1.0 **SCOPE**

1.1 Scope – Supply the quantity of tracked skid steer loaders as noted in the request for proposal. The requirement is for one (1) new tracked skid steer loader equipped with a utility or snow bucket with a bolt on cutting edge. Additional attachments may also be required as listed in section 6.17. The skid steer loader supplied is to be complete with all accessories customarily furnished and installed on this type of vehicle, whether specified herein or not, to enable the unit to function reliably and efficiently under all conditions of service. All items noted in sections 1.0 through 6.16 of this specification are to be included in the base configuration, unless noted otherwise.

SPECIFY THE ACTUAL COMPONENTS SUPPLIED, AND THEIR RATED CAPACITIES, FOR THE UNITS TENDERED. NOTE IN DETAIL ANY DEVIATIONS FROM THE SPECIFIED ITEMS.

COMPLY _____

2.0 **GENERAL REQUIREMENTS**

2.1 Standard Requirements - The equipment supplied under this specification shall be the manufacturer's latest model standard commercial product and shall have demonstrated industry acceptance by having been manufactured, and sold in significant numbers to the commercial trade and shall have been proven in service for the application specified, for at least 1 year prior to the request for proposal; or in the case of a recently introduced item, the manufacturer shall submit sufficient valid operational and test data to demonstrate the acceptability of the equipment.

COMPLY _____

TRACKED SKID STEER LOADER

MAKE _____

MODEL _____

2.2 Overview - The vehicle supplied under this specification is to be a track drive skid steer loader, vehicle utilizing a diesel engine and a two speed hydrostatic transmission. The vehicle is to be equipped with a utility/snow bucket with a bolt on cutting edge. Additional accessories outlined in section 6.17 may also be required.

2.3 Operating Conditions - The compact skid steer loader is required for year-round maintenance work at airports. The unit supplied should be capable of satisfactory continuous operation when loaded to its rated capacities, in ambient temperatures ranging from 40 degrees Celsius to minus 40 degrees Celsius. It should be capable of operating at rated capacities for prolonged periods without deformation and/or failure of components on paved and gravel surfaces in all conditions including adverse weather conditions. COMPLY _____

2.4 Mandatory Items – Mandatory requirements are identified by “shall” or “must”. Deviations will not be permitted.

2.5 Approved Equivalent - Requirements identified by “should” should be satisfied; however, alternative means will be considered if the alternative feature or component is determined by Transport Canada, to meet the specific requirements for form, fit, function and performance, as applicable.

3.0 REGULATIONS AND STANDARDS

3.1 General - All standards and specifications referenced herein refer to the latest editions unless otherwise indicated.

3.2 Component Certification – Upon request of the design authority, the prime contractor must obtain component certification, from the component manufacturer, for any items installed on the unit. These certifications must indicate the model of the machine on which the component will be installed and the characteristics for which the component was designed.

3.3 Canada Occupational Health and Safety Regulations – The vehicle supplied shall comply in all applicable respects with the most recent Canada Occupational Health & Safety Regulations.

3.4 International Organization for Standardization (ISO) – The vehicle supplied shall comply in all applicable respects with the following ISO requirements:

3.4.1 ISO 3450 – Earth moving machinery – Wheeled or high-speed rubber tracked machines – Performance requirements and test procedures for brake systems.

3.4.2 ISO 14397-1 – Earth moving machinery – Loaders and Backhoe loaders – Part 1: Calculation of rated operating capacity and test method for verifying calculated tipping load.

3.4.3 ISO 10533 – Earth moving machinery – Lift-arm support devices.

4.0 DELIVERY

4.1 Delivery Condition – The vehicle shall be delivered to the Wabush Airport, located in Wabush, NL, in fully operational condition and shall be completely cleaned.

4.2 The vehicle shall be lubricated and serviced with all associated products suitable for climatic conditions in Newfoundland and Labrador, Canada.

4.3 Fuel – The fuel tank shall be full upon delivery.

4.4 Distance – The vehicle should be delivered to the final destination with a maximum of 5 hours on the hourmeter, unless prior approval is obtained from Transport Canada. The method of delivery shall be noted on the proposal.

METHOD _____

4.5 Inspection – The contractor is responsible to ensure that the vehicle is thoroughly tested, inspected and that all deviations are corrected prior to delivery. A final inspection shall be completed by the consignee at the time and point of delivery at the airport.

4.6 Acceptance Testing – Prior to acceptance, the vehicle must be complete and fully equipped as indicated in this specification and must be capable of passing all of the requirements of this specification.

4.7 Training

4.7.1 The Contractor shall supply a familiarization course in English, at the delivery destination, optimized for up to eight operators and technicians who are qualified on the vehicle type.

4.7.2 The familiarization course will be a minimum duration of eight (8) hours and shall include operation and maintenance segments, safety procedures, diagnostics and trouble shooting, operation of sub-systems.

4.7.3 The contract will not be considered complete and final payment will not be made until training has been completed.

5.0 WARRANTY AND MANUALS

5.1 Manuals– Provide a minimum of one copy paper and/or include electronic, if available, in English, of the manuals requested below, for the compact skid steer loader delivered as well as all attachments supplied. The contract will not be considered complete and final payment will not be made until all manuals noted are received in new, original, unused condition.

5.2 Maintenance Manuals – Provide a minimum of one copy of the manufacturer’s overall maintenance manuals for the compact skid steer loader. The manuals should indicate the proper maintenance procedures for all component installations, and should include accurate schematics of the electrical systems and the hydraulic systems.

5.3 Parts Manuals – Provide a minimum of one copy of the parts manuals for the compact skid steer loader. The parts manuals should list each of the individual component parts numbers, illustrated drawings and manufacturer's name, address and contact phone number.

5.4 Operators Manual – Provide a minimum of one copy of the operator's manual.

5.5 Warranty – The compact skid steer loader shall be covered by a full vehicle parts and labour warranty for a minimum of (12) twelve months from the date of the final inspection and acceptance by the consignee as per section 4.5 and 4.6 of this specification.

COMPLY _____

5.6 Attachment Warranty – The compact skid steer loader attachments and related components installed or supplied shall be covered by a parts and labour warranty for a minimum of (12) twelve months from the date of the final inspection and acceptance by the consignee as per section 4.5 and 4.6 of this specification.

COMPLY _____

5.7 Dealer – Specify the dealer responsible for performing any required warranty repairs and provide the name and phone number of the person to contact.

DEALER _____
CONTACT: _____
TELEPHONE: _____
ADDRESS _____

6.0 LOADER SPECIFICATIONS

6.1 Loader Capacities

6.1.1	The skid steer loader shall have a minimum tipping load, when measured in accordance with ISO 14397-1, of at least 4,263 kg (9,400 lbs).	COMPLY _____
6.1.2	The operating weight of the unit shall be at least 4,535 kg (10,000 lbs).	COMPLY _____
6.1.3	The skid steer loader shall have a break out force (bucket cylinder force or lift cylinder force) of at least 25 kN.	COMPLY _____

6.2 Engine

6.2.1	The engine shall be diesel.	COMPLY _____
6.2.2	The engine shall have a minimum net rated power of 95 horsepower.	ACTUAL HP _____
6.2.3	The engine must be supplied with cold weather aids to enable the engine (operating with winter grade fuels/oils) to be started at temperatures down to -40°C. The engine starting aids may include but are not limited to: glow plug(s) and intake air preheat.	COMPLY _____
6.2.4	The engine shall be provide with 110-Volt engine block heaters with a capacity as recommended by the engine manufacturer or conforming to SAE J1310.	COMPLY _____

6.2.5	The engine shall be provided with a heated fuel filter/water separator to preheat diesel fuel prior to starting.	COMPLY _____
6.3	Transmission	
6.3.1	The vehicle must be equipped with a two speed hydrostatic transmission.	COMPLY _____
6.3.2	The vehicle must have a forward travel speed of at least 9.4 km/h.	COMPLY _____
6.3.3	The tracks on opposite sides must move in the same or opposite directions.	COMPLY _____
6.4	Brakes	
6.4.1	The vehicle brakes should be power assisted and may be either wet or dry type.	COMPLY _____
6.4.2	The vehicle should be equipped with a driveline applied, independent parking brake system.	COMPLY _____
6.4.3	The vehicle should have an operator presence system that automatically applies the brakes if the operator leaves or the engine is shut off.	DETAILS _____ _____
6.5	Steering	
6.5.1	The steering must be by hand-operated lever, joystick or foot pedal type controlled.	COMPLY _____

6.6 Rubber Tracks

6.6.1	The vehicle shall be provided with continuous rubber tracks with a minimum nominal width of 450 mm (17.7in).	ACTUAL	
6.6.2	The vehicle shall be supported on two tracks, 1 track on either side.	COMPLY	
6.6.3	The tracks must have a total ground contact area of at least 1.6m^2.	ACTUAL	

6.7 Controls

6.7.1	The vehicle must be provided with a safety device ensuring that the engine can only be started with the transmission in a neutral position.	COMPLY	
6.7.2	The vehicle must be provided with joystick controls for directional and tool controls	COMPLY	
6.7.3	The control system shall include a joystick with a connection on the loader arms for control of the snow blower chute.	COMPLY	

6.8 Electrical

6.8.1	The vehicle shall be equipped with maintenance free batteries. The number of batteries and the batteries rating shall be sufficient to meet the vehicle’s total electrical requirements in all operating conditions, as indicated in section 2.3 of this specification.	COMPLY	

6.8.2	The vehicle electrical system can be either 12 volts or 24 volts. If the system is 24 volts, a 12 volt adapter must be installed to allow for the installation of 12 volt accessories, such as radios and beacon lights.	COMPLY	
6.8.3	The vehicle shall be equipped with a back-up alarm as per SAE J-994, type “C”.	COMPLY	
6.8.4	The vehicle shall be equipped with a cab top mounted, minimum 8 joule amber beacon light complete with a dash mounted switch with appropriate identification. The beacon shall be designed and mounted for 360 degree visibility.	COMPLY	
6.8.5	The vehicle shall be equipped with front and rear working lights, and clearance lights.	COMPLY	
6.8.6	The vehicle shall be equipped with a readily accessible driver-operated warning horn.	COMPLY	
6.8.7	The vehicle should be equipped with an in-cab warning light and audible alarm to indicate all of the following conditions; high coolant temperature, low coolant level, high transmission temperature and low engine oil pressure.	COMPLY	
6.8.8	The vehicle should be equipped with a dash mounted hour meter that is configured to record actual engine running hours.	COMPLY	
6.8.9	The vehicle’s entire electrical system shall be protected from the elements. All wiring connections shall be either soldered or approved connectors. All connectors shall be heavy duty, waterproof type. All wiring	COMPLY	

shall be colour coded.

6.9 Cab

6.9.1	The cab shall be a fully insulated, all-weather, roll over protection structure (ROPS) enclosure which provides full visibility and shall conform to SAE J1040.	COMPLY	_____
6.9.2	The vehicle should be equipped with adequate non-slip steps and handholds to permit easy access and exit to and from the cab without hazard to the operator.	COMPLY	_____
6.9.3	The cab should be equipped with non-slip surfaces on operator foot pedals.	COMPLY	_____
6.9.4	The cab shall have heating, ventilation and defrosting systems and shall have a cold climate capacity capable of maintaining the interior cab temperature at 15 degrees Celcius.	COMPLY	_____
6.9.5	The cab shall be equipped with safety glass windows. It is preferred the glass be tinted to reduce solar heating load.	COMPLY	_____
6.9.6	The cab shall be provided with windshield wipers and a washer system.	COMPLY	_____
6.9.7	The cab shall be supplied with a maximum soundproof insulation package optionally available fitted to provide the lowest possible interior sound level.	COMPLY	_____
6.9.8	In addition to instrumentation indicated in other specification sections, the cab should be equipped with a minimum of the following fully functioning	COMPLY	_____

instrumentation; tachometer, speedometer, fuel gauge, voltmeter, temperature gauge and oil pressure gauge.

6.9.9 All instrumentation, switches, gauges and controls should be clearly marked in English, or ISO identification. COMPLY _____

6.9.10 The cab should be equipped with a cloth padded full suspension operator's seat and backrest. The seat shall have the best level of comfort and the maximum adjustments optionally available for the vehicle. The seat shall be equipped with seatbelts conforming, as a minimum, to SAE J386. COMPLY _____

6.9.11 The cab shall be equipped with rear view mirrors providing a full view for safe reverse operations. COMPLY _____

6.9.12 The cab shall be equipped with air-conditioning. COMPLY _____

6.10 Hydraulic System

6.10.1 The vehicle shall be provided with a high flow hydraulic system, in addition to the standard system. COMPLY _____

6.10.2 The high flow hydraulic system shall accommodate all accessories given in section 16.7. COMPLY _____

6.10.3 The hydraulic reservoir shall be provided with a visual oil level indication. COMPLY _____

6.11 Loader Arm Connections for Hydraulic Accessories

6.11.1	The vehicle shall be provided with two (2) sets of connections on the loader arms (one inlet and one outlet each). The Technical Authority will accept only one return line if the Contractor can show that the high flow applications can be in either direction at implement.	COMPLY	
6.11.2	One supply line connection shall be for auxiliary flow and one supply line connection for high flow.	COMPLY	
6.11.3	The valve for high flow operations at the operator station shall have a détente position for continuous flow equipment.	COMPLY	
6.11.4	Sets of connections must be identified as to flow type with permanently affixed labels.	COMPLY	
6.11.5	The size of the connector for the auxiliary flow shall be different than that for the high flow connections.	COMPLY	
6.11.6	All connections shall be provided with a dripless quick connect coupling.	COMPLY	

6.12 Lubricants and Hydraulic Fluids

6.12.1	The vehicle shall operate using synthetic non-proprietary lubricants and hydraulic fluids.	COMPLY	
6.12.2	Grease fittings shall conform to SAE J534 or an equivalent.	COMPLY	

6.13 Painting

6.13.1 The vehicle shall be painted the manufacturer's standard method and colour. COMPLY _____

6.14 Instruction Identification

6.14.1 The unit should be supplied with permanently installed ISO or bilingual written instructions, diagrams and warning plates, where required to ensure maximum safety and efficient operation and servicing. COMPLY _____

6.15 Diagnostics

6.15.1 The vehicle should be supplied with any diagnostic peripherals associated with the vehicle engine, including any documentation, cartridges, CDs and cables available that work with diagnostic engine scan equipment. COMPLY _____

6.16 Equipment

6.16.1 **Standard Lift Arms** - The vehicle must be provided with standard lift arms and a lift arm safety device as referenced in ISO 10533 COMPLY _____

6.16.2 **Loader Arm Mechanical Quick-Connect**

6.16.2.1 The vehicle shall be provide with a mechanical loader arm quick connect. COMPLY _____

6.16.2.2 The loader arm quick connect shall include all fittings for connection of hydraulic power required for operation of all accessories listed in section 6.17. COMPLY _____

6.16.2.3 Hydraulic fittings shall be spill proof. COMPLY _____

6.16.3 **Utility/Snow Bucket**

6.16.3.1 The vehicle shall be provided with a utility or snow bucket with a bolt on replaceable cutting edge. COMPLY _____

6.16.3.2 The bucket must be wider than the width of the vehicle. COMPLY _____

6.17 Optional Accessories

6.17.1 **Snow Blower**

6.17.1.1 The vehicle shall be provided with a snow blower attachment. COMPLY _____

6.17.1.2 The snow blower attachment shall have a swath wider than the width of the vehicle. COMPLY _____

6.17.1.3 The snow blower must be provided with a rotary chute and deflector. COMPLY _____

6.17.2 **Angle Sweeper**

6.17.2.1 The vehicle shall be provided with an angle sweeper COMPLY _____

6.17.2.2 The angle sweeper shall have a sweeping swath wider than the width of the vehicle. COMPLY _____

6.17.2.3 The angle sweeper shall articulate to the left and right of at least 30 degrees. COMPLY _____

6.17.3 **Forklift**

6.17.3.1	The vehicle shall be provided with a forklift attachment.	COMPLY _____
6.17.3.2	The forklift attachment must have fork with a nominal length of 1210 mm (48in).	COMPLY _____