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**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

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

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

Comments - Commentaires

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

Issuing Office - Bureau de distribution
Fuel & Construction Products Division
11 Laurier St./11, rue Laurier
7A2, Place du Portage, Phase III
Gatineau, Québec K1A 0S5

Title - Sujet BULLDOZER, FULL TRACKED, DED	
Solicitation No. - N° de l'invitation W8476-165377/C	Amendment No. - N° modif. 001
Client Reference No. - N° de référence du client W8476-165377	Date 2016-03-18
GETS Reference No. - N° de référence de SEAG PW-\$\$HL-657-70555	
File No. - N° de dossier hl657.W8476-165377	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-04-25	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: Turner, Louie	Buyer Id - Id de l'acheteur hl657
Telephone No. - N° de téléphone (819) 956-3975 ()	FAX No. - N° de FAX (819) 956-5227
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
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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

Solicitation No. - N° de l'invitation
W8476-165377/C
Client Ref. No. - N° de réf. du client
W8476-165377

Amd. No. - N° de la modif.
001
File No. - N° du dossier
hl657.W8476-165377

Buyer ID - Id de l'acheteur
hl657
CCC No./N° CCC - FMS No./N° VME

Amendment #1 is issued to add Annex B – Purchase Description

All other terms and conditions remain the same.



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.

ANNEX B

PURCHASE DESCRIPTION

BULLDOZER, LOW SPEED, FULL TRACKED, DIESEL ENGINE DRIVEN

1. SCOPE

1.1 **Scope** - This purchase description covers the requirements for a diesel engine driven, full tracked, low speed bulldozer.

1.2 Instructions

- (a) Requirements, which are identified by the word "**shall**", **shall** be treated as 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 "**shall**" or "will" are not used, the information provided is for guidance only;
- (d) Where technical certification is required, a copy of the certification or an acceptable proof of compliance **shall** be provided, upon request, at no cost to Canada; and
- (e) Nominal dimensions **shall** be treated as approximate. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but which differ from the actual dimensions.

1.3 Definitions

- (a) "**Technical Authority**" **shall** mean the official responsible for the technical content of this requirement; and
- (b) "**Equivalent**" **shall** mean a standard, means, or component type, which the **Technical Authority** has approved for this requirement, in writing, as meeting the specified requirements for function and performance.

Revisions		
Rev	Date	Description
A	2015/06/23	Initial Release.
B	2016/02/12	Amendment to blade specifications, paragraph 3.5(a) (i) and Data Table.

OPI: DSVPM 4 - BPR: DAPVS 4

Issued on Authority of the Chief of the Defence Staff

Publiée avec l'autorisation du chef d'état-major de la Défense

1.4 **Data Table** - The following table shows the required performance and dimensions for the configuration, with clause references.

CHARACTERISTIC	CLAUSE	UNITS	CONFIGURATION
			E
NET POWER (RATED)	3.4.1 (a)	kW	170
OPERATING WEIGHT	3.4.1 (b)	kg	22,500
BLADE WIDTH	3.5 (a) (ii)	mm	3,500
BLADE HEIGHT	3.5 (a) (iii)	mm	1,000
BLADE LIFT HEIGHT	3.5 (a) (iv)	mm	1,000
BLADE DEPTH OF CUT	3.5 (a) (v)	mm	550
BLADE TILT	3.5 (a) (vi)	mm	450
BLADE ANGLE	3.5 (a) (vii)	degree	20
TRACK SHOE WIDTH	3.12 (a)	mm	655
CONTACT AREA	3.12 (b)	m ²	3.2

2. APPLICABLE DOCUMENTS

2.1 Government Furnished Documents - NOT APPLICABLE

2.2 Other Publications - The following documents are referenced in this specification. Canada will not be supplying any reference documents. Available information on the organization is provided.

- (a) Hazardous Products Act
Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>
- (b) International Organization for Standardization (ISO)
ISO Central Secretariat
1, ch. de la Voie-Creuse
CP 56, CH-1211 Geneva 20
Switzerland
<http://www.iso.org/iso/home.htm>
- (c) SAE Standards
SAE World Headquarters
400 Commonwealth Dr.,
Warrendale, PA, 15096-0001
<http://www.sae.org>

3. REQUIREMENTS

3.1 Standard Design

- (a) The vehicle **shall** be the latest model from a manufacturer who has demonstrated acceptability by selling, in North America, this type and size class of vehicle for at least three (3) years;
- (b) The vehicle **shall** have engineering certification available, upon request, at no cost to Canada, for this application from the original manufacturers of major equipment, systems and assemblies;
- (c) The vehicle **shall** 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; and

- (d) The vehicle **shall** not have systems and components operating at capacities beyond those published by the system or component manufacturer.

3.2 Operating Conditions

3.2.1 Weather - The vehicle/equipment **shall** operate under the extremes of weather conditions found in Canada in temperatures ranging from -40 to 40°C.

3.2.2 Terrain - The vehicle **shall** be capable of being operated off-road (e.g. construction sites, open fields and dirt tracks). Terrain conditions **shall** include year round operations on snow, mud, sand and ice.

3.3 Safety Standards

3.3.1 Hazardous Materials - The contractor **shall** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) used in the manufacture and assembly of the product supplied.

3.4 Performance - The vehicle **shall** be a diesel engine driven, full tracked, low speed bulldozer.

3.4.1 Vehicle Performance

- (a) The vehicle **shall** have a rated net power, in accordance with ISO 9249/SAE J1349, of at least that given as "**NET POWER (RATED)**" in the Data Table; and
- (b) The vehicle **shall** have a typical operating weight, with blade, ripper and ROPS cab, of at least that given as "**OPERATING WEIGHT**" in the Data Table.

3.5 Equipment

(a) Dozer Blade

- (i) The vehicle **shall** be equipped with an angle blade;
- (ii) The dozer blade **shall** have width of at least that given as "**BLADE WIDTH**" in the Data Table;
- (iii) The dozer blade **shall** have a height of at least that given as "**BLADE HEIGHT**" in the Data Table;
- (iv) The dozer blade **shall** have a blade lift (ground clearance) of at least that given as "**BLADE LIFT HEIGHT**" in the Data Table;
- (v) The dozer blade **shall** have a depth of cut below ground level of at least that given as "**BLADE DEPTH OF CUT**" in the Data Table;
- (vi) The dozer blade **shall** have a horizontal tilt to lift the blade corners to a height of at least that given as "**BLADE TILT**" in the Data Table;
- (vii) The dozer blade **shall** angle to the left and right of at least that given as "**BLADE ANGLE**" in the Data Table; and
- (viii) The dozer blade **shall** be equipped with one or more bolt-on replaceable cutting edges.

- (b) **Ripper**
 - (i) The vehicle **shall** be equipped with a hydraulically operated, rear mounted, 3-shank ripper;
 - (ii) The ripper **shall** be equipped with three replaceable shanks;
 - (iii) The shanks **shall** be equipped with replaceable teeth; and
 - (iv) The ripper **shall** have a ground penetration of at least 500 mm.
- (c) **Rock Guards** - Rock guards to protect engine, transmission, and final drive components **shall** be provided.
- (d) **Radiator Guard** - A radiator guard to protect the radiator from cooling air sand abrasion **shall** be provided.
- (e) **Brush Sweeps** - Brush sweeps forward of the cab **shall** be provided.
- (f) **Tie-Down/Transport/Recovery Devices**
 - (i) Permanent and integrally mounted devices **shall** be provided to prevent shifting or movement during transport on low-bed trailers, rail cars and aboard ships and for lifting and recovery operations;
 - (ii) The devices **shall** be designed for forward thrust of 4 G, a rearward thrust of 4 G, an upward thrust of 2 G and a side thrust of 1.5 G (1 G = shipping weight of the equipment). These loads are not imposed simultaneously;
 - (iii) If the devices have eyes, these eyes **shall** have a nominal inside diameter of no less than 76 mm for lifting operations;
 - (iv) The devices **shall** be located and sized to permit attachment of cables or turnbuckles;
 - (v) The devices **shall** be identified and marked with maximum load permitted adjacent to the tie-downs using a contrasting colour; and
 - (vi) The operation and use of these devices **shall** be included in the manuals. It is preferred that this information be marked in the vehicle cab (in the form of decals).
- (g) **Tool Compartment**
 - (i) A tool compartment to hold all tools and loose equipment required for daily maintenance **shall** be provided;
 - (ii) The tool compartment **shall** be protected from the elements including road splash or be of weatherproof construction with anti-return type drainage; and
 - (iii) The tool compartment **shall** be lockable.
- (h) **Protection against Vandalism**
 - (i) The vehicle **shall** have vandal protection measures including provisions for locking the engine covers, filler caps and cab; and
 - (ii) Locking **shall** be by padlock hasps or by integral, common keyed locks.

- (i) **Non-Skid Walking Surfaces** - The vehicle **shall** have all walking surfaces covered with a coarse non-skid coating for operator safety.

3.6 **Operator Station**

3.6.1 **Keys**

- (a) A common key **shall** be used for all items supplied with an integral keyed lock; and
- (b) The integral keyed lock system **shall** include ignition, doors and locking compartments/covers.

3.6.2 **ROPS/FOPS Cab**

- (a) A cab incorporating a Roll Over Protective Structure (ROPS), certified in accordance with ISO 3471, **shall** be provided;
- (b) The ROPS cab **shall** be weatherproof, pressurized and insulated;
- (c) The ROPS cab **shall** have a heating system with ventilation and defrosting systems capable of keeping windows free from frost and moisture;
- (d) The ROPS cab **shall** have the manufacturer's standard safety glass in the windows. It is preferred the glass be tinted to reduce solar heating load;
- (e) The cab **shall** have windshield wipers conforming to SAE J198;
- (f) The windshield wiper system **shall** have at least 2 speeds, with an intermittent setting;
- (g) The windshield wipers **shall** incorporate a washer system; and
- (h) The ROPS cab **shall** have two lockable doors, or one door and at least one visibly labelled window as an emergency escape route.

3.6.3 **Driver's Seat**

- (a) The vehicle shall be equipped with an operator's air suspension seat and backrest in conformance with SAE J899 or in conformance with ISO 11112:1995 and ISO 7096;
- (b) The driver's seat **shall** have seat material being a breathable fabric or a mesh surface;
- (c) The seat **shall** be equipped with seat belts conforming, as a minimum, to SAE J386; and
- (d) The seat **shall** be fore/aft and vertically adjustable without having to move from a seated position.

3.6.4 **Mirror(s)**

- (a) Adjustable rear-view mirrors positioned for safe reverse operation **shall** be provided;
- (b) If exterior mirrors are used, they **shall** be heated;
- (c) Mirror heating **shall** be activated by an in-cab control; and
- (d) It is preferred that the non-reflective surface of the mirror be flat black and that the mirrors be a split type with 25 percent convex.

3.6.5 **Radio**

- (a) An AM/FM radio **shall** be provided. It is preferred that the radio be equipped with and auxiliary input; and
- (b) The radio **shall** turn off automatically when the vehicle is turned off.

3.6.6 **Rear View Camera**

- (a) A rear view camera **shall** be installed on the vehicle;
- (b) The camera image **shall** be displayed in the cab of the vehicle; and
- (c) The camera **shall** be protected by a guard or mounted in a protected location.

3.6.7 **Air Conditioner** - The manufacturer's standard air conditioning system **shall** be provided.

3.6.8 **Operator Manual Stowage** - The vehicle operator compartment **shall** be equipped with a dedicated stowage holder or box for the bilingual operator manual(s).

3.7 **Chassis** - The vehicle chassis **shall** be the manufacturer's standard for a vehicle of this type and size.

3.7.1 **License Plate Holder** - The vehicle **shall** be equipped with a rear mounted license plate holder.

3.8 **Engine** - The manufacturer's standard diesel engine **shall** be provided.

3.8.1 **Engine Components** - Engine components **shall** be the manufacturer's standard.

3.8.2 **Fuel Tank(s)** - The fuel tank(s) **shall** be the manufacturer's standard.

3.8.3 **Engine Cold Weather Aids**

- (a) The engine **shall** be equipped with cold weather aids to enable the engine (operating with winter grade fuels/oils) to be started at temperatures down to -40° C;
- (b) A low temperature engine starting aid **shall** be provided. The engine **shall** have one of the following systems; ether injection, glow plug(s), intake air preheat or **Equivalent**; and
- (c) One or more 110-Volt engine heaters **shall** be provided. The engine heaters **shall** have a capacity as recommended by the engine manufacturer or conforming to SAE J1310;
- (d) One or more 110-Volt battery heaters **shall** be provided. The battery heaters **shall** have a wattage matched to battery size to prevent battery damage due to overheating; and
- (e) External electrical power for engine and battery heaters **shall** be a single cover-protected plug that is accessible without lifting the engine covers. It is preferred that the plug includes or is accompanied by a means to indicate when power is being supplied to the 110 Volt components.

3.8.4 **Fuel-Fired Pre-Heater**

- (a) The vehicle **shall** be provided with a fuel-fired engine coolant preheat system;
- (b) The fuel-fired pre-heater **shall** be the size recommended by the heater manufacturer;

- (c) The fuel-fired pre-heater **shall** be provided with a 7 day programmable timer;
 - (d) Fuel for the fuel-fired pre-heater **shall** be drawn from the vehicle fuel tank; and
 - (e) The fuel-fired pre-heater **shall** operate without power from outside the vehicle.
- 3.9 **Transmission** - The transmission **shall** be the manufacturer's standard.
- 3.10 **Brake System** - The braking system **shall** conform to ISO 3450 or **Equivalent**.
- 3.11 **Steering** - The steering system **shall** be the manufacturer's standard.
- 3.12 **Tracks**
- (a) The vehicle tracks **shall** have a width of at least that given as "TRACK SHOE WIDTH" in the Data Table; and
 - (b) The vehicle tracks **shall** have a ground contact area of at least that given as, "CONTACT AREA" in the Data Table.
- 3.13 **Controls**
- (a) Controls **shall** be of the joy stick type; and
 - (b) The controls **shall** include a safety device ensuring that the engine can only be started with the transmission in a neutral position.
- 3.14 **Instruments**
- (a) Instruments **shall** be the manufacturer's standard; and
 - (b) The instruments **shall** include an hour-meter, which displays the accumulated running time up to at least 9,999 hours.
- 3.15 **Electrical System**
- (a) The vehicle **shall** be equipped with the manufacturer's standard electrical system;
 - (b) A back-up alarm system to alert personnel that the vehicle is in reverse **shall** be provided.
- 3.16 **Battery Solar Charger**
- (a) A Battery Solar Charging System **shall** be provided;
 - (b) The Battery Solar Charging System **shall** be equivalent to NSN 6130-01-487-0035;
 - (c) The solar charger panel **shall** be roof mounted at the rear on an angle of between 10 and 15 degrees;
 - (d) The contractor **shall** have the Solar Battery Charging System's location/wiring approved by the Technical Authority prior to installation.
- 3.17 **Lighting**. The vehicle **shall** be equipped with the manufacturer's standard lighting package.
- 3.17.1 **Amber Coloured Beacon**
- (a) An amber-coloured, omni-directional beacon that operates continuously when the vehicle is running **shall** be provided;

- (b) The beacon **shall** be mounted so as to provide maximum vehicle visibility. It is preferred that the visibility be through 360 degrees;
- (c) It is preferred that the beacon be mounted on the cab roof; and
- (d) The beacon **shall** be LED.

3.17.2 **Working Lights**

- (a) Front and rear working lights **shall** be provided; and
- (b) The working lights **shall** LED.

3.17.3 **Light Guards** - All lighting **shall** be protected by guards or mounted in a location to prevent damage.

3.18 **Hydraulic System** - The hydraulic system **shall** be the manufacturer's standard.

3.19 **Lubricants and Hydraulic Fluids**

- (a) Manufacturer's standard synthetic non-proprietary lubricants and hydraulic fluids **shall** be provided; and
- (b) Lubrication fittings **shall** conform to SAE J534 or an **Equivalent** North American Standard.

3.19.2 **Automatic Greasing System**

- (a) The vehicle **shall** be equipped with an Automatic Greasing System, which automatically provides grease to the majority of the greasing points;
- (b) The system **shall** include a telltale light indicating that the system is functioning and a low grease level alarm in the operator's station; and
- (c) The mounting location **shall** not impede ingress or egress of the vehicle. The final mounting location and configuration will be approved by the Technical Authority prior to vehicle delivery.

3.20 **Paint** - The vehicle **shall** be painted using the manufacturer's standard commercial painting system and in the manufacturer's standard commercial colours.

3.21 **Identification** - The manufacturer's name, model and vehicle serial number **shall** be permanently marked in a conspicuous and protected location.

3.21.1 **Labels** - All written warning and instruction labels **shall** be in a bilingual format.

3.22 **Vehicle Delivery Condition**

- (a) If the vehicle requires assembly at destination, the contractor **shall** be responsible for all manpower and equipment to perform assembly;
- (b) The space for assembly at destination will be provided, if required;
- (c) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose, **shall** be listed on the shipping certificate or to an attached packing note;
- (d) Fuel tank(s) **shall** be half to three quarters full on delivery; and

- (e) Lubricant viscosity provided **shall** be in accordance with the manufacturer's specifications for the destination and the season of delivery.

4. Integrated Logistic Support

4.1 Documentation and Support Items

4.1.1 Items Provided to Technical Authority Prior to Vehicle Delivery

- (a) Data Summary - A bilingual data summary **shall** be provided for each configuration with data and a vehicle picture in the **Technical Authority** provided format;
- (b) Manuals for Approval
 - (i) One set of manuals, including operator, parts and maintenance (shop repair) manuals, in both digital and paper format, for the prime equipment and added sub-systems **shall** be provided;
 - (ii) The operator and maintenance (shop repair) manuals **shall** be provided in a bilingual format as a package;
 - (iii) Digital copies **shall** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection. Digital copies **shall** be provided on a CD or DVD. It is preferred that digital copies are provided in a searchable PDF format;
 - (iv) Manuals will not be returned; and
 - (v) Approval or comments on the manuals will be provided within 15 working days of receipt.
- (c) Warranty Letter
 - (i) A paper copy of the completed bilingual warranty letter in the approved format (provided by the **Technical Authority**) **shall** be provided to the **Technical Authority**; and
 - (ii) The warranty letter **shall** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada.
- (d) Photographs
 - (i) Two (2) digital pictures, one left-front three-quarter view, and one right-rear three-quarter view of each configuration **shall** be provided;
 - (ii) The pictures **shall** have an uncluttered background; and
 - (iii) The pictures **shall** have a resolution of at least eight (8) Mega pixels.
- (e) Initial Parts Kit List - The contractor **shall** provide a list of parts needed to perform preventive maintenance on one vehicle for a 1 year period as per the maintenance manual. A complete change of all filters and filter elements **shall** be included in the list. The list **shall** include the following elements:
 - (i) Part description;
 - (ii) Original Equipment Manufacturer Part number;
 - (iii) Suggested quantity; and

- (iv) Unit cost.
- (f) **Material Safety Data Sheets**
 - (i) The contractor **shall** provide a listing of all hazardous materials used on the vehicle;
 - (ii) If there are no hazardous materials used, this **shall** be stated on the listing; and
 - (iii) The contractor **shall** provide material safety data sheets of all hazardous materials in the list.

4.1.2 **Items with Each Vehicle**

- (a) **Operator's Manuals**
 - (i) An operator's manual for the safe vehicle operation including all supplied attachments **shall** be provided with each vehicle shipped;
 - (ii) The operator's manual **shall** be provided in a bilingual format as a package;
 - (iii) A digital copy of the operator's manual **shall** be provided, in addition to the paper copy, with each vehicle shipped; and
 - (iv) The digital copy **shall** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection. Digital copies **shall** be provided on a CD or DVD. It is preferred that the digital copy be provided in a searchable PDF format.
- (b) **Warranty Letter**
 - (i) A paper copy of the completed bilingual warranty letter in the approved format (provided by the **Technical Authority**) **shall** be provided with each vehicle shipped;
 - (ii) The warranty letter **shall** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - (iii) Designated warranty providers **shall** honour the warranty letter.
- (c) **Keys** - Four (4) keys in accordance with paragraph 3.6.1 **shall** be provided.

4.1.3 **Items Shipped to the Vehicle Supporting Unit**

- (a) **Operator's Manuals** - The contractor **shall** provide a bilingual operator's manual in both paper and digital format. Digital copies **shall** be provided on a CD or DVD;
- (b) **Parts Manuals** - The contractor **shall** provide the Parts Manuals in both paper and digital format. Digital copies **shall** be provided on a CD or DVD;
- (c) **Maintenance (Shop Repair) Manuals** - The contractor **shall** provide the Maintenance (Shop Repair) Manual in a bilingual format or as 2 manuals in a single binder (one English, and one French), in both paper and digital format. Digital copies **shall** be provided on a CD or DVD;

- (d) **Material Safety Data Sheets** - The contractor **shall** provide material safety data sheets for all hazardous materials in the list provided to the **Technical Authority**; and
- (e) **Initial Parts Kit** - The contractor **shall** provide a complete change of all filters and filter elements for the first year.

4.2

Training - Familiarization

- (a) The contractor **shall** provide a familiarization course;
- (b) The familiarization course **shall** include operation and maintenance segments demonstrating, as a minimum, all safety measures required for safe vehicle use and maintenance, differences between new and existing vehicles, sub-systems, including automatic greasing systems and pre-heaters, and responses to questions. The technician's portion **shall** include preventive maintenance including servicing schedules, troubleshooting, diagnostic testing and use of special tools.
- (c) The familiarization course **shall** include 2-day (16 hours) of training, divided into one day for operators and one day for technicians;
- (d) The familiarization course **shall** accommodate up to 8 personnel;
- (e) The familiarization course **shall** be provided at the delivery destination;
- (f) The familiarization course **shall** be in the official language requested;
- (g) An outline of the familiarization course **shall** be provided, for approval, to the **Technical Authority**, two weeks prior to the conduct of training;
- (h) The date for the familiarization course **shall** be arranged with the **Technical Authority**;
- (i) After completion of familiarization course, the contractor **shall** have the "PROOF OF FAMILIARIZATION" certificate signed by the senior course attendee. The **Technical Authority** will supply this document in a digital format.