Public Works and Government Services Canada

Travaux publics et Services gouvernementaux Canada

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

LETTER OF INTEREST
LETTRE D'INTÉRÊT

Title - Sujet
RFI Ultra-Light Combat Vehicle

Solicitation No. - N° de l'invitation W6399-16HB11/A	**Date** 2015-08-25
Client Reference No. - N° de référence du client W6399-16HB11	**GETS Ref. No. - N° de réf. de SEAG** PW-$$BL-265-25328
File No. - N° de dossier 265bl.W6399-16HB11	**CCC No./N° CCC - FMS No./N° VME**
Solicitation Closes - L'invitation prend fin **at - à 02:00 PM** **on - le 2015-09-28**	**Time Zone** **Fuseau horaire** Eastern Daylight Saving Time EDT

F.O.B. - F.A.B.
Plant-Usine: ☐ **Destination:** ☐ **Other-Autre:** ☐

Address Enquiries to: - Adresser toutes questions à: Brisard, Pascale	**Buyer Id - Id de l'acheteur** 265bl
Telephone No. - N° de téléphone (819) 956-0598 ( )	**FAX No. - N° de FAX** (819) 956-0648

Destination - of Goods, Services, and Construction:
Destination - des biens, services et construction:

Specified Herein
Précisé dans les présentes

Comments - Commentaires

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Delivery Required - Livraison exigée See Herein	**Delivery Offered - Livraison proposée**

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Telephone No. - N°de téléphone
Facsimile No. - N° de télécopieur

Name and title of person authorized to sign on behalf of Vendor/Firm (type or print)
Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)

Signature **Date**

Issuing Office - Bureau de distribution
Armoured Vehicles Support/Soutien des véhicules blindés
11 Laurier St./11, rue Laurier
Place du Portage Phase III 6C1
Gatineau
Québec
K1A 0S5

Canada

SEE ATTACHED:

- Request for Information (RFI) document - 9 pages
- ANNEX A - Technical Specification Compliance Matrix - 15 pages
- ANNEX B - Criteria for Selection to Attend Ultra light Combat Vehicle Demonstration - 2 pages

REQUEST FOR INFORMATION
ULTRA LIGHT COMBAT VEHICLE (ULCV)

TABLE OF CONTENT

1. Purpose and Nature of the Request for Information (RFI)
2. Background information
3. Potential Work Scope and Constraints
4. Legislation, Trade Agreements, and Government Policies
5. Schedule
6. Requested Information
7. Enquiries
8. Contact
9. Upcoming Engagement Sessions
10. Closing Date for the RFI
11. Technical Specification Compliance Matrix
12. Industry Engagement – Equipment Demonstration

ANNEX A - Technical Specification Compliance Matrix

ANNEX B - Criteria for Selection to Attend Ultra light Combat Vehicle Demonstration

REQUEST FOR INFORMATION
ULTRA LIGHT COMBAT VEHICLE (ULCV)

1. Purpose and Nature of the Request for Information (RFI)

Public Works and Government Services Canada (PWGSC) is requesting Industry feedback regarding Ultra Light Combat Vehicles (ULCV) for the Government of Canada for use by the Canadian Armed Forces (CAF) worldwide.

The objective of this Request For Information (RFI) is to share Department of National Defence's (DND's) requirement and seek feedback from Industry on potential options to meet CAF needs and associated capability, schedule and cost. This is the first step of an Industry Engagement process where the ULCV project will be seeking initial input on availability of technology, ability for industry to deliver and cost estimates for the initial acquisition of the required ULCV capability.

Information received from Industry will be critical to refine ULCV planning documents and cost tables. The intent, following receipt of RFI responses from Industry, is to have interactive engagement with Industry throughout the project phases leading to the Request for Proposal (RFP).

This RFI is neither a call for tender nor a Request for Proposal (RFP). No agreement or contract will be entered into based on this RFI. The issuance of this RFI is not to be considered in any way a commitment by the Government of Canada, nor as authority to potential respondents to undertake any work that could be charged to Canada. This RFI is not to be considered as a commitment to issue a subsequent solicitation or award contract(s) for the work described herein.

Although the information collected may be provided as commercial-in-confidence (and, if identified as such, will be treated accordingly by Canada), Canada may use the information to assist in drafting performance specifications (which are subject to change) and for budgetary purposes.

Respondents are encouraged to identify, in the information they share with Canada, any information that they feel is proprietary, third party or personal information. Please note that Canada may be obligated by law (e.g. in response to a request under the Access of Information and Privacy Act) to disclose proprietary or commercially-sensitive information concerning a respondent (for more information: http://laws-lois.justice.gc.ca/eng/acts/a-1/).

Respondents are asked to identify if their response, or any part of their response, is subject to the Controlled Goods Regulations.

Participation in this RFI is encouraged, but is not mandatory. There will be no short-listing of potential suppliers for the purposes of undertaking any future work as a result of this RFI. Similarly, participation in this RFI is not a condition or prerequisite for the participation in any potential subsequent solicitation.

Respondents will not be reimbursed for any cost incurred by participating in this RFI.

The RFI closing date published herein is not the deadline for comments or input. Comments and input will be accepted any time up to the time when/if a follow-on solicitation is published.

2. Background Information:

The ULCVs are required to be true light-weight high mobility tactical vehicles, which provide critical integral tactical maneuver to the Canadian Armed Forces deployed out of area in support of Counter Terrorism and High Value Task operations. This vehicle will be used in low, medium and high intensity threat environments and is expected to be off-road 75 % of the time. The ULCV is expected to operate in a wide variety of temperatures (-32 C to + 49 C) and climates, from temperate to the extremes found in desert or tropical climates (humidity ranging from 0 to 100 %). Furthermore, a combination of urban or rural environments situated within mountainous, plains, jungle and woodland areas should be expected. The ULCV will operate on roads of varying quality ranging from paved highways, dirt trails and in most cases broken and/or uneven ground. The ULCV will be operated by personnel who will be experiencing the effects of battle fatigue therefore it must be capable of continuous operations with minimum breakdown, damage or operator maintenance. The ULCV must provide maximum flexibility when tailoring specific force packages. The integration of user supplied communication equipment and weapons systems will be required. The ULCV must have growth potential to accommodate future technological and system capability improvements in numerous areas such as: maneuver, firepower/weapon systems, protection/survivability, human systems and communications/sensors.

3. Potential Work Scope and Constraints:

The DND intends to procure approximately 62 Ultra Light Combat Vehicles (ULCV) for use by the Canadian Armed Forces (CAF) worldwide.

3.1 Employment Concept of ULCV

The ULCV fleet will be used in all operations from responding to a major terrorist attack to participating in the conduct of a major international operation for an extended period of time. Accordingly, the ULCV feet will provide critical integral tactical maneuver to forces deployed worldwide in support Counter Terrorism and High Value Task Operations. The ULCV fleet will provide tactical maneuver, speed, functionality and agility at the lowest weight possible. All operational equipment such as weapon systems, personal protective equipment, tactical radios, low profile antennas and observation devices must be able to be employed without compromising their use to the extent possible. The ULCV fleet shall be able to operate in diverse environments as described previously, while carrying out multiple tasks and roles. The ULCV must be capable of being deployed by a variety of in-service aircraft.

3.2 Mission Profile

The mission profile requires 12000km for garrison and training and 5000km for operations per ULCV per year.

3.3 Concept of Support Services

The procurement of the ULCV is to include the first two years of Integrated Logistics Support. The maintenance and repair of the ULCV will follow the fundamental tenets and level of Combat Service Support (CSS) detailed in the Army sustainment doctrine B-GL-300-004/FP-001. CAF personnel with OEM support, as required, will be responsible to sustain the ULCV fleet in a manner that is similar to the other vehicles within the CAF. Failure reporting will be required during the implementation and operation phases. The Defence Resource Management Information System (DRMIS) will be utilized by CSS personal to document the support activities of the ULCV. The ULCV will be housed in designated infrastructure. Additional support concepts are detailed as follows:

3.3.1 Maintenance Support. Operators will conduct operator level maintenance tasks. Maintenance support will be conducted on the ULCV by CAF maintenance personnel for first and second level repairs. Repairs at the third and fourth level will be conducted by the contractor.

3.3.2 Supply and Repair Parts Support. The ULCV must be delivered with sufficient spare parts to sustain the vehicles for an initial period of two years. Included in this construct, to support the deployment of the ULCV, it is requested that a ready pack of first and second line spares be provided in a configuration to permit rapid deployment to support a fleet of 12 ULCVs for a 30 day period.

3.3.3 Special Tools and Test Equipment. Two sets of special tools and test equipment will be required for the ULCV.

3.3.4 Training. The ULCV operators will require training on the safe operation of the vehicle, including operator maintenance tasks. The maintenance personnel will only require training on the ULCV specific tasks as they will already be qualified on the fundamental technician principles in vehicle mechanics and electrical systems.

3.3.5 Technical Publications. Technical publications to support the ULCV will be required in both Official Languages, English and French.

3.3.6 Technical Documentation. Technical documentation on the ULCV will be required to support the cataloging of the vehicle components necessary to support the vehicle fleet by CAF personnel.

3.4 Life Cycle Support Services

A separate contract mechanism will be pursued to provide engineering and supply chain support to the ULCV throughout its anticipated ten to fifteen year life cycle once the acquisition and interim support activities have been completed.

3.5 Security Requirements

The ULCV Project will involve security issues and a Security Requirements Check List (SRCL) will be submitted with the RFP. Respondents are requested to provide certifications regarding their capabilities, to include:

3.5.1 access to and the capability to store and safeguard Classified information. This will include classified Annexes to the RFP and Contract as well as classified test results.

3.5.2 access to and the ability to store and safeguard Classified assets. This will include Government Furnished Equipment (GFE) crypto controlled items and weapons.

3.5.3 access to and the ability to store and safeguard Controlled Items and information

4. Legislation, Trade Agreements, and Government Policies

The following is indicative of some of the legislation, trade agreements and government policies that could impact any follow-on solicitation(s):

a) Agreement on Internal Trade (AIT)
b) North American Free Trade Agreement (NAFTA)
c) World Trade Organization – Agreements on Government Procurement (WTO-AGP)
d) Defence Production Act
e) Industrial and Regional Benefits (IRBs)
f) Defence Procurement Strategy (DPS)
g) Controlled Goods Program (CGP)
h) Federal Contractors Program for Employment Equity (FCP-EE)

5. Schedule:

In providing responses, the following schedule should be utilized as a baseline:

• RFI Release	August 2015
• RFI Response	September 2015
• Industry Engagement (including Equipment Demonstration, potential One on One Sessions)	October- November 2015
• Request for Proposal Release	February 2016
• Contract Award	July 2016
• Critical Design Review	November 2016
• 1st Article Test	January 2017
• Full Acceptance of first vehicle	March 2017
• Final Delivery of 62 vehicles	March 2018

6. Requested Information

6.1 Compliance with Technical Specifications

A matrix (Annex A) detailing the proposed Technical Specifications is attached. Respondents are requested to fill out the matrix according to the following guidelines:

6.1.1 Under the *Compliant* column the Respondent is to indicate if its product is able to meet the requirement, either yes or no.

6.1.2 Under the *Discuss Compliance* the Respondent is to indicate how its proposed vehicle meets the stated *Requirement*. If the requirement is exceeded, the Respondent should indicate to what level. If the requirement cannot be met, the Respondent should indicate to what level or degree its product could comply. DND is open to suggestions on alternative requirements.

6.1.3 Under the *Applicable Reference* the Respondent is to indicate references, such as test reports, to show the proposed vehicle meets the stated *Requirements.* Where possible, Respondents are requested to provide reference material to support claims.

6.2 Financial Information

The Government of Canada requires costing data to support the procurement process. Respondents are requested to provide ROM costing data based on:

6.2.1 ULCV Quantity 62

6.2.2 Integrated Logistics Support comprising:
- 6.2.2.1 Initial Training
- 6.2.2.2 Initial Provisioning
- 6.2.2.3 Two (2) Years Spares procurement
- 6.2.2.4 Ready pack of first and second line spares for 30 days for 12 ULCVs
- 6.2.2.5 Special Tools and Test Equipment (two sets)
- 6.2.2.6 Technical Manuals (Operation, Maintenance, Illustrated Parts, Installation Instructions for Kitting etc)

6.2.3 In-Service Support (estimated annual costs and/or labour rates)
- 6.2.3.1 Configuration Management
- 6.2.3.2 Management and Update of Technical Data package/Publications/Service Bulletins
- 6.2.3.3 Spare Parts Resupply
- 6.2.3.4 Repair and Overhaul of Major Assemblies
- 6.2.3.5 Mid-life Repair and Overhaul of Vehicle
- 6.2.3.6 Engineering Support for upgrades, integration of new GFE and rectification of obsolescence issues

6.2.4 Optional In-service Support
- 6.2.4.1 Field Service Representative x 1, Part Time @ Petawawa

6.2.4.2 Field Service Representative x 1, 2 months/year out of country
6.2.4.3 Optional equipment availability
6.2.4.4 half-windshield
6.2.4.5 air compressor
6.2.4.6 crew heater
6.2.4.7 snorkel kit
6.2.4.8 soft top
6.2.4.9 cargo netting
6.2.4.10 vehicle storage tarp
6.2.4.11 vehicle tow bar
6.2.4.12 vehicle tow rope

6.3 Storage and Safeguarding Capabilities

As requested under Section 3 of this document, respondents are requested to provide certifications regarding their capabilities to store and safeguard classified information and assets as well as controlled items and information.

6.4 Equipment Demonstration

To augment the information being requested in this RFI, there will be an Industry Equipment Demonstration to provide an opportunity for DND to view the vehicles and allow Industry to present its equipment in an interactive environment. Participation in this activity is voluntary and non-participation will not prejudice the follow-on procurement. Whether or not any potential supplier is invited to the Equipment Demonstration, it will not preclude that supplier from participating in any future procurement. The Demonstration is simply to solicit feedback from industry with respect to the matters described in this RFI.

Respondents interested in participating in this specific engagement must complete the matrix at Annex B to this document. All information provided at Annex B must be returned no later than **September 14, 2015** and must be certified by an authorized representative of the company. Participation at the Equipment Demonstration will be limited to five (5) respondents and will be considered on a first response basis. In order to be invited to participate at the Equipment Demonstration the Canadian Armed Forces will verify that participants are able to meet the requirements detailed in Annex B of this document.

7. Enquiries

All enquiries and other communications related to this RFI must be directed exclusively to the Contracting Authority. All enquiries are to be submitted to the Contracting Authority no later than ten (10) calendar days before the closing date. Enquiries received after that time may not be answered.

Care shall be taken by vendors 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 vendor do so, so that the proprietary nature of the question is

eliminated, and the enquiry can be answered with copies to all vendors. Enquiries not submitted in a form that can be distributed to all vendors may not be answered by Canada.

All pertinent Questions and Answers (Q&A) from written communication will be published on the Government Electronic Tendering System (Buy and Sell).

8. Contact

Interested Respondents may submit their responses to the PWGSC Contracting Authority, identified below, preferably via email:

Name: Pascale Brisard
Title: Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch
Armoured Vehicle Project Directorate
11 Laurier Street
Place du Portage III, 6C1
Gatineau, Quebec
K1A 0S5
Telephone: 819-956-0598
Facsimile: 819-956-0648
E-mail: pascale.brisard@tpsgc-pwgsc.gc.ca

A point of contact for the Respondent should be included in the package.

Changes to this RFI may occur and will be advertised on the Government Electronic Tendering System. Canada asks Respondents to visit Buyandsell.gc.ca regularly to check for changes, if any.

9. Upcoming Engagement Sessions

9.1 Equipment Demonstration:

This engagement will take place during the week of 19-23 October 2015. The Demonstration will be held at Canadian Forces Base Petawawa, Ontario. Respondents who wish to be selected for participation in this engagement will do so at their own expense and will not be reimbursed for any of their expenses. Only five (5) respondents will be selected to participate. Each of the five (5) selected participants will be required to provide two (2) vehicles for demonstration on as the date assigned by the Canadian Armed Forces. Each participant will have one complete day to demonstrate their two (2) vehicles. The schedule and specific details of the demonstration will be provided to the selected participants in advance of the demonstration. Once conformance is verified an invitation to attend the equipment demonstration will be issued to the selected respondents.

9.2 One on One Sessions

Canada may at its discretion contact or meet any respondents to follow-up with additional questions or for clarification on any aspect of a response.

10. Closing Date for the RFI:

Responses to this RFI are to be submitted to the PWGSC Contracting Authority identified above, on or before September 28th, 2015

11. Technical Specification Compliance Matrix

Refer to ANNEX A attached.

12. Industry Engagement – Equipment Demonstration

Refer to ANNEX B attached

Ultra Light Combat Vehicle
Request For Information
Technical Specifications
Compliance Matrix

Requirements	Compliant ? [Yes / No]	Discuss Compliance (Please provide details if the Respondent proposed vehicle doesn't meet the requirements, or if the proposed vehicle exceeds the requirements)	Applicable Reference
1.0 MANDATORY REQUIREMENTS			
1.1 GENERAL			
1.1.1 The proposed proposed ULCV is based on a 4 wheel, open seating area vehicle designed for military off road use.			
1.1.2 The proposed ULCV Technical Specifications is achieved at Gross Vehicle Weight (GVW), defined as the Curb Weight plus the maximum Payload, unless stated otherwise.			
1.1.3 The proposed ULCV design is at Technology Readiness Level 9 as defined in Technology Readiness Assessment (TRA) Guidance, Department of Defense, April 2011.			
1.1.4 The proposed ULCV design has a proven history in delivering and supporting maneuver solutions to special operations applications. A proven history will include the delivery of at least 10 vehicle platforms that have been used with a NATO nation's military or an Australian Defence Force unit.			
1.2 VEHICLE VARIANTS			
1.2.1 The proposed ULCV is configured in a Mobility variant with five occupants including a gunner, and in a Light Strike variant with nine occupants.			
1.2.2 The same vehicle is used for both variants with just the loading of the vehicle determining the variant.			

1.3 CLIMATIC AND ENVIRONMENTAL			
1.3.1 The proposed ULCV is capable to operate on roads of varying quality ranging from paved highways, dirt trails, and in most cases broken and/or uneven ground. The Mission Profile (described in the RFI paragraph 2, 3.1 and 3.2) details the terrain conditions and percentage of time spent on each terrain type.			
1.3.2 The proposed ULCV is a proven design for operation in the entire range of climatic conditions defined as A1, A2, A3, B2, B3, C0, and C1 in STANAG 4370, AECTP 200, AECTP 230 Leaflet 2311/1 Table 2 Summarized Temperature and Humidity Cycles Worldwide.			
1.3.3 The proposed ULCV is able to start and operate after a 24 hour cold soak at -32ºC without any external aids.			
1.4 VEHICLE SYSTEMS			
1.4.1 Weights and Dimensions			
1.4.1.1 The proposed ULCV has a Curb Weight (CW) of 2040 kg or less as defined in TOP 2-2-801, Weight Distribution and Ground Pressure (Wheeled and Tracked Vehicles), US Army Development Test Command, Test Operations Procedure.			
1.4.1.2 The proposed ULCV is capable of carrying a Payload of 1475 kg under all Mission Profile conditions as described in the RFI paragraphs 2, 3.1 and 3.2, Mission Profile, and as defined in TOP 2-2-801, Weight Distribution and Ground Pressure (Wheeled and Tracked Vehicles, US Army Development Test Command, Test Operations Procedure.			

1.4.1.3 The proposed ULCV has dimensions which allow it to comply with internal loading restrictions on the CC-177 Globemaster aircraft, the CC-130 Hercules aircraft, and the CH-147 Chinook helicopter, as detailed in the Air Transportability section.			
1.4.2 <u>Powertrain</u>			
1.4.2.1 The proposed ULCV shall be powered by a compression ignition engine capable of operating on NATO supplied fuels as detailed in STANAG 4362, Fuels for Future Ground Equipments Using Compression Ignition Or Turbine Engines.			
1.4.2.2 The proposed ULCV has an automatic transmission.			
1.4.2.3 The proposed ULCV has a drivetrain with all wheel drive capability. If part time all wheel drive capability is provided, the driver is capable of engaging and disengaging all wheel drive while the vehicle is in motion.			
1.4.2.4 The proposed ULCV has driver selectable high range and low range gear ratios.			
1.4.2.5 The proposed ULCV has limited slip front and rear differentials.			
1.4.3 <u>Suspension</u>			
1.4.3.1 The proposed ULCV has a suspension designed for military off-road use.			
1.4.3.2 The proposed ULCV has a replaceable underbelly skid plate(s) for protection when traversing rocky terrain.			

1.4.4 Wheels and Tires			
1.4.4.1 The proposed ULCV has tires which are nominally a minimum of 835 mm in diameter and nominally a minimum of 300 mm in width.			
1.4.4.2 The proposed ULCV has tires with a tread designed for off road use.			
1.4.4.3 The proposed ULCV wheels has bead lock on the exterior rim.			
1.4.4.4 The proposed ULCV has one externally mounted spare tire and wheel, identical to the in use wheels and tires.			
1.4.5 Steering System			
1.4.5.1 The proposed ULCV is not right hand drive.			
1.4.6 Electrical System			
1.4.6.1 The proposed ULCV has a 24 Vdc negative ground electrical system rated at at least 120 amperes.			
1.4.6.2 The proposed ULCV has four 12 Vdc power outlet receptacles in accordance with (IAW) SAE International J563, Standard for 12 Volt Cigarette Lighters, Power Outlets, and Accessory Plugs, located in the vicinity of the seating locations for powering commercial electronics.			
1.4.6.3 The proposed ULCV has cabling for two radios.			
1.4.6.4 The proposed ULCV has provision for the mounting of a toughbook, tablet, or laptop for use by the Crew Commander.			
1.4.6.5 The proposed ULCV has mounting locations for four antennas with magnetic bases, including UHF, VHF, Tactical Satellite, and GPS.			

1.4.6.6 The proposed ULCV has 25 mm diameter cabling conduit installed under the vehicle for future wiring by the User. The conduit must be located to service the four seating positions.			
1.4.6.7 The proposed ULCV has wiring to permit the necessary junction boxes to ensure that the communication can be routed from the radio locations to the crew commander location.			
1.4.6.8 The proposed ULCV is "fitted for but not with" an infrared lighting system (interface detail to be provided at Request for Proposal (RFP) stage). "Fitted for but not with" includes all brackets, cables, and connectors.			
1.4.6.9 The proposed ULCV has basic lighting equipment for limited use on public roads including head lights, tail lights, brake lights, and turn signals.			
1.4.6.10 The proposed ULCV has a military blackout lighting system in accordance with STANAG 4381, Blackout Lighting Systems For Tactical Land Vehicles.			
1.4.6.11 The proposed ULCV has a keyless engine starting system which is not affected by the use of nearby Electronic Counter Measures (ECM) jammers.			
1.4.6.12 The proposed ULCV has a vehicle battery master switch to isolate the starting battery(s) from the rest of the electrical system.			
1.4.7 <u>Fuel System</u>			
1.4.7.1 The proposed ULCV is capable of being refuelled at full flow rate by commercial pumps, in-service refuelling vehicles equipped with a 38 mm fuel nozzle, and standard 20 litre jerry cans.			

1.4.8 Occupant Compartment			
1.4.8.1 The proposed ULCV has at least four permanent seats with approved three or four point restraints, and one gunner position with a restraint system.			
1.4.8.2 The proposed ULCV has a roll cage which meets or exceeds the roll over performance requirements of vertical roof load capacity and maximum vertical roof deformation IAW Federal Motor Vehicle Safety Standard (FMVSS) 571.216 Roof Crush Resistance, for the permanent seating locations.			
1.4.8.3 The proposed ULCV has temporary bench seating in the cargo area to accommodate additional occupants for up to a total of nine occupants in the vehicle. The temporary bench seating positions do not require restraints or roll over protection.			
1.4.8.4 The proposed ULCV has provision for the transporting of one patient using a Talon II 81C litter in accordance with STANAG 2040, Stretchers, Bearing Brackets, and Attachment Supports.			
1.4.8.5 The proposed ULCV has provision for protecting the crew from encounters with barb wire by integral design or by the addition of a wire cutter(s).			
1.4.9 Stowage			
1.4.9.1 The proposed ULCV has a user configurable tie down system, such as rails with adjustable tie down points, for securing various items depending on the mission.			
1.4.9.2 The proposed ULCV has a modular and user configurable stowage system on the external sides of the cargo area for securing items such as ruck sacks.			

1.4.9.3 The proposed ULCV has modular brackets for securing four standard military 20 litre jerry cans to the sides or rear of the vehicle. If the brackets have to be removed for air transportability, they are removable without tools.			
1.4.9.4 The proposed ULCV has a rear cargo area which is separate from the passenger compartment but is accessible from the passenger compartment.			
1.4.9.5 The proposed ULCV has a rear fold down / flip up tailgate capable of supporting 225 kg.			
1.4.9.6 The proposed ULCV is equipped with all the tools required for user maintenance tasks including performing a tire change.			
1.4.10 <u>Paint and Surfaces</u>			
1.4.10.1 The proposed ULCV has exterior and interior metallic surfaces painted flat tan IAW FED STD 595C, Colors Used In Government Procurement, colour tan 33446.			
1.4.10.2 The proposed ULCV has non-metallic surfaces coloured similar to tan 33446 or a muted non-reflective colour.			
1.4.11 <u>Labels and Markings</u>			
1.4.11.1 The proposed ULCV has bilingual labels or markings, in English and French, whenever text is required.			
1.4.11.2 The proposed ULCV has warning or precautionary markings to protect personnel and equipment where necessary.			

1.4.11.3 The proposed ULCV has instrument markings, decals, and data plates conforming to STANAG 4050, Symbols Designating Function Of Controls In Military Vehicles.			
1.4.11.4 The proposed ULCV has a data plate(s) affixed in a conspicuous and protected location with the following information: The manufacturer's name, model number, model year, Equipment Configuration Code (ECC), Gross Vehicle Weight Rating (GVWR), and Curb Weight (CW).			
1.4.12 <u>Towing and Recovery</u>			
1.4.12.1 The proposed ULCV has four tow hooks rated at 4540 kg each, with two hooks located at the front, and two hooks at the rear of the vehicle.			
1.4.12.2 The proposed ULCV is capable of being flat towed by a similar vehicle over uneven terrain for at least 500 metres without any preparation.			
1.4.12.3 The proposed ULCV is capable of flat towing a similar vehicle over uneven terrain for at least 500 metres without any preparation.			
1.4.12.4 The proposed ULCV has a self-recovery electrical winch with at least 50 metres of synthetic rope with a maximum rated line pull of at least 4540 kg. IAW SAE J706, Rating of Winches.			
1.4.12.5 The proposed ULCV winch is able to pull at angles of 0 to 45 degrees from the horizontal plane of the vehicle.			
1.4.12.6 The proposed ULCV winch is able to be mounted into a two inch tow hitch receiver.			

1.4.12.7 The proposed ULCV has a two inch tow hitch receiver at the front and at the rear of the vehicle for mounting the self-recovery winch.			
1.4.12.8 The proposed ULCV has power connectors at the front and rear winch locations for supplying sufficient electrical power to the winch.			
1.4.12.9 The proposed ULCV has a remote control for the winch which allows the operator to control the winching operation from a safe location.			
1.5 MOBILITY			
1.5.1 Ground Clearance			
1.5.1.1 The proposed ULCV has a minimum of 240 mm ground clearance, dimension H156, as measured IAW SAE J1100, Motor Vehicle Dimensions.			
1.5.2 Acceleration			
1.5.2.1 The proposed ULCV is able to accelerate from 0 km/h to 90 km/h on a flat, dry, paved surface within 750 m or less from the start IAW SAE J1491 Vehicle Acceleration Measurement.			
1.5.3 Cruising Speed			
1.5.3.1 The proposed ULCV is able to maintain a cruising speed of 90 km/h on a flat, dry, paved surface over a distance of 50 km IAW TOP 2-2-602, Acceleration, Maximum and Minimum Speeds.			
1.5.4 Turning Circle			
1.5.4.1 The proposed ULCV has a turning circle with a wall to wall diameter of 13.0 metres or less as measured IAW TOP 2-2-609, Steering.			

1.5.5 Fording Capability			
1.5.5.1 The proposed ULCV is capable of fording a hard bottomed water obstacle to a depth of 760 mm without modification or preparation IAW STANAG 2805, Fording and Floatation Requirements for Combat and Support Ground Vehicles.			
1.5.6 Range			
1.5.6.1 The proposed ULCV is capable of operating on fuel carried in integral fuel tank(s) for a distance of 500 km without refuelling at an average speed of 50 km/h on a flat improved gravel course IAW TOP 2-2-603, Vehicle Fuel Consumption, on the Automotive Test & Evaluation Facility test course.			
1.5.7 Tiedowns			
1.5.7.1 The proposed ULCV is equipped with permanent, integrally attached tie downs IAW MIL-STD-209K, Interface Standard for Lifting and Tiedown Provisions.			
1.5.8 Air Transportability			
1.5.8.1 The proposed ULCV is certified for Internal Air Transport (IAT) on a CC-177 Globemaster aircraft IAW TO 1C-17A-9, Loading Instructions USAF Series C-17A Aircraft.			
1.5.8.2 The proposed ULCV is capable of being loaded onto and unloaded from a CC-177 Globemaster aircraft, without using special tools to convert the proposed ULCV from its loaded configuration to its combat configuration in less than 5 minutes.			
1.5.8.3 The proposed ULCV is certified for Internal Air Transport (IAT) on a CC-130J Hercules aircraft IAW 60-130J-1000, Standard Manoeuvre Manual (SMM) CC130J Hercules Operations.			

1.5.8.4 The proposed ULCV is capable of being loaded onto and unloaded from a CC-130J Hercules aircraft, without using special tools to convert the proposed ULCV from its loaded configuration to its combat configuration in less than 5 minutes.			
1.5.8.5 The proposed ULCV is certified for Internal Air Transport (IAT) on a CH-147F Chinook helicopter IAW B-GA-002-147/FP-001, CH-147 Chinook Standard Manoeuvre Manual.			
1.5.8.6 The proposed ULCV is capable of being loaded onto and unloaded from a CH-147F Chinook helicopter without using special tools to convert the proposed ULCV from its loaded configuration to its combat configuration in less than 5 minutes.			
1.5.8.7 The proposed ULCV is certified for External Air Transport (EAT) from a CH-147F Chinook helicopter IAW B-GA-002-147/FP-001, CH-147 Chinook Standard Manoeuvre Manual.			
1.5.8.8 The proposed ULCV is capable of being transported by a CH-147F Chinook helicopter using an external sling without using special tools to convert the proposed ULCV from its loaded configuration to its combat configuration in less than 5 minutes.			
1.5.8.9 The proposed ULCV is certified for External Air Transport (EAT) from a UH-60 Black Hawk helicopter IAW MIL-STD 913A, Requirements for the Certifications of Sling Loaded Military Equipment for External Transportation by Department of Defense Helicopters.			

1.5.8.10 The proposed ULCV is capable of being transported by a UH-60 Black Hawk helicopter using an external sling without using special tools to convert the proposed ULCV from its loaded configuration to its combat configuration in less than 5 minutes.			
1.5.8.11 The proposed ULCV is certified for air drop from a CC-130J Hercules aircraft with a combat payload of 910 kg, IAW 60-130J-1000, Standard Manoeuvre Manual (SMM) CC130J Hercules Operations, Chapter 19, Airdrop Operations.			
1.5.8.12 The proposed ULCV is certified for air drop from a CC-177 Globemaster aircraft with a combat payload of 910 kg, IAW TO 1C-17A-1-4, Airdrop Mission Crew Manual USAF Series C-17A Aircraft.			
1.6 HUMAN SYSTEMS INTEGRATION			
1.6.1 Human Factor Engineering			
1.6.1.1 The proposed ULCV is designed to accommodate the 5th to 95th percentile male of the CF population IAW DCIEM 98-CR-15 and LFTEU Encumbered Soldier Anthropometrics Data.			
1.6.1.2 The proposed ULCV does not hinder its occupants from accomplishing all their specific tasks while wearing their mission specific personal equipment.			
1.6.2 Seating System			
1.6.2.1 The proposed ULCV seated positions is able to accommodate the 5th to 95th percentile male of the CF population IAW DCIEM 98-CR-15 while wearing their mission specific personal equipment.			

1.6.3 Gunner Station			
1.6.3.1 The proposed ULCV Gunner Station is equipped with a harness to help restrain the gunner while the vehicle is in motion IAW the Mission Profile, (described in the RFI paragraphs 2, 3.1 and 3.2).			
1.6.4 Driver Station			
1.6.4.1 The proposed ULCV Driver Station controls and displays is visible and operable by the driver when seated with the seatbelts fastened.			
1.6.4.2 The proposed ULCV Driver Station displays at least the following information:			
a) fuel gauge			
b) metric odometer			
c) metric trip odometer			
d) metric speedometer			
e) engine coolant temperature			
f) low oil pressure indicator			
g) headlight high beam indicator			
h) battery charging indicator			
i) parking brake indicator			
j) brake system failure indicator			
k) transmission position indicator			
l) high/low gearing position indicator			
1.7 EFFECTS			
1.7.1 The proposed ULCV has a manual weapons turret ring equipped with a NATO standard pintle mount able to support the weight and sustained firing of the following weapons:			
a) 0.50 cal Browning HMG			
b) MK-19/C-16 40 mm AGL			
c) MK-48 7.62 mm LMG			
d) C6 7.62 mm LMG			

1.7.2 The proposed ULCV has weapons pintle mounts suitable for use with a User supplied swing arm, at each exterior permanent passenger seating positions that support the sustained firing of the following weapons:			
a) MK-48 7.62 mm LMG			
b) C6 7.62 mm LMG			
2.0 DESIRABLE REQUIREMENTS			
Desirable requirements should be considered as options which increase the value of the proposal. The weighting of the desirable requirements will be specified at the time of the RFP. For the purposes of the RFI, the respondent is to specify if they can meet or exceed the requirement and by how much. If unable to meet the requirement, the respondent can specify what would be the value that can be met.			
2.1 The proposed ULCV should be capable of operating on fuel carried in integral fuel tank(s) for a distance of 700 km without refuelling at an average speed of 50 km/h on a flat improved gravel course IAW TOP 2-2-603, Vehicle Fuel Consumption, on the Automotive Test & Evaluation Facility test course.			
2.2 The proposed ULCV should be capable of being flat towed by a similar vehicle over uneven terrain for at least 1000 metres without any preparation.			
2.3 The proposed ULCV should be capable of flat towing a similar vehicle over uneven terrain for at least 1000 metres without any preparation.			
2.4 The proposed ULCV should be able to accelerate from 0 km/h to 90 km/h on a flat, dry, paved surface within 500 m or less from the start IAW SAE J1491 Vehicle Acceleration Measurement.			

2.5 The proposed ULCV should be able to achieve a maximum speed of 120 km/h IAW TOP 2-2-602, Acceleration, Maximum and Minimum Speeds.			
2.6 The proposed ULCV should be capable of being loaded onto and unloaded from a CC-177 Globemaster aircraft, without using special tools to convert the proposed ULCV from its loaded configuration to its combat configuration in less than 2 minutes.			
2.7 The proposed ULCV should be capable of being loaded onto and unloaded from a CC-130J Hercules aircraft, without using special tools to convert the proposed ULCV from its loaded configuration to its combat configuration in less than 2 minutes.			
2.8 The proposed ULCV should be capable of being loaded onto and unloaded from a CH-147F Chinook helicopter without using special tools to convert the proposed ULCV from its loaded configuration to its combat configuration in less than 2 minutes.			
2.9 The proposed ULCV should be capable of carrying a Payload of 2272 kg under all Mission Profile conditions as described in the RFI paragraphs 2, 3.1 and 3.2, and as defined in TOP 2-2-801, Weight Distribution and Ground Pressure Wheeled and Tracked Vehicles, US Army Development Test Command, Test Operations Procedure.			
END OF DOCUMENT			
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			

Annex B

CRITERIA FOR SELECTION TO ATTEND ULTRA LIGHT COMBAT VEHICLE EQUIPMENT DEMONSTRATION

All selected participants will attend at their own expense. No reimbursement of expenses will be provided for from Canada.

Responses to this Annex must be received no later than **September 14, 2015**.

Responses to this Annex must be certified by an authorized representative of the company.

Responses in this Annex will be verified by Director Special Forces Requirements 5-2 prior to final selection of the respondent for participation.

Requirements

1 Available to attend at the participant's expense during the week of 19-23 October 2015 in CFB Petawawa, Ontario.

2 Able to provide two (2) fully functional operating vehicles.

2.1 Vehicles must operate using diesel fuel.

2.2 Vehicles must have a minimum range of 500 km on internal fuel when loaded with 1475 kg.

2.3 Vehicle must be able to achieve a minimum top speed of 90 kph on paved roads.

2.4 Vehicles must demonstrate a turning radius of no more than 13 metres.

2.5 Vehicles must demonstrate their off-road capability.

3 Able to mount a .50 caliber machine gun onto a turret ring located at the top of the vehicle (DND will provide weapons).

3.1 The turret ring and the .50 caliber machine gun must be able to be traversed by a gunner through 360 degrees of motion when the vehicle is loaded with mission essential equipment.

3.2 The turret ring must be able to accept a NATO standard pintle mount.

3.3 The vehicles must have hard points able to mount 7.62mm machine gun swing arms from the sides and rear of the vehicle.

4 Able to demonstrate a mock up communications equipment and antenna brackets.

5 Able to be loaded with a minimum of five personnel wearing full fighting equipment and all mission essential equipment.

6 Able to be loaded into the cargo area of a CH-147F aircraft.

6.1 Provide specific loading details 7 days prior to the demonstration for the loading of the vehicle onto the aircraft.

6.2 Able to conduct a roll-on/roll-off demonstration from the aircraft including the mounting of the .50 caliber machine gun.

7 Please note that Canadian Armed Forces personnel will want to be permitted the opportunity to operate the vehicles with limited familiarization training from the participant.

7.1 Participant personnel will be permitted in the vehicle whenever the vehicle is moving.

Certified by an authorized representative of the Company

Name	Title	Signature	Date

Contact Person

Please provide the name, title, phone number, e-mail address of the Respondent representative to contact to finalize the logistics for the demonstration.

Company:
Name of the representative:
Title:
Phone number:
E-mail address: