the total liability of Canada to be exceeded without the prior written approval of the PA and/or CA in accordance with the Contract article entitled "Limitation of Expenditure".

### **2.2.3 Task Completion / Closure Procedures**

The Contractor must monitor all tasks issued under the Contract. If at any time the Contractor believes that a specific task has been completed or has been inactive for a period of at least one (1) month, the Contractor must proceed as follows to request closure:

- a. The Contractor must determine the final costs to Canada, itemized as necessary for each individual task being considered for closure.
- b. The Contractor must submit a letter to the PA (one copy each to Technical Authority and CA) requesting closure of the task with reference to reports or letters concerning the task as applicable.
- c. In cases where authorized funds were not all expended to complete specific tasks, these funds are considered returned to the Contract funding baseline for re-issuance/re-distribution as necessary.

### **2.2.4 Consolidation of Task Authorizations for Administrative Purposes**

For administrative purposes, the Contract will be amended by the CA from time to time to reflect all TAs issued and approved to date under the Contract.

### **2.2.5 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 TAs is limited to the total amount of the actual authorized tasks performed by the Contractor.

Canada reserves the right, at any time, to acquire the requested Work by other means including by selecting other suppliers. For example, Canada may decide to acquire the requested Work by other means when the Contractor provides a written proposal that has been rejected by Canada.

## **2.3 Travel and Living**

The Contractor will be reimbursed its authorized travel and living expenses reasonably and properly incurred in the performance of the Work, at cost, without any allowance for profit, in accordance with the meal, private vehicle and incidental expenses provided in Appendices B, C and D of the [National Joint Council Travel Directive](http://www.njc-cnm.gc.ca/directive/travelvoyage/index-eng.php), (<http://www.njc-cnm.gc.ca/directive/travelvoyage/index-eng.php>), and with the other provisions of the directive referring to "travelers", rather than those referring to "employees". Canada will not pay the Contractor any incidental expense allowance for authorized travel.

All travel shall be authorized in advance and in writing by the DND Procurement Authority (PA) prior to making any travel arrangements. The Contractor shall provide the details of the travel and living expenses with each claim including copies of invoices, and remit copies of original receipts to the PA for reimbursement. All travel and living expenses are subject to Government Audit before or after the claim is paid.



**ANNEX G**

**W8486-173534**

**LAND COMMAND, CONTROL, COMMUNICATIONS,  
COMPUTERS, INTELLIGENCE, SURVEILLANCE AND  
RECONNAISSANCE (LC4ISR)**

**IN-SERVICE**

**SUPPORT (LTS-ISS) CONTRACT**

**EVALUATION CRITERIA**

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## **1 GENERAL**

This document contains the evaluation criteria that will be used to assess the General Bid Requirements, the Technical and the Financial Bid submission. As well this document contains the information necessary to allow bidders to prepare their proposal appropriately for the evaluation.

Where appropriate one or more primary references have been provided for the evaluation requirement. These references may not be the only references and the Bidder is responsible for ensuring they have read and responded appropriately to the entire Request for Proposal (RFP) including all attachments, Annexes and Appendices.

## **2 Technical Bid Evaluation**

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

The proposal must fully demonstrate compliance with the mandatory requirements stated in the SOW and all requirements of the RFP. Canada requires that the Compliance Matrix at Appendix 2 to Annex G be included in the proposal.

### **2.1 Abbreviations**

For abbreviations refer to the SOW.

### **2.2 Mandatory Technical Requirements**

Mandatory Requirements consist of:

- a) Corporate Requirements;
- b) Experience Requirements; and
- c) Key Personnel Qualifications.

Bidders must meet all mandatory requirements. Any proposal that fails to meet even one mandatory requirement will be disqualified and given no further consideration.

#### **2.2.1 Corporate Requirements**

##### **2.2.1.1 Mandatory Technical Corporate Requirement for ISO 9001:2008 / ISO2001:2015**

The Bidder including all members of a joint venture and all associated subcontractors must be currently certified to and comply with the requirements of ISO 9001:2008 or ISO 9001:2015.

The Bidder must provide evidence at time of the Bid that it and all members of a joint venture have achieved ISO 9001:2008 or ISO 9001:2015 certification through an independent accredited certification body.

#### **2.2.2 Experience Requirements**

##### **2.2.2.1 Experience with Radio Test System Design and Development**

The Bidder must provide examples of two Contracts undertaken by the Bidder that demonstrate at least two years of experience, within the last seven years in the design, prototype development, programming and testing of systems used to verify operation of Radio Frequency equipment. To be considered acceptable, Contracts must be at least \$1M in value and demonstrate that the Bidder analysed, developed and documented test system requirements, developed test system architecture, hardware and software design documents and prepared a Technical Data Package which could be used to support the acquisition, assembly and acceptance of production communication equipment test systems.

##### **2.2.2.2 Experience with Network Communication Test System Design and Development**

The Bidder must provide examples of two Contracts undertaken by the Bidder that demonstrate at least two years of experience, within the last seven years in the design, prototype development, programming and testing of systems used to verify operation of Network Communication



equipment. To be considered acceptable, Contracts must be at least \$1M in value and demonstrate that the Bidder analysed, developed and documented test system requirements, developed test system architecture, hardware and software design documents and prepared a Technical Data Package which could be used to support the acquisition, assembly and acceptance of production communication equipment test systems.

#### **2.2.2.3 Experience with Repairing and Overhauling Communication System Test Equipment**

The Bidder must provide information on two Contracts undertaken by the Bidder that demonstrates the Bidder has at least two years of experience performing repair and overhaul activities on communication test equipment similar to the test equipment identified in Appendix 2 to Annex A. To be considered acceptable, Projects must be at least \$250K per annum in value and demonstrate expertise in evaluating that test equipment including hardware, software and cabling, is functioning correctly, returning test equipment to correct operation by repairing or replacing components and calibrating test equipment.

#### **2.2.3 Personnel Qualifications**

Bidders must provide resumes for labour categories identified as key personnel in Table A3-1 in Appendix 1 to Annex G. Mandatory Personnel Qualifications will be assessed by evaluating resumes of key personnel listed in Table A3-1 in Appendix 1 to Annex G.

As a minimum, the following information must be included in each resume:

- a. General: name, company name, location of employee and the employee's government security clearance level status.
- b. Education and training: dates, locations, and names of the institutions where the qualification was acquired. This section may also include formal company in house or external courses and attendance at pertinent conferences or symposia.
- c. Employment history: presented in tabular form and include the duration (years and months), employer name and position held, in reverse chronological order. Self-employed consultants must list major projects and assignments.
- d. Experience: presented in tabular form with three columns including experience area, months of experience in that area and dates (month and year) the experience was obtained; and key details of that experience (e.g. project outline, company, specific tasks performed by the person, number of persons supervised).

The Bidder may use identified sub-contractors to meet the Personnel requirements. The Bidder must confirm that all key personnel will be available to perform the work at Contract award.

The Bidders must demonstrate compliance in response to Appendix 1 to Annex G, Personnel, sections 2.1 through 2.9 which provide specific position requirements. Bidders must provide sufficient information to substantiate that the candidates meet the requirement. Bidders must provide copies of diplomas for the highest level of educational qualification stated in the resumes to meet the educational requirement.

### **3 Financial Bid Evaluation**

The evaluated cost will be calculated using the firm all-inclusive rates and mark-ups proposed by the Bidder and the quantities indicated in the financial evaluation tables. The number of persons, units and days are based on “Proxy” usage rates. They are for evaluation purposes only and do not represent any promise or representation by Canada of any particular volume of work.

Bidders must complete and submit Table C- 1 through Table C- 4 with their Financial Bid.

#### ***3.1 Personnel Costs***

##### **3.1.1 Rate Correlation Table**

Personnel rate categories defined in Appendix 1 of Annex G are correlated with the LTS-ISS “Proxy” Personnel Organization Chart in Figure C- 1. The “Proxy” conceptual organization chart presented at Figure C- 1 identifies a Project organization which would be established by the Bidder to execute the LTS-ISS Project. The Contractors actual LTS-ISS Project organization may not be identical to the “Proxy” organization but certain job descriptions are considered likely and the “Proxy” organization provides a useful frame through which to identify these likely skill sets and make a financial comparison.

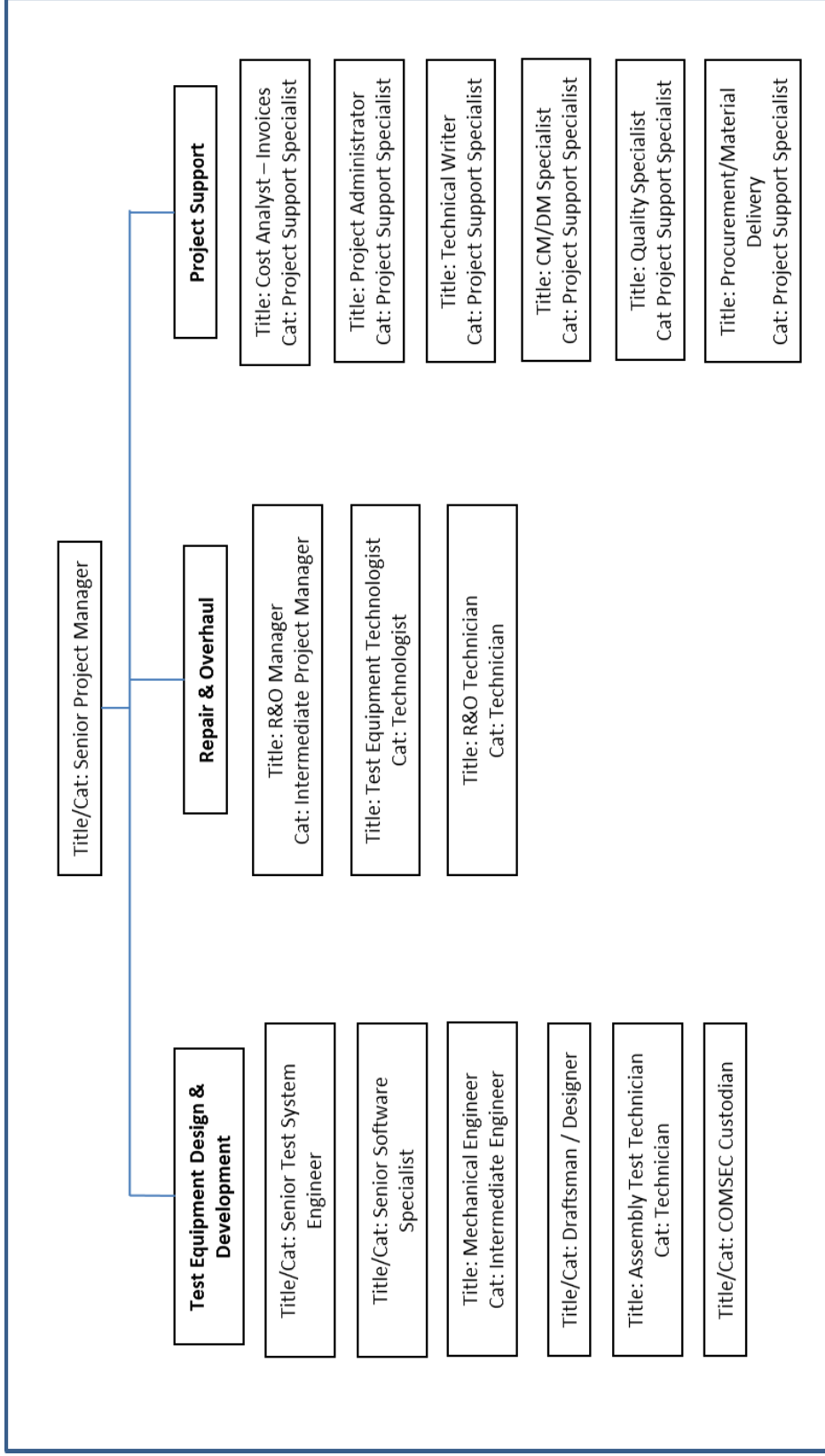


Figure C- 1 Proxy LTS-ISS Organization Table Correlating Job Description Titles and Rate Categories

### 3.1.2 Per Diems

Bidders must enter their rates, as defined by the Personnel Rate Category in Appendix 1 of Annex G, into Table C- 1

Table C- 1 – Per Diems

Personnel (Pers) Rate Category	Qty Pers (A)	Contract per diem (B) (Based on 7.5 hours/day)			Evaluated Cost (AxB x 235 days)		
		Year 1	Year 2	Year 3	Year 1 (C)	Year 2 (D)	Year 3 (E)
Senior Project Manager	0.5	\$	\$	\$	\$	\$	\$
Intermediate Project Manager	0.5	\$	\$	\$	\$	\$	\$
Senior Test System Engineer	0.5	\$	\$	\$	\$	\$	\$
Senior Software Specialist	0.5	\$	\$	\$	\$	\$	\$
Intermediate Engineer	0.75	\$	\$	\$	\$	\$	\$
Draftsman / Designer	0.5	\$	\$	\$	\$	\$	\$
Technician	1	\$	\$	\$	\$	\$	\$
COMSEC Custodian	0.25	\$	\$	\$	\$	\$	\$
Technologist	1	\$	\$	\$	\$	\$	\$
Product Support Specialist	2.5	\$	\$	\$	\$	\$	\$
Senior Hardware Designer Engineer	0.5	\$	\$	\$	\$	\$	\$
Intermediate Hardware Designer Engineer	0.5	\$	\$	\$	\$	\$	\$
Junior Hardware Designer Engineer	0.5	\$	\$	\$	\$	\$	\$
Senior Test Engineer	0.5	\$	\$	\$	\$	\$	\$
Intermediate Test Engineer	0.5	\$	\$	\$	\$	\$	\$
Junior Test Engineer	0.5	\$	\$	\$	\$	\$	\$
Intermediate Software Specialist	0.5	\$	\$	\$	\$	\$	\$
Junior Software Specialist	0.5	\$	\$	\$	\$	\$	\$
Senior System Engineer	0.5	\$	\$	\$	\$	\$	\$
Intermediate System Engineer	0.5	\$	\$	\$	\$	\$	\$
<b>Personnel Sub Totals</b>	<b>12.5</b>				\$	\$	\$

### 3.1.3 Total Per Diem Cost Calculation

The total of the Per Diem Rate is calculated at Table C- 2. These are the personnel costs that will be used for the cost per point calculation determined at Table C- 4:

Table C- 2 – Total Evaluated Personnel Cost for Per Diems

Personnel (Pers) Category	Year 1	Year 2	Year 3	Sub –Total
<b>Sub Totals</b>	\$ (C)	\$ (D)	\$ (E)	\$ (C+D+E)
<b>Total Evaluated Cost</b>				\$Enter Value into Table C- 4

### 3.2 Mark-ups

Bidders must propose firm mark-up rates, including overhead, general and Administration, profit and any other mark-up normally charged, for the acquisition of hardware, system equipment and software (HW/SE/SW), and the services of individuals with specialized knowledge (SK's) during the contract period utilizing Table C- 3. The mark-up amounts determined in the Table C- 3 below will be evaluated as part of the overall Bid price.

#### 3.2.1 Acquisition of hardware, system equipment and software (HW/SE/SW) Mark-Up

For the purposes of this evaluation only, acquisition costs for hardware, system equipment and software through the duration of the Contract are hypothetically set at \$500,000.00. Evaluated amount will be the mark-up rate x \$500,000.00.

Bidder proposed mark-up for Acquisition of HW/SE/SW = (A1) %

*(Bidders will enter the value at A1 into Table C- 3 as indicated.)*

#### 3.2.2 Acquisition of the services of individuals with Specialized Knowledge (SK)

For the purposes of this evaluation only, the acquisition costs for SK through the duration of the contract are hypothetically set at \$200,000.00. Evaluated amount will be the mark-up rate x \$200,000.00.

Bidder proposed mark-up for SK's = (A2) %

*(Bidders will enter the value at A2 into Table C- 3 as indicated)*

Table C- 3 – Cost of Mark-ups

Activity	Mark-up Rate (%) (A)	Acquisition Costs (Not a Guarantee) (B)	Evaluated Amount (AxB)
Acquisition of HW/SE/ SW	(A1)	\$500,000.00	(C)
Acquisition of SK	(A2)	\$200,000.00	(D)
<b>Total Evaluated Cost of Mark-ups = C+D:</b>			\$(Enter Value into Table C- 4)

### 3.3 Travel and Living Expenses

The cost of travel and living expenses for contractors is not considered in the bid pricing.

### 3.4 Financial Bid Worksheet

Table C- 4 is a summary of all evaluated costs as determined in Table C- 1 through Table C- 4. Bidders must populate this table using the totals determined in Table C- 1 through Table C- 4 where indicated by “\$Enter Value into Table C- 4”

Bidders must include Table C- 1 through Table C- 4 with their Financial Bid.

If there are any discrepancies between the amounts in Table C- 4 and those in Table C- 1 through Table C- 4, the cost will be recalculated using the values determined in Table C- 1 through Table C- 4.

Table C- 4 – Total Evaluated Cost of Bid

<b>Cost Summaries</b>	<b>Total Evaluated Cost</b>
<b>Table C- 2 - Personnel Cost Summary</b>	\$
<b>Table C- 3 - Cost of Mark-ups</b>	\$
<b>Total Evaluated Cost</b>	\$

## 4 Mandatory Bid Deliverables Checklist

1. Bidders must complete the checklist below and include it in the Volume I General Bid Requirements bid. This checklist attempts to capture the mandatory bid deliverable items contained within this solicitation document in one location. The Bidder remains fully responsible to ensure all mandatory requirements of the bid solicitation are met, even if a mandatory deliverable item is not included in this list.
2. This list does not address the actual content requirements for each deliverable. The Bidder is fully responsible to ensure it addresses the content requirements as detailed in the applicable sections of the bid solicitation.
3. This list does address deliverables that are not required with the bid but must be provided prior to award of a contract. It is the responsibility of the Bidder to meet such requirements as contained in the bid solicitation.
4. This list does not preclude bidders from including additional information to support their bid.

Table C- 5 – Mandatory Bid Deliverables Checklist

MBDC Item	RFP Reference	Bid Volume	Requirement	Included (Yes/No)	Bid Reference
1		All	Section I: Technical (4 hard copies, and 1 soft copy on CD) Section II: Financial (1 hard copies) Section III: Certifications (1 hard copies)		
2		General	Signature of Bid		
3		General	Completion of Table C- 5 Mandatory Bid Deliverables Checklist (MBDC)		
4		General	Certifications Required with Bid Submission – Integrity Provisions		
5		General	Certifications Required with Bid Submission – Certificate of Compliance		
6		Tech	Section 1 - Executive Summary		
7		Tech	Section 2 - Bidder information and key subcontractors		
8	Appdx 2, Annex G	Tech	Compliance Matrix – Mandatory Technical Requirements		
9	Annex G Para 2.2.1.1	Tech	Section 3 - Objective Evidence: ISO 9001 2008/2015		
10	Annex G Para 2.2.2.1,	Tech	Section 3 - Objective Evidence Exp. with Radio Test System Design and Development		
11	Annex G Para 2.2.2.2	Tech	Section 3 – Objective Evidence Exp. with Network Communication Test System Design and Development		

<b>MBDC Item</b>	<b>RFP Reference</b>	<b>Bid Volume</b>	<b>Requirement</b>	<b>Included (Yes/No)</b>	<b>Bid Reference</b>
12	Annex G Para 2.2.2.3	Tech	Section 3 – Objective Evidence Exp. with Repairing and Overhauling Communications System Test Equipment		
13	Annex G Para 2.2.3	Tech	Section 3 - Objective Evidence Resume (CV) - Senior Project Manager		
14	Annex G Para 2.2.3	Tech	Section 3 – Objective Evidence Resume (CV) – Intermediate Project Manager		
15	Annex G Para 2.2.3	Tech	Section 3 – Objective Evidence Resume (CV) – Senior Test System Engineer		
16	Annex G Para 2.2.3	Tech	Section 3 – Objective Evidence Resume (CV) – Senior Software Specialist		
17	Annex G Para 2.2.3	Tech	Section 3 – Objective Evidence Resume (CV) – Intermediate Engineer		
18	Annex G Para 2.2.3	Tech	Section 3 – Objective Evidence Resume (CV) – Draftsman/Designer		
19	Annex G Para 2.2.3	Tech	Section 3 – Objective Evidence Resume (CV) - Technician		
20	Annex G Para 2.2.3	Tech	Section 3 – Objective Evidence Resume (CV) - Technologist		
21	Annex G Para 2.2.3	Tech	Section 3 – Objective Evidence Resume (CV) – Project Support Specialist		
22	Annex G, Para 3.1.2	Financial	Completion of Table C- 1 – Per Diems		
23	Annex G, Part 3.1.3	Financial	Completion of Table C- 2 – Total Evaluated Personnel Cost for Per Diems		
24	Annex G, Part 3.2.1	Financial	Proposed Mark-ups: Acquisition of HW, SE, SW		
25	Annex G, Part 3.2.2	Financial	Proposed Mark-up: Acquisition of SK		
26	Annex G, Part 3.2.2	Financial	Completion of Table C- 3 – Cost of Mark-ups		
27	Annex G, Part 3.4	Financial	Completion of Table C- 4 – Total Evaluated Cost of Bid		



**APPENDIX 1 TO ANNEX G**

**TO CONTRACT W8486-173534**

**LAND COMMAND, CONTROL, COMMUNICATIONS,  
COMPUTERS, INTELLIGENCE, SURVEILLANCE AND  
RECONNAISSANCE (LC4ISR)**

**TEST SYSTEM (LTS)**

**IN-SERVICE SUPPORT (LTS-ISS)  
CONTRACT**

**PERSONNEL REQUIREMENTS**

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## 1 Personnel Requirements Summary

### 1.1 Qualification and Skills

1.1.1 The contractor must be capable of providing personnel with the needed capability and experience to perform the work at the contracted rates for the particular skill set. The senior / team lead level in each category type must have the demonstrated capability and experience to function as a team leader.

### 1.2 Personnel Labour Category Assignments

1.2.1 Table A3- 1 below summarizes the categories to be assigned by the Contractor to personnel allocated by the Contractor to provide the support for work described in the SOW and authorized by individual task.

Serial	Personnel Rate Category
<b>Key Personnel</b>	
1	Senior Project Manager
2	Intermediate Project Manager
3	Senior Test System Engineer
4	Senior Software Specialist
5	Intermediate Engineer
6	Draftsman / Designer
7	Technician
8	Technologist
9	Project Support Specialist
<b>Supporting Personnel</b>	
10	Senior Hardware Designer Engineer
11	Intermediate Hardware Designer Engineer
12	Junior Hardware Designer Engineer
13	Senior Test Engineer
14	Intermediate Test Engineer
15	Junior Test Engineer
16	Intermediate Software Specialist
17	Junior Software Specialist
18	Senior System Engineer
19	Intermediate System Engineer

Table A3- 1 Personnel Requirements

1

## 2 Personnel Requirements (Qualifications, Skill Sets and Experience)

### 2.1 Senior Project Manager

No.	Criteria
1.	<p><u>Education and Experience Combination</u></p> <p>The Senior Project Manager must have the following minimum qualifications:</p> <ul style="list-style-type: none"> <li>a. A university undergraduate degree in project management, business, engineering, science or information systems, and five years of management experience in the last ten years leading teams of at least ten individuals and managing budgets of over \$1 million per year; or</li> <li>b. A college diploma (two or three year program) in project management, business, electrical engineering, electronics, telecommunications, computers or information technology program and six years of management experience in the last ten years leading teams of at least ten individuals and managing budgets of over \$1 million; or</li> <li>c. The Project Management Institute's Project Management Professional (PMP) certification and seven years of management experience in the last ten years leading teams of at least five individuals and managing budgets of over \$2 million.</li> </ul>
2.	<p><u>Experience</u></p> <p>Must have a minimum of four years of demonstrated experience in the past eight years managing engineering design and development projects.</p>

**2.2 Intermediate Project Manager**

<b>No.</b>	<b>Criteria</b>
1.	<p data-bbox="391 296 881 323"><u>Education and Experience Combination</u></p> <p data-bbox="391 342 1243 411">The Intermediate Project Manager must have the following minimum qualifications:</p> <ul data-bbox="427 430 1385 842" style="list-style-type: none"><li data-bbox="427 430 1385 562">a. A university undergraduate degree in project management, business, engineering, science or information systems, and four years of management experience in the last eight years leading teams of at least five individuals; or</li><li data-bbox="427 583 1385 753">b. A college diploma (two or three year program) in project management, business, electrical engineering, electronics, telecommunications, computers or information technology program and five years of management experience in the last ten years leading teams of at least five individuals; or</li><li data-bbox="427 774 1385 842">c. The Project Management Institute's PMP certification and six years of project management experience in the last ten years.</li></ul>
2.	<p data-bbox="391 867 532 894"><u>Experience</u></p> <p data-bbox="391 913 1360 982">Must have a minimum of three years' experience in the past six year managing engineering or technical projects.</p>

### 2.3 Senior Test System Engineer

No.	Mandatory Criteria
1.	<p><u>Education</u></p> <p>The Senior Test System Engineer must have a minimum of a:</p> <ol style="list-style-type: none"> <li>a. University undergraduate degree in Engineering from Engineers Canada accredited engineering program; or</li> <li>b. Alternatively, should the candidate's degree be from a non-Engineers Canada accredited engineering program, their engineering education credentials must be deemed 'substantially equivalent' by the Engineers Canada via an application to the Engineering International - Education Assessment Program, (EI-EAP); or</li> <li>c. As a third alternative, the candidates engineering education credentials will be considered compliant if the candidate is deemed eligible, by a recognized provincial licensing body, for registration as a Professional Engineer.</li> </ol>
2.	<p><u>Experience</u></p> <p>Must have a minimum of four years of demonstrated experience within the last seven years providing technical leadership in the design, prototype development, integration and set to work of test equipment used to test RF and or network communication systems.</p>
3.	<p><u>Experience</u></p> <p>Must have a minimum of eight years of demonstrated experience within the last twelve years working in an engineering development environment in progressively more responsible positions.</p>
4.	<p><u>Experience</u></p> <p>Must have a minimum of five years of demonstrated experience in identifying, building, developing and directly supervising a team of at least five in an engineering development environment.</p>
5.	<p><u>Experience</u></p> <p>Must have demonstrated experience engaging pertinent stakeholders to elicit, elaborate and manage test requirements.</p>

## 2.4 Senior Software Specialist

No.	Criteria
1.	<p><u>Education</u></p> <p>The Senior Software Specialist must have the following minimum qualifications:</p> <ul style="list-style-type: none"> <li>a. University undergraduate degree in Engineering or Science; or</li> <li>b. College diploma (two or three year program) in an electrical engineering, electronics, telecommunications, computers or information technology program; or</li> <li>c. Successful completion of an intensive Software/Firmware course with a minimum of six hundred hours of instruction and assignments.</li> </ul>
2.	<p><u>Experience</u></p> <p>Must have a minimum of four years of demonstrated experience within the last eight years working in an engineering development environment in progressively more responsible positions.</p>
3.	<p><u>Experience</u></p> <p>Minimum of seven years of relevant work experience within the past ten years with software development or software system validation, including:</p> <ul style="list-style-type: none"> <li>a. Experience with UNIX, Linux or Windows environments;</li> <li>b. Development using LabVIEW or NI TestStand;</li> <li>c. Experience with C#,C++, .NET framework, Java or VB.Net; and</li> <li>d. Experience with IP network protocols: TCP/UDP and IP.</li> </ul>
4.	<p><u>Qualifications</u></p> <p>Microsoft Certified Solutions Expert/Developer, or Certified LabVIEW Developer/Architect, or Certified NI TestStand Developer/Architect, or trained in Proligent software environment, or equivalent.</p>

## 2.5 Intermediate Engineer

No.	Criteria
1.	<p data-bbox="391 296 516 323"><u>Education</u></p> <p data-bbox="391 342 1333 373">The Intermediate Engineer must have the following minimum qualifications:</p> <ul style="list-style-type: none"> <li data-bbox="440 394 1305 459">a. University undergraduate degree in Engineering from an Engineers Canada accredited engineering program; or</li> <li data-bbox="440 480 1398 615">b. Alternatively, should the candidate's degree be from a non-Engineers Canada accredited engineering program, their engineering education credentials must be deemed 'substantially equivalent' by Engineers Canada via an application to the EI-EAP; or</li> <li data-bbox="440 636 1349 770">c. As a third alternative, the candidates engineering education credentials will be considered compliant if the candidate is deemed eligible, by a recognized provincial licensing body, for registration as a Professional Engineer.</li> </ul>
2.	<p data-bbox="391 795 529 823"><u>Experience</u></p> <p data-bbox="391 842 1377 907">Must have a minimum of four years of demonstrated work experience within the last eight years testing RF and/or network communication systems.</p> <p data-bbox="391 928 1338 993">Have a demonstrated knowledge of communication technologies or digital or analog technologies.</p> <p data-bbox="391 1014 1211 1045">Have a demonstrated knowledge of network and IT infrastructures.</p>



**2.6 Draftsman / Designer**

No.	Criteria
1.	<u>Education</u> The Designer must have a minimum of education equivalent to an Ontario Secondary school graduation plus a further three years of formal education in relevant courses of one year is in Electro-Mechanical Drafting or Technology.
2.	<u>Experience</u> A minimum of six years of experience of which at least two years involve operation of Computer Aided Design equipment.

**2.7 Technician**

No.	Criteria
1.	<u>Education and Experience Combination</u> The Technician must have the following minimum qualifications: <ol style="list-style-type: none"> <li data-bbox="427 884 1408 1052">a. College diploma (two or three year program) in an electrical engineering, electronics, telecommunications, computers or information technology program electronics, telecommunications or computer science and a minimum of 12 months of demonstrated work experience in a relevant systems support field within the last 3 years; or</li> <li data-bbox="427 1073 1408 1241">b. Successful completion of an intensive electronics or telecommunications hardware technicians course with a minimum of six hundred hours of instruction and assignments and a minimum of 12 months of demonstrated work experience in a relevant systems support field within the last 3 years; or</li> <li data-bbox="427 1262 1408 1335">c. A minimum of 3 years of demonstrated work experience in a relevant systems support field within the last 5 years.</li> </ol>
2.	<u>Experience</u> Technicians must have experience working on systems that have a broad variety of hardware including radios, antennas, terminal devices, computers, displays, routers and network switches.

	<p><u>Experience</u></p> <p>Must have a minimum of three years of demonstrated experience within the last five at providing technical support and using complex test equipment with RF and or network communication systems including:</p> <ul style="list-style-type: none"><li>a. Spectrum Analyzer;</li><li>b. Network Analyzer;</li><li>c. BERTS measurements;</li><li>d. Power meters and sensors;</li><li>e. Noise measurements;</li><li>f. RF Signal Generators; and</li><li>g. Audio Analyzers; performing test such as SINAD.</li></ul>
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## 2.8 Technologist

No.	Criteria
1.	<p data-bbox="391 291 881 323"><u>Education and Experience Combination</u></p> <p data-bbox="391 340 1219 371">The Technologist must have the following minimum qualifications:</p> <ol data-bbox="407 392 1360 598" style="list-style-type: none"><li data-bbox="407 392 1360 491">a. College diploma (two or three year program) in an electrical engineering, electronics, telecommunications, computers or information technology program electronics, telecommunications or computer science; or</li><li data-bbox="407 495 1360 598">b. Successful completion of an intensive electronics, telecommunications or information technology course with a minimum of six hundred hours of instruction and assignments.</li></ol>
	<p data-bbox="391 621 532 653"><u>Experience</u></p> <p data-bbox="391 669 1365 768">Must have a minimum of five years of demonstrated experience within the last ten at providing technical support and using complex test equipment on RF and network communication systems including:</p> <ol data-bbox="391 789 1057 1125" style="list-style-type: none"><li data-bbox="391 789 675 821">a. Spectrum Analyzer;</li><li data-bbox="391 842 667 873">b. Network Analyzer;</li><li data-bbox="391 894 716 926">c. BERTS measurements;</li><li data-bbox="391 947 756 978">d. Power meters and sensors;</li><li data-bbox="391 999 691 1031">e. Noise measurements;</li><li data-bbox="391 1052 748 1083">f. RF Signal Generators; and</li><li data-bbox="391 1104 1057 1136">g. Audio Analyzers; performing test such as SINAD.</li></ol>

**2.9 Project Support Specialist**

<b>No.</b>	<b>Criteria</b>
1.	<u>Education</u> The Project Support Specialist must have the following minimum qualifications: a. A university undergraduate degree; or b. A college diploma (two or three year program).
	<u>Experience</u> Must have a minimum of three years of experience in the past six years working on projects in an technical environment.

**2.10 Senior Hardware Design Engineer**

No.	Criteria
1.	<p><u>Education</u></p> <p>The Senior Hardware Design Engineer must have a minimum of a:</p> <ol style="list-style-type: none"> <li>a. University undergraduate degree in Engineering from Engineers Canada accredited engineering program; or</li> <li>b. Alternatively, should the candidate's degree be from a non-Engineers Canada accredited engineering program, their engineering education credentials must be deemed 'substantially equivalent' by the Engineers Canada via an application to the Engineering International - Education Assessment Program, (EI-EAP); or</li> <li>c. As a third alternative, the candidates engineering education credentials will be considered compliant if the candidate is deemed eligible, by a recognized provincial licensing body, for registration as a Professional Engineer.</li> </ol>
2.	<p><u>Experience.</u></p> <p>Must have a minimum of seven years of demonstrated experience within the last ten years in hardware and product engineering. Relevant area of work are radios, antennas, network and optical equipment, computers, displays, communication systems, sensor systems, and test systems. Experience with specialized Canadian Army mission equipment is considered asset.</p>

**2.11 Intermediate Hardware Design Engineer**

No.	Criteria
1.	<p data-bbox="329 306 456 338"><u>Education</u></p> <p data-bbox="329 359 1224 390">The Intermediate Hardware Design Engineer must have a minimum of a:</p> <ul data-bbox="342 411 1365 737" style="list-style-type: none"><li data-bbox="342 411 1365 474">a. University undergraduate degree in Engineering from Engineers Canada accredited engineering program; or</li><li data-bbox="342 495 1365 632">b. Alternatively, should the candidate's degree be from a non-Engineers Canada accredited engineering program, their engineering education credentials must be deemed 'substantially equivalent' by the Engineers Canada via an application to the Engineering International - Education Assessment Program, (EI-EAP); or</li><li data-bbox="342 642 1365 737">c. As a third alternative, the candidates engineering education credentials will be considered compliant if the candidate is deemed eligible, by a recognized provincial licensing body, for registration as a Professional Engineer.</li></ul>
2.	<p data-bbox="329 762 477 793"><u>Experience.</u></p> <p data-bbox="329 814 1382 982">Must have a minimum of three years of demonstrated experience within the last eight years in hardware and product engineering. Relevant area of work are radios, antennas, network and optical equipment, computers, displays, communication systems, sensor systems, and test systems. Experience with specialized Canadian Army mission equipment is considered asset.</p>

## 2.12 Junior Hardware Design Engineer

No.	Criteria
1.	<p><u>Education</u></p> <p>The Junior Hardware Design Engineer must have a minimum of a:</p> <ol style="list-style-type: none"> <li>a. University undergraduate degree in Engineering from Engineers Canada accredited engineering program; or</li> <li>b. Alternatively, should the candidate's degree be from a non-Engineers Canada accredited engineering program, their engineering education credentials must be deemed 'substantially equivalent' by the Engineers Canada via an application to the Engineering International - Education Assessment Program, (EI-EAP); or</li> <li>c. As a third alternative, the candidates engineering education credentials will be considered compliant if the candidate is deemed eligible, by a recognized provincial licensing body, for registration as a Professional Engineer.</li> </ol>
2.	<p><u>Experience.</u></p> <p>Must have a minimum of six months of demonstrated experience within the last three years in hardware and product engineering. Relevant area of work are radios, antennas, network and optical equipment, computers, displays, communication systems, sensor systems, and test systems. Experience with specialized Canadian Army mission equipment is considered asset.</p>

**2.13 Senior Test Engineer**

<b>No.</b>	<b>Criteria</b>
1.	<p><u>Education.</u></p> <p>The Senior Test Engineer must have a university degree in Engineering, Science or Computer Science.</p>
2.	<p><u>Experience.</u></p> <p>Must have a minimum of seven years of demonstrated work experience within the last ten years in test and product engineering work at the product, system and system-of-systems levels. At least four years of system-of-system test engineering experience is required.</p> <p>Relevant experience is in managing test strategy, directly supervising other test personnel and developing, performing and reviewing manual and automated testing, including investigative testing in support of debugging and system problem report resolution.</p> <p>Must also have experience in developing and implementing test strategies in conjunction with the development team to perform identified test program and tasks.</p>



**2.14 Intermediate Test Engineer**

No.	Criteria
1.	<u>Education.</u> The Intermediate Test Engineer must have a university degree in Engineering, Science or Computer Science.
2.	<u>Experience.</u> Must have a minimum of three years of demonstrated work experience within the last eight years in test and product engineering work at the product, system and system-of-systems levels. At least eighteen months of system-of-system test engineering experience is required.  Relevant experience is in managing tests and developing, performing and reviewing manual and automated testing, including investigative testing in support of debugging and system problem report resolution.

**2.15 Junior Test Engineer**

<b>No.</b>	<b>Criteria</b>
1.	<u>Education.</u> The Junior Test Engineer must have a university degree in Engineering, Science or Computer Science.
2.	<u>Experience.</u> Must have a minimum of six months of demonstrated work experience within the last three years in test and product engineering work at the product, system and system-of-systems levels. Relevant experience is in developing, and performing manual and automated testing, including investigative testing in support of debugging and system problem report resolution.

## 2.16 Intermediate Software Specialist

No.	Criteria
1.	<p><u>Education</u></p> <p>The Intermediate Software Specialist must have the following minimum qualifications:</p> <ul style="list-style-type: none"> <li>a. University undergraduate degree in Engineering or Science; or</li> <li>b. College diploma (two or three year program) in an electrical engineering, electronics, telecommunications, computers or information technology program; or</li> <li>c. Successful completion of an intensive Software/Firmware course with a minimum of six hundred hours of instruction and assignments.</li> </ul>
2.	<p><u>Experience</u></p> <p>Must have a minimum of eighteen months of demonstrated experience within the last five years working in an engineering development environment.</p> <p>Must have a minimum of three years of relevant work experience within the past eight years with software development or software system validation, including:</p> <ul style="list-style-type: none"> <li>a. Experience with UNIX, Linux or Windows environments;</li> <li>b. Development using LabVIEW or NI TestStand;</li> <li>c. Experience with C#,C++, .NET framework, Java or VB.Net; and</li> <li>d. Experience with IP network protocols: TCP/UDP and IP.</li> </ul>
3.	<p><u>Qualifications</u></p> <p>Microsoft Certified Solutions Expert/Developer, or Certified LabVIEW Developer/Architect, or Certified NI TestStand Developer.</p>

**2.17 Junior Software Specialist**

<b>No.</b>	<b>Criteria</b>
1.	<p data-bbox="391 296 516 323"><u>Education</u></p> <p data-bbox="391 342 1382 369">The Junior Software Specialist must have the following minimum qualifications:</p> <ul style="list-style-type: none"> <li data-bbox="440 394 1252 422">a. University undergraduate degree in Engineering or Science; or</li> <li data-bbox="440 447 1382 541">b. College diploma (two or three year program) in an electrical engineering, electronics, telecommunications, computers or information technology program; or</li> <li data-bbox="440 567 1365 625">c. Successful completion of an intensive Software/Firmware course with a minimum of six hundred hours of instruction and assignments.</li> </ul>
2.	<p data-bbox="391 657 532 684"><u>Experience</u></p> <p data-bbox="391 703 1349 762">Minimum of eighteen months of relevant work experience within the past five years with software development or software system validation, including:</p> <ul style="list-style-type: none"> <li data-bbox="440 787 1195 814">a. Experience with UNIX, Linux or Windows environments;</li> <li data-bbox="440 840 1068 867">b. Development using LabVIEW or NI TestStand;</li> <li data-bbox="440 892 1279 919">c. Experience with C#,C++, .NET framework, Java or VB.Net; and</li> <li data-bbox="440 945 1190 972">d. Experience with IP network protocols: TCP/UDP and IP.</li> </ul>
3.	<p data-bbox="391 993 467 1020"><u>Asset</u></p> <p data-bbox="391 1039 1268 1098">Microsoft Certified Solutions Expert/Developer, or Certified LabVIEW Developer/Architect, or Certified NI TestStand Developer.</p>

## 2.18 Senior System Engineer

No.	Criteria
1.	<p><u>Education</u></p> <p>The Senior System Engineer must have a minimum of a:</p> <ol style="list-style-type: none"> <li>a. University undergraduate degree in Engineering from Engineers Canada accredited engineering program; or</li> <li>b. Alternatively, should the candidate's degree be from a non-Engineers Canada accredited engineering program, their engineering education credentials must be deemed 'substantially equivalent' by the Engineers Canada via an application to the Engineering International - Education Assessment Program, (EI-EAP); or</li> <li>c. As a third alternative, the candidates engineering education credentials will be considered compliant if the candidate is deemed eligible, by a recognized provincial licensing body, for registration as a Professional Engineer.</li> </ol>
2.	<p><u>Experience.</u></p> <p>Must have seven years of experience within the last ten years in systems and product engineering work, at least four years of which is in systems engineering.</p> <p>Senior System Engineers must be capable of:</p> <ol style="list-style-type: none"> <li>a. Understanding System Value</li> <li>b. Understanding Systems Engineering Life Cycles - How systems are built;</li> <li>c. Understanding System Science - How systems work;</li> <li>d. Understanding of modelling via Methodologies, Techniques; and Tools;</li> </ol> <p>System Engineers must have experience with the following activities:</p> <ol style="list-style-type: none"> <li>a. Analyzing, Designing and Implementing systems at the System level;</li> <li>b. Communications systems;</li> <li>c. Interface Control Management and implementation; and</li> <li>d. System Integration: hardware and software (commercial off-the-shelf (COTS) and/or custom developed) components into new or existing systems.</li> </ol>

## 2.19 Intermediate System Engineer

No.	Criteria
1.	<p><u>Education</u></p> <p>The Intermediate System Engineer must have a minimum of a:</p> <ol style="list-style-type: none"> <li>a. University undergraduate degree in Engineering from Engineers Canada accredited engineering program; or</li> <li>b. Alternatively, should the candidate's degree be from a non-Engineers Canada accredited engineering program, their engineering education credentials must be deemed 'substantially equivalent' by the Engineers Canada via an application to the Engineering International - Education Assessment Program, (EI-EAP); or</li> <li>c. As a third alternative, the candidates engineering education credentials will be considered compliant if the candidate is deemed eligible, by a recognized provincial licensing body, for registration as a Professional Engineer.</li> </ol>
2.	<p><u>Experience.</u></p> <p>Must have three years of experience within the last eight years in systems and product engineering work, at least one years of which is in systems engineering.</p> <p>Intermediate System Engineers must be capable of,</p> <ol style="list-style-type: none"> <li>a. Understanding System Value</li> <li>b. Understanding Systems Engineering Life Cycles - How systems are built;</li> <li>c. Understanding System Science - How systems work;</li> <li>d. Understanding of modelling via Methodologies, Techniques; and Tools;</li> </ol> <p>Experience with the following activities are asset:</p> <ol style="list-style-type: none"> <li>a. Analyzing, Designing and Implementing systems at the System level;</li> <li>b. Communications systems;</li> <li>c. Interface Control Management and implementation; and</li> <li>d. System Integration: hardware and software (commercial off-the-shelf (COTS) and/or custom developed) components into new or existing systems.</li> </ol>