



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

**Bid Receiving - PWGSC / Réception des
soumissions - TPSGC**
11 Laurier St. / 11, rue Laurier
Place du Portage, Phase III
Core 0B2 / Noyau 0B2
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

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

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

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

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

Comments - Commentaires

Title - Sujet Aircraft rescue	
Solicitation No. - N° de l'invitation W8476-195915/A	Date 2018-05-14
Client Reference No. - N° de référence du client 6000437128	
GETS Reference No. - N° de référence de SEAG PW-\$\$HP-912-74856	
File No. - N° de dossier hp912.W8476-195915	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2018-06-26	Time Zone Fuseau horaire Eastern Daylight Saving Time EDT
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: Pearson, Neil	Buyer Id - Id de l'acheteur hp912
Telephone No. - N° de téléphone (873) 469-3312 ()	FAX No. - N° de FAX (819) 953-2953
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATIONAL DEFENCE Building 127 Work Point Barracks Victoria British Columbia V9A 7N2 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

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

Issuing Office - Bureau de distribution

Vehicles & Industrial Products Division
11 Laurier St./11, rue Laurier
7A2, Place du Portage, Phase III
Gatineau, Québec K1A 0S5

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

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PART 1 - GENERAL INFORMATION

1.1 Requirement

Canada is seeking proposals to procure:

- 1.1.1 Quantity one (1), Aircraft Rescue Fire Fighting Vehicle and ancillary items as described in Annex "A" - Pricing and in accordance with Annex "B"- Purchase Description Aircraft Rescue Fire Fighting Vehicle.
- 1.1.2 Irrevocable options identified in Annex "A"- Pricing.
 - 1.1.2.1 The options may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.
 - 1.1.2.2 The options may be exercised in whole or in part and on more than one occasion at the sole discretion of Canada, up to the maximum quantity identified in Annex "A"- Pricing.
 - 1.1.2.3 The options may be exercised within twelve (12) months after contract award.

1.2. Debriefings

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

1.3. Trade Agreements

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), the Canada-European Union Comprehensive Economic and Trade Agreement (CETA), and the Canadian Free Trade Agreement (CFTA).

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

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

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

The 2003 (2017-04-27) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

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

Delete: sixty (60) days

Insert: ninety (90) days

The 2003 standard instructions is amended as follows:

- Section 5, entitled Submission of bids, is amended as follows:
 - subsection 1 is deleted entirely and replaced with the following: "Canada requires that each bid, at solicitation closing date and time or upon request from the Contracting Authority, for example in the case of epost Connect service, be signed by the Bidder or by an authorized representative of the Bidder. If a bid is submitted by a joint venture, it must be in accordance with the section entitled Joint venture."
 - subsection 2.d is deleted entirely and replaced with the following: "send its bid only to the specified Bid Receiving Unit of Public Works and Government Services Canada (PWGSC) identified in the bid solicitation, or to the address specified in the bid solicitation, as applicable;"
 - subsection 2.e is deleted entirely and replaced with the following: "ensure that the Bidder's name, return address and procurement business number, bid solicitation number, and solicitation closing date and time are clearly visible on the bid; and,"
- Section 6, entitled Late bids, is deleted entirely and replaced with the following: "PWGSC will return bids delivered after the stipulated solicitation closing date and time, unless they qualify as a delayed bid as described in the section entitled Delayed bids. For bids submitted using means other than the Canada Post Corporation's epost Connect service, the bid will be returned. For bids submitted

using Canada Post Corporation's epost Connect service, conversations initiated by the Bid Receiving Unit via the epost Connect service that contain access, records and information pertaining to a late bid will be deleted."

- Section 07, entitled Delayed bids, is amended as follows:
 - Subsection 1 is amended to add the following piece of evidence: "d. a CPC epost Connect service date and time record indicated in the epost Connect conversation activity."

- Section 8, entitled Transmission by facsimile, is deleted and replaced by the following:

"Transmission by facsimile or by epost Connect

1. Facsimile

- a. Unless specified otherwise in the bid solicitation, bids may be submitted by facsimile. The only acceptable facsimile number for responses to bid solicitations issued by PWGSC headquarters is 819-997-9776 or, if applicable, the facsimile number identified in the bid solicitation. The facsimile number for responses to bid solicitations issued by PWGSC regional offices is identified in the bid solicitation.
- b. For bids transmitted by facsimile, Canada will not be responsible for any failure attributable to the transmission or receipt of the faxed bid including, but not limited to, the following:
 - i. receipt of garbled or incomplete bid;
 - ii. availability or condition of the receiving facsimile equipment;
 - iii. incompatibility between the sending and receiving equipment;
 - iv. delay in transmission or receipt of the bid;
 - v. failure of the Bidder to properly identify the bid;
 - vi. illegibility of the bid; or
 - vii. security of bid data.
- c. A bid transmitted by facsimile constitutes the formal bid of the Bidder and must be submitted in accordance with the section entitled Submission of bids.

2. ePost Connect

- a. Unless specified otherwise in the bid solicitation, bids may be submitted by using the epost Connect service provided by Canada Post Corporation ([https://www.canadapost.ca/web/en/products/details.page?article=epost connect send a](https://www.canadapost.ca/web/en/products/details.page?article=epost_connect_send_a)).
- b. To submit a bid using epost Connect service, the Bidder must either:
 - i. send directly its bid only to the specified PWGSC Bid Receiving Unit, using its own licensing agreement for epost Connect provided by Canada Post Corporation; or

-
- ii. send as early as possible, and in any case, at least six business days prior to the solicitation closing date and time, an email that includes the bid solicitation number to the specified PWGSC Bid Receiving Unit requesting to open an epost Connect conversation. Requests to open an epost Connect conversation received after that time may not be answered.
 - c. If the Bidder is sending an email to the Bid Receiving Unit, the Bid Receiving Unit will then initiate an epost Connect conversation which will allow the Bidder to transmit its bid afterward at any time prior to the solicitation closing date and time. The epost Connect conversation will create an email notification from Canada Post Corporation prompting the Bidder to access the message within the conversation, and the Bidder can reply to the email notification by transmitting its bid.
 - d. If the Bidder is using its own licensing agreement to send its bid, the Bidder must keep the epost Connect conversation open until at least 30 business days after solicitation closing date and time.
 - e. The email address of PWGSC Bid Receiving Unit in Headquarters is: TPSGC.DGAreceptiondessoumissions-ABBidReceiving.PWGSC@tpsgc-pwgsc.gc.ca. The solicitation number must be identified in the epost Connect message field of all electronic transfers.
 - f. It should be noted that the use of epost Connect service requires a Canadian mailing address. Should a bidder not have a Canadian address, they may use the Bid Receiving Unit address specified on page 1 of the solicitation in order to register for the epost Connect service.
 - g. For bids transmitted by epost Connect service, Canada will not be responsible for any failure attributable to the transmission or receipt of the bid including, but not limited to, the following:
 - i. receipt of a garbled or incomplete bid;
 - ii. availability or condition of the epost Connect service;
 - iii. incompatibility between the sending and receiving equipment;
 - iv. delay in transmission or receipt of the bid;
 - v. failure of the Bidder to properly identify the bid;
 - vi. illegibility of the bid;
 - vii. security of bid data; or
 - viii. inability to create an electronic conversation through the epost Connect service.
 - h. A bid transmitted by epost Connect service constitutes the formal bid of the Bidder and must be submitted in accordance with the section entitled "Submission of bids."

2.2 Submission of Bids

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

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted to the Contracting Authority no later than seven (7) calendar days before the bid closing date. Enquiries received after that time may not be answered.

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

2.4 Applicable Laws

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

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

2.5 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications, Statement of Work or Purchase Description contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least seven (7) days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

If the Bidder chooses to submit its bid electronically, Canada requests that the Bidder submits its bid in accordance with section 8 of the 2003 standard instructions and as amended in Part 2 - Bidder Instructions, Article 2.1 Standard Instructions, Clauses and Conditions. Bidders are required to provide their bid in a single transmission. The epost Connect service has the capacity to receive multiple documents, up to 1GB per individual attachment.

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

Section I: Technical Bid
Section II: Financial Bid
Section III: Certifications
Section IV: Additional Information

If the Bidder is simultaneously providing a hard copy of the bid using another acceptable delivery method, and if there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the soft copy will have priority over the wording of the hard copy.

- If the Bidder chooses to submit its bid in hard copies, Canada requests that the Bidder submits its bid in separately bound sections as follows:

Section I: Technical Bid (2 hard copies)
Section II: Financial Bid (1 hard copy)
Section III: Certifications (2 hard copies)
Section IV: Additional Information (2hard copies)

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

Canada requests that bidders follow the format instructions described below in the preparation of hard copy 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-) (<http://www.tpsgc->

pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html). To assist Canada in reaching its objectives, bidders should:

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

Section I: Technical Bid

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

3.1.1 Substitute and Alternatives

Bidders may propose substitutes and alternatives where **equivalent** is indicated in the technical requirement description (Purchase Description/Statement of Requirement/Statement of Work). Offerors / suppliers are encouraged to offer or suggest green solutions whenever possible.

1. Substitutes and alternatives that are equivalent in form, fit, function and performance will be considered for acceptance by the Technical Authority where the Bidder:
 - (a) Clearly identifies a substitute and/or an alternative;
 - (b) Designates the brand name, model and/or part number of the substitute and/or of the product, where applicable;
 - (c) States that the substitute product is fully interchangeable with the item specified in the technical requirement description;
 - (d) Provides complete specifications and brochures, where applicable;
 - (e) Provides compliance statements that include technical details showing the substitute and/or the alternative meet all technical requirements specified in the technical requirement description; and
 - (f) Clearly identifies those areas in the technical requirement description and in the brochures that support the substitute and/or the alternative compliance

with the technical requirements.

2. Substitutes and alternatives offered as equivalent in form, fit, function and performance will not be considered for acceptance by the Technical Authority if:
 - (a) The bid fails to provide all of the information requested to allow the Technical Authority to fully evaluate the evaluate the equivalency; or
 - (b) The substitute and/or the alternative fail to meet or fail to exceed the technical requirements specified in the technical requirement description.

Section II: Financial Bid

Bidders must submit their bid in accordance with the Basis of Payment specified in Part 6 and Annex A - Pricing.

3.1.2 Electronic Payment of Invoices – Bid

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

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

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

3.1.3 Exchange Rate Fluctuation Risk Mitigation

1. The Bidder may request Canada to assume the risks and benefits of exchange rate fluctuations. If the Bidder claims for an exchange rate adjustment, this request must be clearly indicated in the bid at time of bidding. The Bidder must submit form [PWGSC-TPSGC 450](#), Claim for Exchange Rate Adjustments with its bid, indicating the Foreign Currency Component (FCC) in Canadian dollars for each line item for which an exchange rate adjustment is required.
2. The FCC is defined as the portion of the price or rate that will be directly affected by exchange rate fluctuations. The FCC should include all related taxes, duties and other costs paid by the Bidder and which are to be included in the adjustment amount.

3. The total price paid by Canada on each invoice will be adjusted at the time of payment, based on the FCC and the exchange rate fluctuation provision in the contract. The exchange rate adjustment will only be applied where the exchange rate fluctuation is greater than 2% (increase or decrease).
4. At time of bidding, the Bidder must complete columns (1) to (4) on form PWGSC-TPSGC 450, for each line item where they want to invoke the exchange rate fluctuation provision. Where bids are evaluated in Canadian dollars, the dollar values provided in column (3) should also be in Canadian dollars, so that the adjustment amount is in the same currency as the payment.
5. Alternate rates or calculations proposed by the Bidder will not be accepted for the purposes of this exchange rate fluctuation provision.

Section III: Certifications

Bidders must submit the certifications required under Part 5 - Certifications.

Section IV Additional Information

Canada requests that bidders submit the following information:

3.1.4 Delivery

Firm Quantity

While delivery of the vehicle(s) is requested by 29 July 2019, the best delivery that can be offered is as follows:

Item 001 – Quantity one (1), Aircraft Rescue Fire Fighting Vehicle and related items will be delivered within _____ calendar days from the effective date of the contract.

Optional Quantity

If an option is exercised, the best delivery that can be offered is as follows:

Item 002 – Quantity up to one (1), Aircraft Rescue Fire Fighting Vehicle and ancillary items will be delivered within _____ calendar days after an option is exercised.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1. Evaluation Procedures

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

4.1.1 Technical Evaluation

4.1.1.1 Mandatory Technical Evaluation Criteria

- a) Bidders must demonstrate their compliance with all technical evaluation criteria detailed in Annex "C" - Technical Evaluation Matrix, by providing substantial information describing completely and in detail how each requirement is met or addressed. Simply repeating the statement contained in the bid solicitation is not sufficient.
- b) Bidders proposing substitutes and/or alternatives must submit, with their bid all the information requested as detailed in Part 3, section 2 - Substitutes and Alternatives to be considered for evaluation.

4.1.2 Mandatory Financial Evaluation Criteria

4.1.2.1 Bidders must provide, with their bid, the financial information requested in the bid solicitation and at Annex A - Pricing for items 001, 002, 003, 004, 005 and 006.

4.1.2.2 The prices of the bid Bids must be in Canadian dollars, DDP Delivered Duty Paid at destination, Incoterms 2000, for the firm quantity for item 001 and optional quantity item 002, Canadian dollars for Operator and Maintenance instructions/training (option) item 003, 004, 005 and item 006. Canadian Custom Duties and Excise Taxes included where applicable, and Applicable Taxes are extra.

4.1.2.3 Aggregate Evaluated Price

Bids will be evaluated on an aggregate price basis for the firm quantity, the optional quantity and the Operator and Maintenance instructions/training (option).

4.1.2.4 To determine the total price for the firm quantity, calculation will be as follows:

a) The firm unit price for the firm quantity will be multiplied by their identified estimated quantities.

4.1.2.5 Since the optional quantities are to be exercised by provinces, the firm unit price for the optional quantity will be averaged.

To determine the average price for the optional quantities, calculation will be as follows:

a) The firm unit price for the optional quantity for each province identified will be added; and

b) The sum will be divided by five (5).

4.1.2.6 The firm unit price for the English and French Operator and English and French Maintenance instructions/training (option) will be averaged.

To determine the average price for the Operator and Maintenance /training (option), calculation will be as follows:

a) The firm unit price for the English and French Operator and English and French Maintenance /Instructions/training (option) will be added; and

b) The sum will be divided by four (4).

4.1.2.7 To determine the aggregate evaluated price for the firm quantity, optional quantity and the Operator and Maintenance instructions/training (option), calculation will be as follows:

a) The average price for the optional quantity obtained in 4.1.2.5 (b) above will be multiplied by the total estimated optional quantity identified;

b) The average price for the Operator and Maintenance instructions/training (option) obtained in 4.1.2.6 (b) above will be multiplied by the total estimated optional quantity identified; and

- c) The result will be added to the total price for the firm quantity obtained in 4.1.2.4 (a) above.

4.2. Basis of Selection

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

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

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

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

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

5.1 Certifications Required with the Bid

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

5.1.1 Integrity Provisions - Declaration of Convicted Offences

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

5.2 Certifications Precedent to Contract Award and Additional Information

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

5.2.1 Integrity Provisions – Required Documentation

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

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the Employment and Social Development Canada (ESDC) - Labour's website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>).

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

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex "E" titled Federal Contractors Program for Employment Equity - Certification, before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

5.2.3 Additional Certifications Precedent to Contract Award

The certifications listed below should be completed and submitted with the bid, but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the Contracting Authority will 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

5.2.3.1 Product Conformance

The Bidder certifies that all vehicles/equipment proposed conform, and will continue to conform throughout the duration of the contract, to all technical specifications of the purchase description(s).

This certification does not relieve the bid from meeting all mandatory technical evaluation criteria detailed in Part 4.

Bidder's authorized representative signature

Date

5.2.3.2 General Environmental Criteria Certification

The Bidder must select and complete one of the following two certification statements.

- A) The Bidder certifies that the Bidder is registered or meets ISO 14001.

Bidders' Authorized Representative Signature

Date

Or

- B) The Bidder certifies that the Bidder meets and will continue to meet throughout the duration of the contract, a minimum of four (4) out of six (6) criteria identified in the table below.

The Bidder must indicate which four (4) criteria, as a minimum, are met.

Green Practices within the Bidders' organization	Insert a checkmark for each criterion that is met
Promotes a paperless environment through directives, procedures and/or programs	
All documents are printed double sided and in black and white for day to day business activity unless otherwise specified by your client	

Paper used for day to day business activity has a minimum of 30% recycled content and has a sustainable forestry management certification	
Utilizes environmentally preferable inks and purchase remanufactured ink cartridges or ink cartridges that can be returned to the manufacturer for reuse and recycling for day to day business activity.	
Recycling bins for paper, newsprint, plastic and aluminum containers available and emptied regularly in accordance with local recycling program.	
A minimum of 50% of office equipment has an energy efficient certification.	

Bidders' Authorized Representative Signature

Date

PART 6 - RESULTING CONTRACT CLAUSES

6.1. Requirement

- 6.1.1 The Contractor must deliver Quantity one (1), Aircraft Rescue Fire Fighting Vehicle and ancillary items as described in Annex "A" - Pricing and in accordance with Annex "B" - Purchase Description Aircraft Rescue Fire Fighting Vehicle.
- 6.1.2 The Contractor grants to Canada irrevocable options identified in Annex "A"- Pricing.
- 6.1.2.1 The options may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.
- 6.1.2.2 The options may be exercised in whole or in part and on more than one occasion at the sole discretion of Canada, up to the maximum quantity identified in Annex "A"- Pricing.
- 6.1.2.3 The options may be exercised within Twelve (12) months after contract award.

6.2. 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) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

6.2.1 General Conditions

2010A (2016-04-04) General Conditions - Goods (Medium Complexity), apply to and form part of the contract.

6.2.1.1 Section 09 of general conditions 2010A is amended as follows;

- by replacing the period of twelve (12) months by twenty-four (24) months.
- Full lifetime warranty coverage against defects in materials or workmanship on the frame, cross members and tanks;
- A minimum ten (10) year cab and body structural warranty against defects in materials or workmanship;
- A minimum ten (10) year stainless steel plumbing components warranty against defects in material or workmanship;
- A minimum five (5) year paint warranty, against peeling, cracking, blistering, corrosion, and UV paint fade (pro-rating is acceptable);

All other provisions of the warranty section remain in effect.

6.3. Term of Contract

6.3.1 Delivery of Vehicle

6.3.1.1 Firm Quantity

Delivery date of the vehicle must be made as follows:

Item 001 – Quantity one (1) Aircraft Rescue Fire Fighting Vehicle and ancillary items must be delivered on or before _____ (Date to be inserted by PWGSC the Contracting Authority at time of contract award.)

6.3.1.2 Option Quantity

Item 002- Quantity up to one (1) Aircraft Rescue Fire Fighting Vehicle and ancillary items to be delivered within _____ calendar days after an option is exercised. (Days to be inserted by PWGSC the Contracting Authority at time of contract award.)

6.4. Authorities

6.4.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Neil Pearson
Title: Supply Specialist
Organization: Public Works and Government Services Canada - Acquisitions Branch
LEFT Directorate, HP Division,
7A2, Place du Portage, Phase 3, 11 Laurier Street,
Gatineau Quebec, K1A 0S5
Telephone: 873 469-3312
E-mail: neil.pearson@pwgsc-tpsgc.gc.ca

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

6.4.2 Procurement Authority

The Procurement Authority for the Contract is:

Name: _____ (To be inserted by PWGSC at time of contract award.)
Title: _____
Organization: _____

Telephone: _____ - _____ - _____
Facsimile: _____ - _____ - _____
E-mail: _____

The Procurement Authority is the representative of the department or agency for whom the Work is being carried out under the Contract. The Procurement Authority is responsible for the implementation of tools and processes required for the administration of the Contract. The Contractor may discuss administrative matters identified in the Contract with the Procurement Authority however the 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.

6.4.3 Technical Authority:

The Technical Authority for the Contract is:

Name: _____ (To be inserted by PWGSC at time of contract award.)
Title: _____

Organization: _____

Telephone: _____

Facsimile: _____

E-mail: _____

____ - ____ - ____

____ - ____ - ____

____ - ____ - ____

The Technical Authority named above 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.

6.4.4 Contractor's Representative

Name and telephone number of the person responsible for :

General enquiries

Name: _____ (To be completed by the bidder.)

Title: _____

Telephone: _____

Facsimile: _____

E-mail: _____

____ - ____ - ____

____ - ____ - ____

____ - ____ - ____

Delivery follow-up

Name: _____ (To be completed by the bidder.)

Title: _____

Telephone: _____

Facsimile: _____

E-mail: _____

____ - ____ - ____

____ - ____ - ____

____ - ____ - ____

6.4.5 After Sales Service

The following dealer and/or agent is authorized to provide after sales service, maintenance and warranty repairs and a full range of repair parts for the vehicle/equipment offered:

Item 001

Name: _____

Address: _____

Telephone Number: _____

Distance between the delivery location and the dealer and/or agent: _____ km

6.5. Payment

6.5.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid the firm price(s) specified in Annex "A" - Pricing, and as follows:

6.5.1.1 Basis of Payment (BOP) Type 1

Firm unit prices in Canadian dollars, Delivered Duty Paid at destination, Incoterms 2000, including Canadian Custom Duties and Excise Taxes included where applicable, and applicable Taxes are extra.

The price paid will be adjusted in accordance with the exchange rate fluctuation provision (as applicable).

6.5.1.2 Basis of Payment (BOP) Type 2

Firm unit prices in Canadian dollars, including Canadian Custom Duties and Excise Taxes included where applicable, and applicable Taxes are extra.

The price paid will be adjusted in accordance with the exchange rate fluctuation provision (as applicable).

6.5.1.3 Basis of Payment (BOP) Type 3

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 and/or administrative overhead, 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/index.php?sid=90&hl=1&lang=eng>), 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. All payments are subject to government audit.

When requested by Canada, the Contractor must provide an estimated cost and relevant information for the travel and living.

6.5.2 Electronic Payment of Invoices – Contract (if Applicable)

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

- a. Direct Deposit (Domestic and International);
- b. Electronic Data Interchange (EDI);
- c. Wire Transfer (International Only);

6.5.3 SACC Manual Clauses

C6000C	Limitation of price	2017-08-17
H1001C	Multiple Payments	2008-05-12
C3015C	Exchange rate fluctuation adjustment	2017-08-17

6.6 Invoicing Instructions

6.6.1 The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions including the Client Ref # BT855. Invoices cannot be submitted until all work identified in the invoice is completed. Suppliers are requested to provide invoices in electronic format unless otherwise specified by the Contracting Authority or Project Authority, thereby reducing printed material.

Each invoice must be supported by:

- (a) a copy of the release document and any other documents as specified in the Contract;

6.6.2 Invoices must be distributed as follows:

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

National Defence Headquarters
Mgen George R. Pearkes Bldg
101 Colonel By Drive
Ottawa, Canada
K1A 0K2

Attention: DLP _____

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

6.6.3 Holdback

A ten percent (10%) holdback will apply on the total price of each vehicle Items 001 and 002 on any due payment of the said vehicle/equipment. Release of the holdback (10%) is conditional upon receipt and certified acceptance by inspection authority of the said vehicle and all ancillary items as identified in Annex "A" - Pricing.

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 Taxes payable as it was claimed and payable under the previous invoice.

- (a) The original and one (1) copy of the invoice for the holdback must be forwarded to the Procurement Authority identified under the section entitled "Authorities" of the Contract.
- (b) One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

6.7. Certifications

6.7.1 Compliance

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

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

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

6.8 Applicable Laws

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

6.9 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) 2010A (2016-04-04) General Conditions - Goods (Medium Complexity);
- (c) Annex "A" - Pricing;
- (d) Annex "B" - Purchase Description - Aircraft Rescue Fire Fighting Vehicle
- (e) Annex "E", Federal Contractors Program for Employment Equity – Certification;
- (f) the Contractor's bid dated _____

6.10 SACC Manual Clauses

A1009C	Work Site Access	2008-05-12
A9006C	Defence Contract	2012-07-16
A9049C	Vehicle Safety	2011-05-16
A9062C	Canadian Forces Site Regulations	2011-05-16
C2800C	Priority Rating	2013-01-28
C2801C	Priority Rating - Canadian-based Contractors	2017-08-17
D3010C	Delivery of Dangerous Goods / Hazardous Products	2016-01-28
D5510C	Quality Assurance Authority (Department of National Defence) - Canadian-based Contractor	2017-08-17
D5515C	Quality Assurance Authority (DND) - Foreign-based and United States Contractor	2010-01-11
D5540C	ISO 9001:2008 Quality Management Systems - Requirements (QAC Q)	2010-08-16
D5604C	Release Documents - Foreign based Contractor	2008-12-12
D5605C	Release Documents - US based Contractors	2010-01-11
D5606C	Release Documents - Canadian-based Contractors	2012-07-16
B4061C	North Atlantic Treaty Organization Codification – Data Requirements	2012-05-08
D9002C	Incomplete Assemblies	2007-11-30
G1005C	Insurance	2016-01-28

6.11 Inspection and Acceptance

The Technical Authority is the Inspection Authority. All reports, deliverable items, documents, goods and all services rendered under the Contract are subject to

inspection by the Inspection Authority or representative. Should any report, document, good or service not be in accordance with the requirements of the Statement of Work and to the satisfaction of the Inspection Authority, as submitted, the Inspection Authority will have the right to reject it or require its correction at the sole expense of the Contractor before recommending payment.

6.12 Preparation for Delivery

The vehicle / equipment must be serviced, adjusted and delivered in condition for immediate use. The interior and exterior must be cleaned before leaving the factory and being released to inspection authority or consignee personnel at the final delivery location.

The fuel tanks must be at least half full prior to release of the vehicle(s) to inspection authority or consignee.

6.13 Shipping Instructions - Delivery at Destination

- 6.13.1 The Contractor must ship the goods prepaid DDP - Delivered Duty Paid (as detailed at Annex "A"- Pricing). Unless otherwise directed, delivery must be made by the most economical means. The Contractor is responsible for all delivery charges, administration, costs and risks of transport and customs clearance, including the payment of customs duties and taxes.
- 6.13.2 The Contractor must deliver the goods by appointment only. The Contractor or its carrier must arrange delivery appointments by contacting the contacts specified in Annex "A"- Pricing. The consignee may refuse shipments when prior arrangements have not been made.

6.14 Release Documents - Distribution

The Contractor must prepare the release documents in a current electronic format and distribute them as follows:

- a. One (1) copy mailed to consignee marked: "Attention: Receipts Officer";
- b. Two (2) copies with shipment (in a waterproof envelope) to the consignee;
- c. One (1) copy to the Contracting Authority;
- d. One (1) copy to:
National Defence Headquarters
Mgen George R. Pearkes Building
101 Colonel By Drive
Ottawa, ON K1A OK2

Attention: _____

- e. One (1) copy to the Quality Assurance Representative;
- f. One (1) copy to the Contractor; and
- g. For all non-Canadian contractors, one (1) copy to:
DQA/Contract Administration
National Defence Headquarters
Mgen George R. Pearkes Building
101 Colonel By Drive
Ottawa, ON K1A 0K2
E-mail: ContractAdmin.DQA@forces.gc.ca.

NOTE: For into-plane refuelling contracts b, c and d above are not required

6.15 Post-Contract Award Meeting/Pre-Production Meeting

Within ten (10) calendar days from the effective date of the Contract, the Contractor must contact the Contracting Authority to determine if a post-contract award meeting is required. A meeting will be convened at the discretion of the Technical Authority after contract award to review technical and contractual requirements. The Contractor shall be responsible for the preparation and distribution of the minutes of meeting within five (5) calendar days after the meeting has been held. The meeting will be held at the Contractor's facilities or at the Department of National Defence facility or via teleconference, at Canada's discretion at no additional cost to Canada, with representatives of the Contractor, the Department of National Defence and Public Works and Government Services Canada.

6.16 Progress Reports

The Contractor must submit monthly reports, in electronic format, on the progress of the Work, to both the Technical Authority and the Contracting Authority.

Each progress report must address the following questions:

- (a) Is the delivery on schedule?
- (b) Is the Contract free of any areas of concern in which the assistance or guidance of Canada may be required?
- (c) Each negative response must be supported with an explanation.

6.17 Tools and Loose Equipment

For shipment verification, all items and tools, which are shipped loose with the vehicle/equipment must be listed on the Inspection Certificate (CF 1280) or on an attached packing note.

6.18 Material

Material supplied must be new unused and of current production by manufacturer. (2018 model-year or newer).

6.19 Design Changes

The "Design Change, Design Deviation and Waiver Procedure" as defined in National Defence Standard D-02-006-008/SG-001 must apply.

6.20 Interchangeability

Unless changes during the production run are authorized by Contracting Authority, all vehicles supplied against any one item of a contract must be the same make and model, and all like assemblies, sub-assemblies and parts must be interchangeable.

6.21 Packaging

The methods used for preservation and packaging must be in conformity with the Contractor's normal standard for domestic shipment or, if necessary, with standards for overseas shipment as below deck cargo.

6.22 Service at Delivery

The Contractor must send a Service Representative to each delivery destination to perform the assembly/preparation on all vehicles delivered. Cost to provide this service must be included in the price of each vehicle.

6.23 Vehicle Recall Notices

All vehicle recall notices must be forwarded to:

National Defence Headquarters
MGen George R. Pearkes Building
101 Colonel By Drive
Ottawa, Ontario K1A 0K2

Attention: (designation and name of TA to be inserted by PWGSC at contract award)

ANNEX "A" - PRICING

Item 001 Aircraft Rescue Fire Fighting Vehicle (Firm Quantity)

The Contractor must deliver the vehicle/equipment including the sample manuals, CD and paper of all approved manuals, data summary, photographs, warranty letter(s), preventative maintenance replacement parts kit list, special tools list, Recommended spare parts kit list, Dimensioned Drawings, Bilingual Training Video and Operator and Maintenance training (English, one session each) in accordance with the attached Annex "B" - Purchase Description - Aircraft Rescue Fire Fighting Vehicle.

The Aircraft Rescue Fire Fighting Vehicle and ancillary items must be delivered to:

CFS Esquimalt
Major Equipment Section
Building 1127
Work Point Barracks
Victoria, BC
V9A 7N2

Delivery contact: _____ (Name to be inserted by PWGSC at time of contract award.)

Date of delivery: _____ (Date to be inserted by PWGSC at time of contract award.)

Firm unit price of \$ _____ per vehicle, including all equipment and ancillary items, in accordance with Basis of Payment Type 1 (as detailed at Clause 6.5.1 Basis of Payment).

Quantity: one (1)

Item 002 Aircraft Rescue Fire Fighting Vehicle (Optional Quantity)

If this option is exercised, the Contractor must deliver the vehicle/equipment including manuals and warranty letters in accordance with the attached Annex "B" - Purchase Description - Aircraft Rescue Fire Fighting Vehicle

For Destinations in British Columbia;

Firm unit price of \$ _____ per vehicle/equipment in accordance with Basis of Payment Type 1 (as detailed at Clause 6.5.1 Basis of Payment).

For Destinations in Alberta and Saskatchewan;

Firm unit price of \$ _____ per vehicle/equipment in accordance with Basis of Payment Type 1 (as detailed at Clause 6.5.1 Basis of Payment).

For Destinations in Manitoba;

Firm unit price of \$ _____ per vehicle/equipment in accordance with Basis of Payment Type 1 (as detailed at Clause 6.5.1 Basis of Payment).

For Destinations in Ontario and Quebec;

Firm unit price of \$ _____ per vehicle/equipment in accordance with Basis of Payment Type 1 (as detailed at Clause 6.5.1 Basis of Payment).

For Destinations in New Brunswick and Nova Scotia

Firm unit price of \$ _____ per vehicle/equipment in accordance with Basis of Payment Type 1 (as detailed at Clause 6.5.1 Basis of Payment).

Quantity: Up to one (1)

Item 003 Operator instructions/training - English (Option)

If this option is exercised, the Contractor must provide Operator instruction/training, in accordance with the attached Annex "B"- Purchase Description - Aircraft Rescue Fire Fighting Vehicle

Firm unit price of \$ _____ in accordance with Basis of Payment Type 2 (as detailed at Clause 6.5.1 Basis of Payment).

Quantity: up to one (1)

Item 004 Operator instructions/training - French (Option)

If this option is exercised, the Contractor must provide Operator instruction/training, in accordance with the attached Annex "B"- Purchase Description - Aircraft Rescue Fire Fighting Vehicle

Firm unit price of \$ _____ in accordance with Basis of Payment Type 2 (as detailed at Clause 6.5.1 Basis of Payment).

Quantity: up to one (1)

Item 005 Maintenance instructions/training - English (Option)

If this option is exercised, the Contractor must provide Maintenance instruction/training, in accordance with the attached Annex "B" - Purchase Description - Aircraft Rescue Fire Fighting Vehicle

Firm unit price of \$_____ in accordance with Basis of Payment Type 2 (as detailed at Clause 6.5.1 Basis of Payment).

Quantity: up to one (1)

Item 006 Maintenance instructions/training - French (Option)

If this option is exercised, the Contractor must provide Maintenance instruction/training, in accordance with the attached Annex "B" - Purchase Description - Aircraft Rescue Fire Fighting Vehicle

Firm unit price of \$_____ in accordance with Basis of Payment Type 2 (as detailed at Clause 6.5.1 Basis of Payment).

Quantity: up to one (1)

Item 007 Travel and Living for Instruction/Training (Option)

(Item 007 will not be included in the financial evaluation)

All travel must have the prior authorization of the Technical Authority. All payments are subject to government audit.
When requested by Canada, the Contractor must provide an estimated cost for the travel and living.

Estimated cost: \$(to be inserted by PWGSC if an option is exercised)
Familiarization Instruction/Training, for Travel and Living expenses, Delivered Duty Paid at destination, in accordance with Clause 6.5.1, Basis of Payment Type 3.

Quantity: up to one (1)

ANNEX “D” to PART 3 OF THE BID SOLICITATION

ELECTRONIC PAYMENT INSTRUMENTS

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

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

ANNEX "E" to PART 5 – BID SOLICITATION

FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY - CERTIFICATION

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with any request or requirement imposed by Canada may render the bid non-responsive or constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit Employment and Social Development Canada (ESDC) -Labour's website.

Date: _____(YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

- A1. The Bidder certifies having no work force in Canada.
- A2. The Bidder certifies being a public sector employer.
- A3. The Bidder certifies being a federally regulated employer being subject to the *Employment Equity Act*.
- A4. The Bidder certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).

A5. The Bidder has a combined workforce in Canada of 100 or more employees; and

- A5.1. The Bidder certifies already having a valid and current Agreement to Implement Employment Equity (AIEE) in place with ESDC -Labour.

OR

A5.2. The Bidder certifies having submitted the Agreement to Implement Employment Equity (LAB1168) to ESDC -Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC C-Labour.

B. Check only one of the following:

B1. The Bidder is not a Joint Venture.

OR

B2. The Bidder is a Joint Venture and each member of the Joint Venture must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)



ANNEX B

PURCHASE DESCRIPTION

FOR

NANOOSE - AIRCRAFT RESCUE AND FIRE FIGHTING VEHICLE WITH WATER FOAM AND DRY CHEMICAL

ECC 189130



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

AVIS

Cette documentation a été révisée par l'autorité technique et ne contient pas de marchandises contrôlées.

OPI DSVPM 5 – DAVPS 5

Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du chef d'état-major de la Défense

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RDIMS # 4786583

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1. SCOPE

1.1 Scope

- a) This Purchase Description describes a 4x4 Aircraft Rescue and Fire Fighting (ARFF) Vehicle, with a minimum 2,600 litres (688 US gal) water tank, 170 litres (45 US gal) 3% Aqueous Film Forming Agent (AFFF) tank, and 90 kg (198 lb) of Purple K dry chemical, The vehicle will be used primarily to transport personnel and equipment to the scene of an aircraft emergency, for rescue operations and combating fires.

1.2 Instructions

- a) Requirements, which are identified by the word “**must**”, are mandatory. Deviations will not be permitted.
- b) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part.
- c) Where “**must**” or “will” are not used, the information supplied is for guidance only.
- d) In this document “provided” **must** mean “provided and installed”.
- e) Where a technical certification is referred to in this specification, a copy of the certification or an acceptable Proof of Compliance **must** be supplied for the vehicle when requested by the Technical Authority.
- f) Metric measurements are used to define the requirement. Other measurements are for reference only and may not be exact conversions.
- g) Nominal dimensions reflect a method by which materials or products are generally identified, but which differ from the actual measured dimensions.

1.3 Definitions

- a) “**Technical Authority**” - The government official responsible for technical content of this requirement.
- b) “**Equivalent**” - Substitutes and alternatives that are equivalent in product, performance or a standard will be considered for acceptance by the Technical Authority where Proof of Compliance for equivalency for the respective requirement is provided for evaluation.
- c) “**Vehicle**” – The entire vehicle including all systems and sub-systems, in a complete manufactured state in accordance with the requirements in this Purchase Description.
- d) “**Road Legal**” – Applies to a self-propelled vehicle designed for or capable of transporting persons, property, material or permanently or temporarily affixed apparatus on a highway.
- e) “**5th percentile adult female**” – As defined in the *Motor Vehicle Safety Regulations (C.R.C., c. 1038)* a person having as physical characteristics a mass of 46.3 kg, height of 1499 mm, erect sitting height of 785 mm, normal sitting height of 752 mm, hip sitting breadth of 325 mm, hip

sitting circumference of 925 mm, waist sitting circumference of 599 mm, chest depth of 191 mm, bust circumference of 775 mm, chest upper circumference of 757 mm, chest lower circumference of 676 mm, knee height of 455 mm, popliteal height of 356 mm, elbow rest height of 180 mm, thigh clearance height of 104 mm, buttock-to-knee length of 518 mm, buttock-to-poples length of 432 mm, elbow-to-elbow breadth of 312 mm and seat breadth of 312 mm.

- f) **“95th percentile adult male”** – As defined in the *Motor Vehicle Safety Regulations (C.R.C., c. 1038)* a person having as physical characteristics a mass of 97.5 kg, height of 1849 mm, erect sitting height of 965 mm, normal sitting height of 930 mm, hip sitting breadth of 419 mm, hip sitting circumference of 1199 mm, waist sitting circumference of 1080 mm, chest depth of 267 mm, chest circumference of 1130 mm, knee height of 594 mm, popliteal height of 490 mm, elbow rest height of 295 mm, thigh clearance height of 175 mm, buttock-to-knee length of 640 mm, buttock-to-poples length of 549 mm, elbow-to-elbow breadth of 506 mm and seat breadth of 404 mm.
- g) **“Gross Axle Weight Rating (GAWR)”** - The value specified by the vehicle manufacturer as the load-carrying capacity of a single axle system, as measured at the tire-ground interfaces.
- h) **“Gross Vehicle Weight Rating (GVWR)”** - The value specified by the vehicle manufacturer as the loaded weight of a single vehicle.

2. APPLICABLE DOCUMENTS

2.1 Applicable Documents

- a) The following documents form part of this Purchase Description. The dates of issue are those in effect on the date of release of the RFP. Canada will not be supplying these documents. Sources are as shown:

Canadian Occupational Health and Safety Regulations (COHSR), 2015

<http://laws.justice.gc.ca/eng/regulations/sor-86-304/index.html>

SAE Handbook

Society of Automotive Engineers Inc.
400 Commonwealth Dr,
Warrendale, PA, 15096
<http://www.sae.org>

Automotive (On-road) Diesel Fuel

CAN/CGSB Standard 3.517
Standards Council of Canada
270 Albert Street, suite 200
Ottawa, ON K1P 6N7
<https://www.scc.ca/en>

Motor Vehicle Safety Regulations (MVSR)

Government of Canada / Transport Canada
<https://www.tc.gc.ca/eng/acts-regulations/regulations-crc-c1038.htm>

Yearbook

Tire and Rim Association Inc.
3200 West Market St.
Akron, Ohio, 44321
<http://www.us-tra.org/traHome.htm>

Hazardous Products Act

Government of Canada
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

Transportation of Dangerous Goods Regulation, Part 5

Transport Canada, Transport Dangerous Goods
Government of Canada
330 Sparks Street, Ottawa, ON, K1A 0N5

Safety Code 6: Health Canada's Radiofrequency Exposure Guidelines

Health Canada,
Government of Canada
Address Locator 0900C2
Ottawa, ON, K1A 0K9

National Fire Protection Association

NFPA 412 – 2014 – Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment
NFPA 414 – 2017 – Standard for Aircraft Rescue and Fire-Fighting Vehicles
National Fire Protection Association (NFPA)
1 Batterymarch Park
Quincy, Massachusetts 02169-7471

MIL-STD-209K – Department of Defence, Interface Standard for Lifting and Tie down Provisions

http://www.sddc.army.mil/sites/TEA/Functions/Deployability/TransportabilityEngineering/Modeling/Documents/MIL-STD-209K_2005-02-22.pdf

Advisory Circulars 300 Series – Aerodromes and Airports (for additional information and guidance only)

Transport Canada
Government of Canada
330 Sparks Street
Ottawa, ON, K1A 0N5
<https://www.tc.gc.ca/>

Commercial Item Description A-A-50696 - Reels, Static Discharge, Grounding, 50 and 75 Foot Cable Lengths

GSA - Specification Section
470 L'Enfant Plaza
Suite 8100
Washington, DC 20407

United Nations Economic Conditions for Europe (UNECE)

Regulation No. 29, Addendum 28, Revision 1, "Uniform Provisions Concerning the Approval of Vehicles with Regard to the Protection of the Occupants of the Cab of a Commercial Vehicle"
Palais des Nations

3. REQUIREMENTS

3.1 Standard Design

- a) **Latest Model** - The vehicle design **must** be the manufacturer's latest model.
- b) **Industry Acceptability** - The vehicle design **must** have demonstrated industry acceptability by having been manufactured and sold commercially for at least 2 year, or be manufactured by a company that has at least 5 years' experience in design and manufacturing of a comparable type of equipment of equivalent or greater complexity.
- c) **Engineering Certification** – Upon request original manufacturers engineering certification **must** be provided for major drive train components, and major equipment systems and assemblies, to demonstrate that assemblies are used within their design limitations.
- d) **Regulations** – The vehicle **must** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and pollution in effect in Canada at the time of manufacture. International equivalent laws, regulations, and industrial standards will be accepted only if certified for equivalency by a professional engineer.
- e) **Published Ratings** - The vehicle **must** have system and component capacities equivalent to published ratings (i.e. product or component brochures).
- f) **Standard Components** - The vehicle **must** include all standard components, equipment and accessories for the model offered, although they may not be specifically described in this Purchase Description.
- g) **Spare Parts** - The manufacturer **must** select components readily available for a minimum period of fifteen (15) years from the date of manufacture.
- h) **Couplings** – Unless otherwise specified, all inlets, discharges, and hoses **must** be provided with Storz couplings, complete with cap and chain where applicable.
- i) **Hazardous Materials** - The contractor **must** comply with Hazardous Products Act of Canada concerning the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals used in the manufacture and assembly of the product supplied.
- j) **Foreign Object Debris (FOD)** - To prevent FOD, all loose metal parts **must** be securely attached to the vehicle with wire lanyards. If removable panels are provided they **must** be attached with captive fasteners.

3.1.1 Maintainability

- a) The vehicle **must** be designed to permit access to all items required for servicing and maintenance.
- b) Spin on style filters **must** be provided where available.

3.2 Operating Conditions

3.2.1 Weather

- a) The vehicle **must** operate within the extremes of weather conditions found in Canada in temperatures ranging from -40 to 40° C (-40 to 104° F)

3.2.2 Terrain

- a) The vehicle **must** operate off-road.
- b) Terrain conditions **must** include year round operations on snow, mud, swamp, sand and ice.
- c) The vehicle and all attached equipment **must** operate up to a maximum side inclination of 30 degrees.

3.2.3 Visibility

- a) The vehicle **must** operate in day, night, and during periods of artificial obscuration in fire suppression operations.

3.3 Safety Standards

3.3.1 Vehicle Safety Regulations

- a) The vehicle **must** comply with the Motor Vehicle Safety Regulations (MVSR).
- b) The completed vehicle **must** have Safety Compliance Certification Label with a National Safety Mark (NSM), as a seal of compliance **or** be accompanied by a Vehicle Import Form containing proof of Inspection by the Registrar of Imported Vehicles.

3.3.2 National Fire Protection Association

- a) The vehicle **must** comply with all of the minimum requirements identified in the National Fire Protection Association (NFPA) 412 Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment edition 2014.
- b) The vehicle **must** comply with all of the minimum requirements identified in the National Fire Protection Association (NFPA) 414 Standard for Aircraft Rescue and Fire-Fighting Vehicles 2017 edition.
- c) The completed vehicle **must** have Safety Compliance Certification Label with a National Safety Mark (NSM), as a seal of compliance **or** be accompanied by a Vehicle Import Form containing proof of Inspection by the Registrar of Imported Vehicles.

3.3.3 Noise Level

- a) The vehicle/equipment noise level **must** meet the requirements of legislation relative to Canadian Occupational Health and Safety Regulations (COHSR) at locations where the vehicle/equipment is operated.

3.3.4 Human Factors Engineering

- a) The vehicle, all systems, and components **must** comply with the relevant sections of the COHSR.
- b) The vehicle **must** be manufactured/assembled for safety and ease of use by CAF users with anthropometric characteristic measurements ranging from 95th percentile male to 5th percentile female;
- c) The vehicle **must** have entry and exit points equipped with handles and steps sized and positioned to accommodate CAF users with anthropometric characteristic measurements ranging from 95th percentile male to 5th percentile female;
- d) The vehicle **must** be equipped, with warning and instruction plates, non-slip walking surfaces and heat shields, for operator safety; and

3.4 Vehicle Performance, Ratings and Dimensions

3.4.1 Performance

- a) As a minimum, the vehicle **must** meet the fully loaded vehicle performance parameters identified in NFPA 414, applicable to the vehicle size.

3.4.2 Weight

- a) The actual gross vehicle weight of the fully staffed, loaded and equipped vehicle for service **must** not exceed the manufacturer's tested weight rating as recorded on the vehicle information data plate, in accordance with NFPA 414.

3.4.3 Dimensions

- a) The vehicle **must** have road legal dimensions across Canada;
- b) The maximum overall **height** of the vehicle **must** not exceed a maximum of 3.81 metres (11.5 feet).
- c) The maximum overall **length** of the vehicle **must** not exceed a maximum of 9.14 metres (30 feet).
- d) The maximum overall body **width** of the vehicle **must** not exceed a maximum of 2.59 metres (8.5 feet).
- e) The maximum overall **width** of the vehicle **must** not exceed a maximum of 3.30 metres (10.83 feet) including mirrors and accessories.
- f) The vehicle minimum ground clearance **must** be a minimum of 330 mm (13 inches).

3.5 Vehicle construction

3.5.1 Frame

- a) The frame **must** be of heavy duty construction manufactured for use in all conditions specified in the weather and terrain descriptions of section 3.2.

3.5.2 Body

- a) The vehicle body **must** be constructed from aluminium alloy panels and extrusions or GRP body panel design, providing the lightest weight while maximizing strength, heat, and corrosion resistance.

3.5.3 Bumpers

- a) The vehicle **must** be provided with durable front and rear bumpers, secured to the vehicle frame.

3.5.4 Bumper Accessories

- a) Two (2) towing eyes with shackles or towing hooks **must** be frame mounted at the front and rear of the vehicle, with sufficient strength to permit direct pull during recovery operations of the loaded vehicle.
- b) The tow eyes or hooks **must** be of sufficient strength to pull an apparatus of equivalent GVWR to vehicle for which this document is written.

3.6 Ladders, Equipment and Racks

- a) The vehicle **must** be provide with two 3.05m (10 feet) pike poles.
- b) The vehicle **must** be provide with a 4.27m (14 feet) extension ladder.
- c) The vehicle **must** be provided with a multifunction/combination step and extension ladder with a minimum fully extended length of 4,57m (15 feet).

3.7 Engine

- a) The vehicle engine(s) **must** have the horsepower, torque and speed characteristics to meet and maintain all vehicular performance characteristics specified in NFPA 414.
- b) The engine **must** be turbo charged and operate on diesel fuel to the CAN/CGSB Standard 3.517.

3.7.1 Engine Components

- a) Replaceable air filter(s) **must** be provided.
- b) Engine cooling system **must** be provided.
- c) A combustion air cleaning system **must** be provided, with an air cleaner restriction indicator visible to the operator.

- d) An engine governor **must** be provided.
- e) An engine oil drain **must** be provided, plumbed to allow oil changes from the underside of the engine.
- f) A full flow replaceable oil filter **must** be installed.
- g) An engine shutdown or de-rate system **must** be provided, controls accessible from the operator position.
- h) A fast idle system **must** be provided, to raise engine speed when required for operations, when the transmission is in neutral and the parking brake is set.

3.7.2 **Cold Weather Starting Aids**

- a) The engine **must** be equipped with cold weather aids applicable to the operating conditions in section 3.2.
- b) A thermostatically controlled in-line fuel heater **must** be provided.
- c) A 110-volt engine block heater(s) **must** be provided.
- d) Cold weather aids **must** be powered through a dedicated auto-eject shoreline receptacle(s).

3.7.3 **Exhaust System**

- a) The vehicle **must** be equipped with an exhaust system compliant with NFPA 414 and shielded to prevent personnel injury from contacting a heated surface.
- b) Exhaust system **must** meet engine manufacturer requirements.
- c) The vehicle exhaust pipe **must** discharge close to the ground.
- d) The vehicle exhaust system **must** be designed to discharge where fire fighters are least affected when operating pump panels and accessing cabinets.
- e) The vehicle exhaust system **must** discharge on the passenger side of the vehicle.

3.7.4 **Fuel Tank(s)**

- a) The fuel tank(s) **must** have a fuel capacity in accordance with NFPA 414, art. 4.4.3.5.
- b) If more than one fuel tank is used, they **must** be connected to a common fuel gauge and filling point.
- c) The fuel system **must** include a fuel water separator, incorporating a thermostatically controlled heater.
- d) Lines of the fuel system **must** be installed such that they are protected from damage while navigating under conditions outlined in section 3.2.

3.8 Batteries

- a) The vehicle **must** be supplied with heavy-duty, maintenance free batteries, compliant with NFPA 1901 Section 13.4.
- b) Batteries **must** be mounted in an accessible, protected and ventilated location.
- c) Batteries **must** be installed in an insulated battery box.
- d) The batteries **must** be rated to exceed the draw, in the required operating conditions.

3.8.1 Battery Charger

- a) The vehicle **must** be supplied with a battery charger.
- b) The charging system power **must** be provided through an auto-eject shoreline receptacle.
- c) The receptacle **must** be solely used to charge the battery and coloured yellow.
- d) The battery charging system **must** provide a visual voltage signal indicator.
- e) Location of the shoreline receptacle and remote charge indicator will be confirmed at the pre-production meeting.

3.9 Drivetrain

- a) The vehicle **must** be 4x4 drive.
- b) The drivetrain **must** include a “Park” or “Neutral” starting interlock.
- c) The drivetrain **must** include limited slip or driver controlled locking differential(s) on the drive axle(s).

3.10 Transmission

- a) The vehicle **must** be equipped with an automatic transmission.
- b) The transmission **must** have an oil cooler.
- c) The transmission **must** have replaceable oil filter(s).
- d) The transmission shift control **must** clearly indicate the selected gear under all lighting conditions.
- e) A transmission oil dipstick **must** be provided.
- f) An audible back-up alarm **must** be installed in accordance with NFPA 414 Section 5.7.6.1(7).

3.11 Brakes – Air System

- a) The vehicle **must** be equipped with a braking system in accordance with NFPA 414 Section 4.10.

- b) The braking system **must** include an anti-lock (ABS) brake system.
- c) The braking system **must** be equipped with automatic slack adjusters on all wheels.
- d) The braking system **must** include an automatic air dryer;
- e) The braking system **must** include brake housing dust shields and visual brake stroke indicators (as applicable).
- f) The braking system **must** include air couplers (glad hands), service and emergency, in a protected location at the front and rear of the Apparatus.
- g) The braking system **must** include heated automatic moisture expelling valve on the air dryer.
- h) The braking system **must** be equipped with an auto-eject air connection to maintain charge in the air system. Location of auto-eject will be confirmed at the pre-production meeting.
- i) The braking system **must** be equipped with air pressure protection preventing the use of air-operated accessories when the system air pressure drops below 550 kPa (80 PSI).
- j) The braking system **must** be equipped with a quick build-up section in the air reservoir to enable the Apparatus to move within 15 seconds of start-up, when it has a completely discharged air system.

3.11.1 **Parking Brake**

- a) The vehicle **must** be equipped with a parking brake that can hold the vehicle on a 20 percent gradient.

3.12 **Suspension System**

- a) The vehicle **must** be equipped with heavy-duty suspension system.
- b) The suspension system **must** be provided with double acting shock absorbers on all axles.

3.13 **Steering**

- a) The vehicle **must** be provided with a power steering system.
- b) The steering system **must** be provided with a telescopic/tilt steering column.
- c) Steering mechanism must meet the turning diameter in accordance with NFPA 414 art. 4.11.3.

3.14 **Wheels, Rims and Tires**

- a) The vehicle **must** be equipped with steel-belted, tubeless radial tires.
- b) The tires **must** be mounted and balanced on two piece steel or aluminium hub pilot disc wheels.
- c) The tires **must** be sized to meet or exceed the load requirements.

- d) The tires **must** be mud and snow type.
- e) The wheels and tires **must** conform to the Tire and Rim Association requirements for the Apparatus application.

3.15 **Cab**

- a) The vehicle **must** be equipped with a four person weatherproof cab.
- b) A minimum of four (4) doors **must** be provided keyed alike.
- c) A ventilation/heater and defrosting system **must** be provided, with a multi-speed fan, applicable for the operating conditions as specified in Paragraph 3.2.1.
- d) An air conditioning system **must** be provided equipped with all components and controls required for regulation of the cab interior temperature.
- e) The vehicle **must** be equipped with powered driver and passengers side windows.
- f) A powered windshield wiper/washer system **must** be provided with multi-speed wipers, where the wiper blades **do not** travel from a vertical center windshield position to a horizontal position near the roof line.
- g) The cab floor **must** be weatherproof.
- h) The cab floor **must** not be carpet.
- i) The cab floor **must** be a material that reduces absorption of toxins and promotes ease of cleaning.
- j) Two rotating interior sun visors **must** be installed.
- k) A back-up camera system **must** be installed in the cab with a screen size of at least 17.7 cm (7 inches).
- l) An AM/FM stereo radio with an auxiliary port **must** be provided.
- m) Two heavy-duty, powered and heated exterior rear view mirrors, compliant with NFPA 414, **must** be provided with in-cab controls.
- n) The vehicle **must** be equipped with a horn in accordance with NFPA 414 Section 4.25.3.
- o) Mobile power leads and antennae cable **must** be wired into the vehicle, with a service loop terminating in the cab for future installation of both UHF and VHF radio equipment.
- p) Two (2) antenna bases **must** be mounted high on the cab exterior.
- q) Two (2) dedicated USB charging ports **must** be installed within reach of the driver's seat.
- r) Each passenger seat **must** have a dedicated USB charging port within reach of the occupant.

3.15.1 Self-Contained Breathing Apparatus (SCBA)

- a) The SCBA, MSA G1 model, units will be supplied by the owner at the time of vehicle delivery.
- b) The SCBA release mechanism **must** be accessible to the user while seated.
- c) The SCBA system **must** be equipped with a Zico positive mechanical latching system or equivalent with collision restraint straps or equivalent in accordance with NFPA 1901.

3.15.2 Cab Seating

- a) One (1) fully adjustable, Self-Contained Breathing Apparatus (**SCBA**) style, driver's seat **must** be provided, with a high back.
- b) One (1) fully adjustable, Self-Contained Breathing Apparatus (**SCBA**) style, officer's seat **must** be provided, with a high back.
- c) Two (2) SCBA style high back seats **must** be provided, at the rear of the cab.
- d) All seating **must** be upholstered with a material that reduces the absorption of toxins, promotes ease of cleaning, repels water, and is wear resistant, applicable to firefighting applications.
- e) All SCBA style seats or SCBA backs **must** be provided with matching dark upholstery seat covers and equipped with a flip-up split headrest, for ease of SCBA bottle release upon exit.
- f) All seating **must** be equipped with easily accessible, retractable 3-point seat belt assemblies.

3.15.3 Controls

- a) Each control **must** be permanently marked to identify the function, in both English and French or international symbols as defined by SAE J1362.
- b) Vehicle controls **must** be grouped together in the cab.
- c) Firefighting system controls **must** be grouped together in the cab.
- d) Controls **must** not restrict the operator's field of view.
- e) Control panel lights **must** be provided for adequate dimmable lighting for night-time operations.

3.15.4 Low Visibility Enhanced Vision System

- a) A Jabsco 63022 low light thermal imager or equivalent **must** be provided
- b) The thermal imager **must** be mounted in a position that provides full frontal visibility of objects in the approach path of the apparatus.
- c) Mounting of the thermal imager **must** not compromise the operations of the bumper turret in any manner.
- d) A thermal imager joystick **must** be provided in reach of the driver and officer seat.

- e) A video screen **must** be provided.
- f) A recording system **must** be provided.

3.15.5 **Video camera**

- a) A video camera **must** be provided to capture emergency scene response and activity for review and training enhancement.
- b) The video camera system **must** record automatically whenever the emergency lighting switch is activated.
- c) A recording system **must** be provided

3.15.6 **Instruments**

- a) Instruments **must** be metric, or metric and imperial with metric prominent, and visible to the seated operator in all lighting conditions.
- b) An Original Equipment Manufacturer approved instruments cluster **must** be provided.
- c) A voltmeter for the battery **must** be included.
- d) An engine coolant temperature indicator **must** be provided.
- e) An hour-meter with numeric display, which accurately records accumulated engine running time up to at least 9,999 hours **must** be provided.
- f) A fuel tank indicator **must** be provided.
- g) A tachometer **must** be provided.
- h) A speedometer **must** be included.
- i) A power divider oil pressure indicator **must** be provided.
- j) A stability dynamics LG-Alert lateral G-force system with dual axis display **must** be provided.
- k) Air pressure indicator(s) **must** be provided.
- l) A dry chemical system pressure indicator(s) **must** be provided in the cab with redundant indicator installed near the nitrogen tank regulator.
- m) A water pump pressure indicator **must** be provided.
- n) A water tank level indicator **must** be provided.
- o) A foam tank level indicator **must** be provided.
- p) Rear differential lock indicator **must** be included.

3.16 Fire Extinguishing System

3.16.1 Plumbing System

- a) The vehicle's plumbing system **must** be in accordance with NFPA 414 art. 4.15.
- b) Victaulic couplings with suitable gasket material **must** be used for all foam, water pipe and valve connections.
- c) Drains **must** be provided to allow complete draining of the system.
- d) The system **must** be provided with a thermal relieve valve for protection against pressure build up due to heat caused by deadhead pumping.

3.16.2 Water Pump

- a) The vehicle **must** be provided with a centrifugal type water pump with a minimum discharge rate of 1,100 litres per minute (291 US gallons per minute).
- b) The water pump **must** incorporate a mechanical type seal not requiring regular periodic adjustment.
- c) The water pump **must** be provided with incrementally or infinitely variable discharge flow control accessible from the operator panel.
- d) When operating from the water tank as an aircraft fire fighting unit, the pump **must** provide a turret straight stream or dispersed water/foam/secondary agent pattern over the performance ranges specified in NFPA 414, section 4.1 tables as applicable.
- e) The total discharge capacity of the water pump **must** meet the combined flow rates of all ARFF discharges working simultaneously.
- f) The water pump **must** be gravity primed from the vehicle tank.
- g) The water pump system **must** have a water pressure control valve, which should consist of a relief valve or PGS (pressure sensing governor).
- h) All metal components of the main system relief valve and/or pilot valve, which come in contact with water, **must** be manufactured in brass, bronze, or stainless steel

3.16.3 Water Tank

- a) The vehicle **must** be equipped with a water tank in accordance with NFPA 414 section 4.16.
- b) The water tank **must** have a minimum usable capacity of 2,600 litres (688 US gal).
- c) The water tank **must** be equipped with tank baffling appropriate to mitigate vehicle instability during travel.

- d) The tank **must** be provided with adequate venting to the atmosphere to permit rapid and complete filling without pressure build up and to permit discharge at the maximum design flow rate without danger of tank collapse.
- e) The actual capacity **must** be clearly indicated with 50 mm (1.97 inches) high letters, permanently embossed near the top fill point.
- f) A flush mounted tank drain valve, of a minimum 65 mm pipe size and designed to drain all the water from the tank **must** be provided.
- g) The tank fill inlet pipe diameter **must** be 65 mm (2 ½ inch).
- h) Each connection **must** be provided with an angled connection to prevent hose kinking and be equipped with a bleeder valve.

3.16.4 **Pump Discharge, Intake and Suction**

- a) The pump and piping system **must** be designed to eliminate the entrapment of air.
- b) One 65 mm (2 ½ inch) gated pump discharges and two 38 mm (1 ½ inch) gated pump discharge **must** be provided at the left structural pump panel, each with a male AMA thread complete with Storz adaptor.
- c) All discharge outlet **must** be angled.
- d) The discharges **must** be provided with a 19mm (3/4 inch) 1/4-turn bleeder valve and individual 65 mm (2 ½ inch) minimum, liquid filled pressure gauges.
- e) Side discharges **must** be capable of providing foam solutions.
- f) Pump discharges **must** be provided with adapters.
- g) The adapters **must** be provided with caps and chains. Coupler design will be determined as specified by individual Fire Hall requirements and confirmed at the pre-production meeting.
- h) Two 65 mm (2 ½ inch) pump intakes connections **must** be provided, one on each side of the apparatus.
- i) One 65 mm (2 ½ inch) suction inlet **must** be provided.

3.16.5 **Pump Operator Panel**

- a) The vehicle **must** be equipped with a pump operator panel.
- b) The pump operator panels **must** be located on the driver side of the vehicle.
- c) The pump operator panel **must** be equipped with a roll down weatherproof door to protect the panel from damage while not in use.
- d) The pump operator panel **must** house all controls required for full operation of the fire extinguishing system.

- e) Each control **must** be permanently marked to identify the function, in both English and French or international symbols as defined by SAE J1362.

3.16.6 **Bumper Turret**

- a) The vehicle **must** be equipped with a power assist bumper mounted turret in accordance with NFPA 414 section 4.19.
- b) The turret discharge flow **must** be in accordance with NFPA 414.
- c) The turret **must** have a horizontal rotation of 180 degrees and vertical travel of +45 degrees/-20 degrees.
- d) The bumper turret **must** incorporate Hydro-Chem™ technology or equivalent.
- e) The nozzle **must** be a combination foam and dry chemical nozzle designed to use the foam solution as a means to propel the dry chemical.
- f) The turret **must** incorporate an electric pattern actuation to select a straight stream or fog discharge pattern.
- g) The turret **must** have a joystick type controller.
- h) Two (2) high intensity LED lights **must** be attached to the nozzle assembly and **must** be remotely switched at the joystick box.

3.16.7 **Roof Turret**

- a) The vehicle **must** be equipped with a power assist roof mounted turret in accordance with NFPA 414 section 4.19.
- b) The turret **must** have a horizontal rotation of 180 degrees and vertical travel of +45 degrees/-20 degrees.
- c) The nozzle **must** be capable of discharging water / air aspirated foam.
- d) The turret **must** incorporate an electric pattern actuation to select a straight stream or fog discharge pattern.
- e) The turret **must** have a joystick type controller.
- f) The turret **must** have auto deploy and auto stow functionality.
- g) The turret discharge flow **must** be in accordance with NFPA 414.

3.16.8 **Foam System**

- a) The vehicle **must** be equipped with a foam system built in accordance to NFPA 414 section 4.17.
- b) The foam-liquid concentrate tank **must** have a capacity based on a foam concentration of 3% AFFF (Aqueous Film Forming Foam).

- c) The tank provided **must** have a minimum foam capacity of 170 litres (45 US gal) in order to support foam requirements necessary for two (2) full loads of water discharge.
- d) The tank **must** be adequately vented to permit rapid and complete filling without the build-up of excessive pressure and to permit emptying the tank at maximum design flow without danger of collapse.
- e) The usable capacity **must** be clearly indicated with 50 mm high letters permanently embossed on the tank next to fill point.
- f) A 38 mm (1½ inch) hose fill/drain connection with a strainer and plug with chain **must** be provided on the left and right side of the vehicle at the pump panel.
- g) An electronically operated foam transfer pump with a 38 mm (1½ inch) hose connection **must** be installed in a compartment on the left side of the vehicle to allow the foam tank to be filled or drained.
- h) The foam transfer pump **must** be plumbed into the foam tank fill/drain connections.
- i) The vehicle **must** be delivered without any foam in the foam system.
- j) The vehicle **must** be provided with an on-board foam testing system in accordance with NFPA 412 and NFPA 414.
 - i. The foam test system plumbing **must** include a mean of hooking up an external source for testing the foam system.
 - ii. The piping **must** include a manual on/off valve with a 38 mm (1 ½ inch) connector with cap and chain.
 - iii. The foam metering system **must** be designed to allow override during foam system testing (if applicable).
- k) Switches used to activate the foam system **must** be of a lockable type to prevent accidental discharge.

3.16.9 Foam Proportioning System

- a) An around-the-pump foam liquid proportioning system **must** be provided in accordance with NFPA 414 section 4.17.
- b) The proportioning system design **must** incorporate valves that prevent the flow of water into the foam tank and foam into the water tank under all operating conditions and tilt angles of the vehicle.
- c) The system **must** incorporate a means of completely flushing all the foam making equipment and related piping downstream of the foam tank outlet valve.

3.16.10 Secondary Agent, Dry Chemical

- a) The vehicle **must** be equipped with a secondary dry chemical system in accordance with NFPA 414 table 4.1.1 (c).
- b) The secondary system **must** be equipped to handle 90 kg (198 lb) of dry chemical utilizing Purple K as the agent.
- c) Dry chemical discharge **must** be provided for the bumper turret at a rate between 7.0 to 10 kg (15.4 to 22 lbs) per second.
- d) Dry chemical discharges **must** be provided for the hose reel at a rate of 2.3 kg (5 lbs) per second.
- e) A nitrogen cylinder **must** be provided that will allow a complete discharge of the dry chemical agent and a blow down operation.
- f) The nitrogen cylinder **must** be equipped with an integral pressure gauge.
- g) The vehicle design **must** be such that it will allow for one person to perform nitrogen cylinder replacement.
- h) Loading mechanisms for the nitrogen cylinder **must** not rely on a metal cable winch.
- i) The cylinder **must** not be stored on the roof of the vehicle.
- j) A check valve **must** be provided in the gas piping to prevent the agent from being forced back into the propellant gas line.
- k) Dash pressure gauges or dash and system pressure gauges **must** be provided to enable the operator to determine the propellant reservoir status and operating pressure when the system is activated.
- l) Switches used to activate the dry chemical discharge **must** be of a lockable type to prevent accidental discharge.

3.16.11 Hand Line

- a) The apparatus **must** be provided with two (2) pre-connected hand lines for the discharge of water/foam.
- b) Each pre-connected hand lines **must** be a 45 mm (1 ¾ inch) diameter x 61m (200 ft.) long rubber covered fire hose.
- c) Each pre-connected hand line **must** be provided with an Akron Assault nozzle or approved equivalent.
- d) The hand lines **must** be provided in the forward compartments.
- e) One hand line **must** be provided on each side of the apparatus.
- f) The pre-connected hand lines **must** be stored in a roll out trays.

- g) The roll-out trays **must** be provided with Turtle Tiles compartment matting or equivalent.

3.16.12 Dual Agent Hand Line

- a) The hand line for dry chemical **must** be a dual agent type mounted in a forward compartment on the left side.
- b) The hand line **must** be provided with a minimum 30m (100 ft.) of 25 mm (1 inch) booster type hose on a Hannay Hose Reel, or Technical Authority approved equivalent.
- c) The hose reel **must** be provided with a 12 VDC or 24 VDC electric rewind motor with manual rewind provisions. A tension device should be installed to prevent the unreeling of the hose.
- d) The hand line **must** be provided with a Hydro-Chem™ nozzle or equivalent capable of discharging 227-litres (60 gpm) foam/water and 2.3 kg (5.06 lbs) per second of dry chemical in accordance with NFPA 414 table 4.1.1 (c).
- e) Controls at the hand line **must** allow charging of nitrogen into the dry chemical tank, and charging of dry chemical into the hand line.
- f) Automatic throttle activation for the pumping RPM **must** be accomplished when the hand line discharge nozzle is opened.

3.16.13 Winterization System

- g) The vehicle **must** be provided with a winterization system to protect the water and foam from freezing in the tanks, lines, piping and valves.
- h) The system **must** provide sufficient insulation and heating capacity by means of hot recirculation liquids with the heat being produced from a diesel fuel fired heater to protect water and foam from freezing in the tanks, lines, piping, turret, and valves.
- i) The system **must** permit operation of the vehicle and firefighting systems for a minimum period of two hours at minus -40°C with the vehicle fully operational and the engine running.

3.17 Windshield Deluge System

- a) In accordance with NFPA 414 Section 4.12.4.6 a windshield deluge system **must** be provided.

3.18 Under Truck Nozzles

- a) The vehicle **must** be provided with under truck nozzles.
- b) A minimum of three (3) under truck nozzles **must** be provided and mounted under the truck with a cab mounted control switch within easy reach of the seated drivers position.
- c) The under truck nozzles **must** provide protection to the bottom of the vehicle and the inner sides of the wheels and tires through the application of a foam solution discharged in a spray pattern.

3.19 Electrical System

- a) The vehicle **must** be equipped with an NFPA 414 compliant electrical system.
- b) Wiring **must** be protected by insulating grommets, where passing through metal.
- c) An alternator **must** be provided.
- d) Batteries **must** be mounted in an accessible, protected and ventilated location.
- e) The batteries **must** be rated to exceed the draw, in the required operating conditions.
- f) Protected battery booster studs/slave receptacle **must** be provided in an accessible location.
- g) A master disconnect switch, accessible from the ground, **must** be provided.

3.19.1 Generator System

- a) The vehicle **must** be provided with a minimum 8kW generator system.
- b) If the generator uses the same fuel tank as the vehicle, the generator **must** not operate when the fuel is below a quarter full (if applicable).
- c) The generator **must** be provided with an in-cab remote start/stop control.
- d) A gauge panel **must** be provided and display voltage, frequency, amperage and contain an hour meter.
- e) The gauge panel **must** be readily visible from the generator hatch opening.
- f) The generator **must** be tested operating at 100 percent of its nameplate voltage for a minimum of 2 hours in accordance with NFPA 1901, chapter 4-13, without the need to have the pump operational during the test.

3.19.2 Receptacles

- a) Three Duplex, 120 Volt AC, 20 amp outlets with weather proof covers **must** be provided in the following locations:
 - i. One receptacle **must** be provided at the left rear side of the vehicle.
 - ii. One receptacle **must** be provided at the right rear side of the vehicle.
 - iii. One receptacle **must** be provided at the rear of the vehicle.
- b) Receptacles **must** be a three-wire grounding type, NEMA L5-20R.
- c) Each receptacle **must** be clearly marked with output voltage and amperage.

3.20 Electrical Cord and Reel

- a) An electric cord reel **must** be provided with 45 metres (150 feet) safety yellow cord.
- b) The cord reel **must** be hard wired into the generating system and provided with a 20-amp circuit breaker.
- c) The receptacle at the end of the cord **must** conform to NEMA L5-20R.
- d) The reel **must** be mounted in an upper compartment on the right side of the vehicle.
- e) The cord **must** be provided with an adjustable cable stop and outlet junction box consisting of four (4) duplex receptacles.
- f) The cord reel **must** be provided with a 12 VDC or 24 VDC electric rewind motor with the rewind switch mounted adjacent to the cord reel.
- g) A means to prevent the cord reel from unreeling in the stored position **must** be provided.
- h) A roller system **must** be provided to allow for deployment of the cord from the reel without chafing.

3.21 Non-Emergency Lights

- a) All non-emergency lights **must** be LED were available.
- b) Two (2) Floodlights **must** be provided.
- c) The Floodlights **must** be provided with an anodized aluminium telescopic extension pole, with one light located on each side of the body. The exact mounting location the flood lights to be determined by the manufacturer based on apparatus design and approved by the Technical Authority.
- d) The Floodlights **must** be provided with a low voltage switch control mounted in the cab dash within easy reach/access of the driver and officer seat.
- e) Each Floodlight **must** be capable of generating 20,000 lumens.
- f) Two (2) high intensity low profile brow lights **must** be provided.
- g) The brow lights **must** be hardwired into the on-board generator and provided with on/off switching from the driver and officer seat.

3.22 Exterior Emergency Warning Lights

- a) Exterior emergency warning lights complying with NFPA 414 Paragraph 4.25.4 **must** be provided.
- b) All exterior emergency warning lights **must** be LED.
- c) All exterior emergency lights controls **must** be accessible from the driver and officer seat.

3.22.1 The emergency lighting system **must** be provided with a control system for all emergency lighting.

3.23 Paints, Decals, Identification and Finish

a) The vehicle **must** be provided with lettering, numbering, and striping which comply with NFPA 414.

3.23.1 Paint & Finish

- a) All metal surfaces **must** be protected.
- b) The prime coating **must** be a high durability, corrosion resistant type, such as an epoxy.
- c) The colour **must** be Lime Yellow AKZO SIKKENS FLNA 6051 or equivalent.
- d) The chassis items **must** be painted black. Chromed surfaces need not be painted;
- e) The cab interior and dash **must** be finished with a non-reflective material.
- f) Non-metallic hoses and wires **must** not be painted.
- g) Working decks and walkways and the interior of storage compartments **must** not be painted.

3.23.2 Decals

- a) Striping **must** be placed horizontally on the sides of the vehicle below the body centreline, primarily white, with red edges above and below and with a clear polyurethane coating, which contours the chassis.
- b) All lettering **must** be applied in the ARIAL BLOCK font, sized to accommodate the required text, in the outlined areas, while complying with NFPA 414.
- c) Lettering **must** be red on the required yellow vehicle colour.
- d) Decals **must** be applied using high quality vinyl with a clear polyurethane coating, or equivalent.
- e) The vehicle identification number **must** be provided on the:
 - i. Front of the vehicle, with a nominal 100 mm to 150 mm (4 to 6 inch) height;
 - ii. Sides of the vehicle, sized to maximize the available body space, with a minimum 600 mm (24 inch) height;
 - iii. Topside of the vehicle, sized to fit available roof space, with a minimum 24 inch height and affixed with the base toward the back of the vehicle; and
 - iv. Rear of the vehicle, with a minimum 150 mm (6 inch) height;
- f) The National Defence Fire Service Crest **must** be applied to both the driver and officer doors, sized and positioned to fit the available space.

- g) A Canadian flag **must** be applied to each side of the vehicle.
- h) The National Defence logo **must** be applied to each side of the vehicle.

3.23.3 **Corrosion Protections**

- a) The vehicle including all components and subsystems **must** be designed and manufactured to prevent galvanic corrosion.
- b) The materials used in the vehicle manufacturing **must** resist damage or deterioration as a result of cleaning with hot or cold water, steam, or detergents.
- c) A commercial rust prevention coating **must** be applied to the vehicle, such as Krown Rust Control or Rust Check.
- d) A decal and warranty papers for the rust prevention coating **must** accompany the vehicle.

3.23.4 **Warning, Markings and Instruction Plates**

- a) All identification, instructional, and warning labels **must** be bilingual or International symbols defined in SAE J1362.
- b) All identification, instructional, and warning labels **must** within view of the operator.
- c) All gauges and controls and **must** be permanently labelled.

3.23.5 **Vehicle identification**

- a) The vehicle **must** be provided with a vehicle information identification data plate, permanently affixed in a conspicuous and protected location in the cab, and containing the information required by NFPA 414 chapter 4.2.5.

3.24 **Minor Equipment** - The vehicle **must** be provided with a full supply of equipment outlined in NFPA 414 Annex A, namely:

- a) One (1) section of rubber covered hose of minimum 65 mm (2 1/2 in.) diameter for tank fill;
- b) Appropriate spanner wrenches for the fittings on the vehicle;
- c) One (1) hydrant wrench or other wrench necessary to activate the local water supply;
- d) Skin penetrator/agent applicator;
- e) Appropriate wheel chocks;
- f) 30.5 m (100 ft) of utility rope;
- g) One 2.3 kg (5 lbs) Rescue axe;
- h) One 3.6 kg (8 lbs) Fire axe;

- i) One 2.3 kg (5 lbs) pry bar;
- j) Fire-resistant blanket;
- k) Bolt cutters, minimum 610 mm (24 in.);
- l) Multipurpose, forcible entry tool;
- m) Two (2) Intrinsically safe LED hand lights;
- n) Two (2) harness cutting tools;
- o) Hook, grab, or salvage tool;
- p) First aid kit;
- q) 1.8 kg (4 lb) hammer;
- r) Two (2) backboards.

3.25 Storage Compartments

- a) The vehicle **must** be provided with weatherproof storage compartments.
- b) The roof of the vehicle **must** not house any storage compartments.

3.25.1 Storage Compartment Design

- a) Body compartments **must** be constructed of corrosion resistant alloy.
- b) Compartment floors and shelves **must** be sufficiently thick, and supported to hold the intended equipment capacity without deformation.
- c) All bottoms of compartments **must** be equipped with one sliding shelf, labelled with a maximum capacity of 226 kg (500 pounds).
- d) A minimum of one compartment **must** be sized with a width of 1,200 mm (48 inches).
- e) Compartments **must** be sized with similar configuration with equivalent or greater volume.
 - i. Two (2) compartments sized 457mm (18 inch) deep x 1220mm (48 inch) wide x 660mm (26 inch) high.
 - ii. Two (2) compartments sized 610mm (24inch) deep x 915mm (36 inch) wide x 1220mm (48 inch) high.
- f) Compartments **must** be equipped with accessible equipment holders, for all of the miscellaneous equipment required in this Purchase Description, designed to secure the equipment under all vehicle operating conditions.

- i. Horizontal tube cylinder compartments **must** be provided for secure and safe transportation of 60 minute pressurized SCBA bottles, with a minimum 4 bottle capacity.
 - ii. Storage **must** be provided for two (2) backboards, with a slide pad installed to facilitate backboard removal.
 - iii. Storage, accessible from ground level **must** be equipped with a rack consisting of two (2) pike pole storage tubes.
- g) The compartments **must** provide ventilation and have provisions for drainage of moisture.
 - h) All electrical junctions or wiring within the compartments **must** be protected from damage resulting from equipment stored within the compartment.
 - i) The compartment doors **must** allow for access while wearing gloves.
 - j) Storage compartments **must** be equipped with Turtle Tiles compartment matting or approved equivalent.
 - k) Compartments **must** be equipped with internal LED strip type lighting that is automatically activated when the door is opened and automatically deactivated when the door is closed.
 - i. Compartment lights **must** have a master on/off control in the cab.
 - ii. A red flashing compartment “door open” indicator with audible alarm **must** be provided, in a location visible to the seated driver.
 - iii. The compartment door open indicator **must** be interlocked with the parking brake, to prevent flashing during vehicle servicing and on scene operation.

3.25.2 **Miscellaneous Equipment Storage**

- a) The vehicle body **must** be equipped with enclosed, weather resistant, equipment storage compartments, and built in accordance NFPA 414 Section 4.13.
- b) The storage compartments **must** maximize the space available, have roll up doors, and be located along each side and the rear of the vehicle.

3.25.3 **Fire Hose and Hose Storage** - The vehicle body **must** be equipped with hose storage, provided in accordance with NFPA 414 Section 4.20.5.3.

4. **INTEGRATED LOGISTIC SUPPORT**

4.1 **Vehicle Manuals**– All manuals required for the description, operation, maintenance and repair of the complete equipment, including sub-systems, **must** be provide, in compliance with NFPA 414.

4.1.1 **Operator’s Manuals**

- a) The operator’s manuals **must** be bilingual (English/French).

- b) The operator's manuals **must** include instructions for the safe operation of the vehicle.
- c) The operator's manuals **must** include daily operator maintenance instructions/checks (including lubrication).
- d) The operator's manuals **must** include safety warnings.
- e) The operator's manuals **must** include hand signals (as necessary).

4.1.2 **Parts Manual(s)**

- a) The parts manual(s) **must** be in English (bilingual is desirable).
- b) The parts manual **must** have illustrations showing all components of the vehicle including equipment and accessories from other manufacturers that are supplied to meet the requirements of the contract, with numbers for the itemization of the parts.
- c) The parts manual **must** have a listing for all itemized parts showing the Original Equipment Manufacturers (OEM) part number, the part name and a brief description of the item.
- d) The parts manual **must** cross reference the OEM part number to the correct illustration and item number.
- e) The parts manual **must** have a representation of bilingual warning signs and identification labels delivered on the equipment.

4.1.3 **Maintenance (Service) Manuals**

- a) The maintenance manual **must** be English (bilingual is desirable).
- b) The maintenance manual **must** include a trouble shooting guide, showing the steps and tests required to determine the exact cause of a problem and the steps required to correct a problem.
- c) The maintenance manual **must** include a listing of the necessary tolerances, torque levels, fluid volume, and special tools (including item part numbers).
- d) The maintenance manual **must** include information on the order of disassembly and assembly of the systems and components of the vehicle.
- e) The maintenance manual **must** include special tools list as per 4.3.4.
- f) The maintenance manual **must** include schematics for the vehicle plumbing system, engine, drive train components, fire pump, and pump operator's panel.
- g) Electrical wiring diagrams **must** be included, clearly showing the routing and interface of the manufacturer's electrical circuit(s) with the cab and chassis OEM electrical system (Multiplex).

4.1.4 **Manual Delivery to Technical Authority**

- a) Sample manuals **must** be submitted to the Technical Authority (TA) prior to the delivery of the vehicle for each model and or sub-system for approval. Sample manuals will not be returned. TA will provide approval or comments on the manuals within 30 days.
- b) One (1) complete set of approved manuals (Operator's, Maintenance, and Parts) in electronic format **must** be delivered to the Technical Authority.

4.1.5 **Manual Delivery with Vehicle**

- a) One (1) complete set of manuals (Operator's, Maintenance, and Parts) **must** accompany each vehicle, shipped to each location.
- b) The manuals **must** be in electronic format.

4.1.6 **Electronic Format**

- a) Approved copies of the electronic format manuals **must** be delivered on CD/DVD-ROM.
- b) CD/DVD-ROM **must not** require installation, password and/or Internet connection to be accessed and be an unlocked PDF in a searchable format.

4.1.7 **Provisional Manuals**

- a) In the event that approved manuals are not available at the time of delivery of the equipment, manuals marked "Provisional" **must** be supplied with the equipment.
- b) The contractor **must** deliver replacement approved manuals to all destinations where Provisional manuals were delivered.

4.1.8 **Manual Supplements**

- a) The contractor **must** supply manual supplements (Operator's, Maintenance and Parts) to support dealer-installed equipment not covered in the Vehicle Manuals.
- b) Manual supplements **must** be delivered in accordance with 4.1.4 and 4.1.5.

4.1.9 **Translation and Reproduction Rights**

- a) The Canadian Government **must** reserve the right to translate and reproduce, for Government use only, all or any part of the publications supplied, including the training packages delivered against the contract agreement.

4.1.10 **Changes to Manuals**

- a) During the period of the contract, changes to equipment, which affect the contents of manuals, **must** be reflected in the revision of the electronic and paper version of the manuals.
- b) Changes to the manuals **must** conform to the same format and presentation requirements as the original manuals.

- c) The revised electronic version of the manual **must** be sent to the Technical Authority by the Contractor.

4.2 Warranty Letter

- a) The warranty letter **must** include a list of all Canadian designated warranty service providers that will honour the warranty for the equipment and attachments (if applicable) procured under this contract, including the contact person and phone number at each warranty service provider.
- b) The warranty letter **must** include additional warranty coverage of sub-systems and a copy of the warranty letter from each sub-system's Original Equipment Manufacturer (OEM).
- c) The warranty letter **must** include warranty period as negotiated in the contract.
- d) The warranty letter **must** include Contractor contact information, name and phone number, for warranty support.

4.2.1 Warranty Letter Delivery

- a) The Contractor **must** provide a bilingual warranty letter to the Technical Authority and with each vehicle. If the Technical Authority requires the letter to be in DND format, then they will provide the Contractor a template for the DND acceptable format of the warranty letter.

4.3 Other ILS Deliverables to Technical Authority

4.3.1 Data Summary

- a) The Contractor **must** provide a bilingual Data Summary for each make/model/configuration of vehicle by completing Technical Authority's template with data and a vehicle picture.

4.3.2 Photographs

- a) The Contractor **must** provide photographs in colour, taken against a plain background, and in digital JPEG format with a minimum 10 megapixel resolution.
- b) One left front three-quarter view of a completed unit **must** be provided.
- c) One right rear three-quarter view of a completed unit **must** be provided.

4.3.3 Dimensioned Drawing

- a) One side and front view sketch showing the dimensions **must** be provided. Brochure sketches are acceptable.

4.3.4 **Special Tools List** - The Contractor **must** provide an itemized list of specific special tools required for the servicing and repair of the vehicle and include:

- a) Item name;
- b) Contractor's part number;

- c) Manufacturer's part number (OEM);
- d) Quantity recommended per delivery location;
- e) Unit price; and
- f) Unit of issue.

4.3.5 **Preventive Maintenance Replacement Parts Kit List (PMRPKL)** - The contractor **must** provide a list detailing the parts that are required to perform preventive maintenance to the system for a period of 12 months, and include:

- a) Item name;
- b) Contractor's part number;
- c) Manufacturer's part number (OEM);
- d) Manufacturer's NATO Supply code (NCAGE) or name and address;
- e) NSN (NATO Stock Number) (if known);
- f) Quantity per equipment;
- g) Quantity recommended;
- h) Unit price; and
- i) Unit of issue.

4.3.6 **Recommended Spare Parts List (RSPL)** - The Contractor **must** provide a list detailing the spare parts deemed necessary to maintain the vehicle for a period of 12 months exclusive of any warranty period, and include:

- a) Item name;
- b) Contractor's part number;
- c) Manufacturer's part number (OEM);
- d) Manufacturer's NATO Supply code (NCAGE) or name and address;
- e) NSN (NATO Stock Number) (if known);
- f) Quantity per equipment;
- g) Quantity recommended;
- h) Unit price; and

i) Unit of issue.

4.3.7 **Cataloguing Information**

- a) The information **must** be in accordance with the terms of the contract in SACC Clause B4061C with the exception of paragraph 8.
- b) The Contractor **must** provide, upon request, the information necessary to catalogue the parts for the vehicle. The Technical Authority will request information within 30 days of receiving the RSPL.
- c) The Contractor **must** supply the information within 60 days after the request is made.
- d) The Contractor **must** provide the serial numbers of all major equipment.

4.4 **Safety Recalls and Servicing Data**

- a) Safety recalls, and manufacturer's technical service bulletins, or equivalent **must** be provided to the technical authority and the final delivery locations on a continuing basis, throughout the life expectancy of the vehicle or for no less than 10 years.

4.5 **Training**

4.5.1 **Maintenance Personnel Training**

- a) The Contractor **must** provide a maintenance training course.
- b) The course **must** be given at the delivery destination and be available in both official languages.
- c) The course **must** have a minimum duration of two (2) days to provide training of up to eight (8) maintenance personnel and have the final dates arranged with the Technical Authority.
- d) The course **must** have a syllabus or course outline and schedule available for review fourteen (14) days prior to the course commencement date.
- e) After completion of the course, the Contractor **must** have a "*PROOF OF MAINTENANCE TRAINING*" certificate signed by a Canada Representative for the destination. The Technical Authority will supply this document in an electronic format.

4.5.2 **Maintenance Personnel Training Curriculum**

- a) Operator's training detailed in Paragraph 4.6.4 below **must** be included in the curriculum.
- b) Operation and maintenance safety precautions **must** be included in the curriculum.
- c) Preventive maintenance including servicing schedules (10 % of classroom time) **must** be included in the curriculum.
- d) Trouble shooting, testing, and adjustments (70 % of classroom time) **must** be included in the curriculum.

- e) Special tools and test equipment **must** be included in the curriculum.

4.5.3 **Operator Training**

- a) The Contractor **must** provide an operator training course.
- b) The course **must** be given at the delivery destination and be available in both official languages.
- c) The course **must** have minimum duration of two (2) days to provide training for up to sixteen (16) operators and have the final dates arranged with the Technical Authority.
- d) The course **must** have a syllabus or course outline and schedule available for review thirty (30) days prior to the course commencement date.
- e) The course **must** be delivered by an instructor who is fully trained and functional on all aspects of the firefighting package, with at least three (3) years of experience within the past five (5) years on the specific vehicle or a vehicle of similar design.
- f) After completion of the course the Contractor **must** have a “*PROOF OF OPERATOR TRAINING*” certificate signed by a Crown Representative for the destination. The Technical Authority will supply this document in an electronic format.

4.5.4 **Operator Training Curriculum**

- a) Safety precautions to be observed while operating and servicing the vehicle **must** be included in the curriculum.
- b) Vehicle operating characteristics **must** be included in the curriculum.
- c) Vehicle operating procedures **must** be included in the curriculum.
- d) Pre-operating and pre-shutdown procedures **must** be included in the curriculum.
- e) Daily/weekly operator servicing procedures **must** be included in the curriculum.
- f) A minimum of two (2) hours practical operating experience, per operator, **must** be provided.

4.5.5 **Training Materials**

- a) Training materials **must** be provided to each attendee, in French for locations in Quebec.
- b) Training materials **must** include a list of topics to be covered;
- c) Training materials **must** include an approximate timetable showing when topics are scheduled to be covered and how much time is scheduled for each topic;
- d) Training materials **must** list any reference material; and
- e) Training materials **must** make available any reference material used.

4.5.6 **Training Video**

- a) A bilingual operator training video **must** be provided.
- b) The video **must** be used for initial training and will be kept by DND for refresher training.
- c) The video **must** cover all training subjects as specified in Paragraph 4.6.3.
- d) The video **must** be interactive and of high quality of 1600x720 pixels minimum resolution.
- e) The video **must** have lessons divided into selectable sections with a maximum duration of 15 minutes per section.
- f) The video **must** be delivered on CD/DVD-ROM.
- g) The video **must not** require installation, password and/or Internet connection to be accessed.

Annex C

Technical Evaluation Matrix

Title:

**Nanoose - Aircraft Rescue and Fire
Fighting Vehicle with Water Foam
and Dry Chemical EC 189130**

Date:

02-May-18

Instructions:

This Technical Evaluation Matrix covers the mandatory technical criteria, which **must** be provided by the Bidder for evaluation of the proposed solution to the requirement specified in the Purchase Description.

“Substantive Information” **must** be provided for each corresponding performance requirement/specification stated in this Technical Evaluation Matrix.

If an **“Equivalent”** is being offered for any requirement in the Purchase Description it **must** be submitted for technical evaluation with Substantive Information proving the equivalency.

Bidders should indicate the document name/title and page number where the Substantive Information can be found for each evaluation criteria.

Definitions for **“Equivalent”** and **“Substantive Information”** are as follows:

“Substantive Information” - This is defined in SACC Clause A9097T.

“Equivalent” - Substitutes and alternatives that are equivalent in product, performance or a standard will be considered for acceptance by the Technical Authority where Substantive Information proving the equivalency for the respective requirement is provided for evaluation.

Technical Evaluation Matrix
Nanoose - Aircraft Rescue and Fire Fighting Vehicle with Water Foam and Dry Chemical ECC 189130

Bidder Information

Bidder Name: _____
 Proposal Date: _____
 Proposed Make and Model: _____

Technical Mandatory Criteria			
PD Reference	PD Requirement	Bid Evaluation Requirement	Location in Bid Proposal
3.1 b)	<p>Industry Acceptability - The vehicle design must have demonstrated industry acceptability by having been manufactured and sold commercially for at least 2 year, or be designed and manufactured by a company that has at least 5 years' of experience in design and manufacturing of a comparable type of equipment of equivalent or greater complexity.</p>	<p>The Bidder must provide client information for industry acceptability and/or experience as specified in the purchase description.</p> <p>Client information must include:</p> <ul style="list-style-type: none"> - Client name and location - Year completed - List of make(s)/model(s). 	
3.4.2	<p>Weight – The actual gross vehicle weight of a fully staffed, loaded, and equipped vehicle for service must not exceed the manufacturers tested weight rating as recorded on the vehicle information data plate, in accordance with NFPA 414.</p>	<p>Substantive information on vehicle GVWR and GAWR.</p>	

3.4.3	<p>Dimensions</p> <p>a) The vehicle must have road legal dimensions across Canada;</p> <p>b) The maximum overall height of the vehicle must not exceed a maximum of 3.81 metres (11.5 feet);</p> <p>c) The maximum overall length of the vehicle must not exceed a maximum of 9.14 metres (30 feet);</p> <p>d) The maximum overall body width of the vehicle must not exceed a maximum of 2.59 metres (8.5 feet);</p> <p>e) The maximum overall width of the vehicle must not exceed a maximum of 3.30 metres (10.83 feet) including mirrors and accessories;</p> <p>f) The vehicle minimum ground clearance must be a minimum of 330 mm (13 inches).</p>	Substantive Information	
3.7	<p>Engine</p> <p>a) The vehicle engine(s) must have the horsepower, torque and speed characteristics to meet and maintain all vehicular performance characteristics specified in NFPA 414.</p> <p>b) The engine must be turbo charged and operate on diesel fuel to the CAN/CGSB Standard 3.517.</p>	Substantive Information	
3.15.1	<p>Self-Contained Breathing Apparatus (SCBA)</p> <p>c) The SCBA system must be equipped with a Zico positive mechanical latching system with collision restraint straps or equivalent in accordance with NFPA 1901.</p>	The Bidder must provide product literature attesting that proposed alternate product is equivalent or superior to product described in purchase description.	
3.15.4	<p>Low Visibility Enhanced Vision System</p> <p>a) A Jabsco 63022 low light thermal imager or equivalent must be provided</p>	The Bidder must provide product literature attesting that proposed alternate product is equivalent or superior to product described in purchase description.	

3.16.2	<p>Water Pump a) The vehicle must be provided with a centrifugal type water pump with a minimum discharge rate of 1,100 litres per minute (291 US gallons per minute). c) The water pump must be provided with incrementally or infinitely variable discharge flow control accessible from the operator panel.</p>	Substantive Information	
3.16.3	<p>Water Tank b) The water tank must have a minimum usable capacity of 2,600 litres (688 US gal).</p>	Substantive Information	
3.16.6	<p>Bumper Turret b) The turret discharge flow must be in accordance with NFPA 414.</p>	Substantive Information	
3.16.6	<p>Bumper Turret d) The bumper turret must incorporate Hydro-Chem™ technology or equivalent.</p>	The Bidder must provide product literature attesting that proposed alternate product is equivalent or superior to product described in purchase description.	
3.16.8	<p>Foam System a) The vehicle must be equipped with a foam system built in accordance to NFPA 414 section 4.17 c) The tank provided must have a minimum foam capacity of 170 litres (45 US gal) in order to support foam requirements necessary for two (2) full loads of water discharge.</p>	Substantive Information	
3.16.11	<p>Hand Line c) Each pre-connected hand line must be provided with an Akron Assault nozzle or approved equivalent.</p>	The Bidder must provide product literature attesting that proposed alternate product is equivalent or superior to product described in purchase description.	

3.16.11	<p>Hand Line g) The roll-out trays must be provided with Turtle Tiles compartment matting or equivalent.</p>	The Bidder must provide product literature attesting that proposed alternate product is equivalent or superior to product described in purchase description.	
3.16.12	<p>Dual Agent Hand Line b) The hand line must be provided with a minimum 30m (100 ft.) of 25 mm (1 inch) booster type hose on a Hannay Hose Reel, or Technical Authority approved equivalent.</p>	The Bidder must provide product literature attesting that proposed alternate product is equivalent or superior to product described in purchase description.	
3.16.12	<p>Dual Agent Hand Line d) The hand line must be provided with a Hydro-Chem™ nozzle or equivalent capable of discharging 227-litres (60 gpm) foam/water and 2.3 kg (5.06 lbs) per second of dry chemical in accordance with NFPA 414 table 4.1.1 (c).</p>	The Bidder must provide product literature attesting that proposed alternate product is equivalent or superior to product described in purchase description.	
3.28.1	<p>Storage Compartment Design i) Storage compartments must be equipped with Turtle Tiles compartment matting or approved equivalent.</p>	The Bidder must provide product literature attesting that proposed alternate product is equivalent or superior to product described in purchase description.	

Proposed Equivalents			
PD Reference	PD Requirement	Bid Evaluation Requirement	Location in Bid Proposal