

FORM A: BID
(See B7)

1. Contract Title SUPPLY & INSTALLATION OF TRUCK MOUNTED POTHOLE
PATCHING EQUIPMENT

2. Bidder

Name of Bidder

Street

City

Province

Postal Code

Facsimile Number

(Mailing address if different)

Street or P.O. Box

City

Province

Postal Code

The Bidder is:

(Choose one)

a sole proprietor

a partnership

a corporation

carrying on business under the above name.

3. Contact Person

The Bidder hereby authorizes the following contact person to represent
the Bidder for purposes of the Bid.

Contact Person

Title

Telephone Number

Facsimile Number

E-mail address

4. Definitions

All capitalized terms used in the Contract shall have the meanings
ascribed to them in the General Conditions and D3.

5. Offer

The Bidder hereby offers to perform the Work in accordance with the
Contract for the price(s), in Canadian funds, set out on Form B: Prices,
appended hereto.

6. Commencement
of the Work

The Bidder agrees that no Work shall commence until he is in receipt of
a notice of award from the Award Authority authorizing the
commencement of the Work.

7. Contract

The Bidder agrees that the Bid Opportunity in its entirety shall be deemed to be incorporated in and to form a part of this offer notwithstanding that not all parts thereof are necessarily attached to or accompany this Bid.

8. Addenda

The Bidder certifies that the following addenda have been received and agrees that they shall be deemed to form a part of the Contract:

No.	_____	Dated	_____
	_____		_____
	_____		_____

9. Time

This offer shall be open for acceptance, binding and irrevocable for a period of Sixty (60) Calendar Days following the Submission Deadline.

10. Signatures

In witness whereof the Bidder or the Bidder's authorized official or officials have signed this

_____ day of _____, 20_____ .

Signature of Bidder or
Bidder's Authorized Official or Officials

(Print here name and official capacity of individual whose signature appears above)

(Print here name and official capacity of individual whose signature appears above)

FORM B: PRICES
 (See B8)

SUPPLY & INSTALLATION OF TRUCK MOUNTED POTHOLE PATCHING EQUIPMENT

UNIT PRICES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
1.	Truck Mounted Pothole Patching Equipment	07070	Each	3	\$ _____	\$ _____
2.	Operator's Manual (Body)	07070	Each	5	\$ _____	\$ _____
3.	Parts, Repair, Service Manuals (Body)	07070	Set	2	\$ _____	\$ _____
4.	39,000 lbs. GVWR Conventional Cab & Chassis	07118	Each	3	\$ _____	\$ _____
5.	Parts, Repair, Service Manuals (Chassis)	07118	Set	2	\$ _____	\$ _____

TOTAL BID PRICE (GST and MRST extra) (in figures) \$ _____

(in words) _____

 Name of Bidder

FORM N: DETAILED SPECIFICATIONS 07070

TRUCK MOUNTED POTHOLE PATCHING EQUIPMENT

(Street Maintenance)

1.0 SCOPE

- 1.1 These specifications describe the supply and delivery of truck mounted pothole patching equipment to be installed on a conventional cab and chassis supplied by the Contractor (see Detailed Specifications 07118 attached). The equipment installed shall be the manufacturer's latest model.
- 1.2 The unit shall be furnished complete and ready for use. All parts not specifically mentioned, but which are required to complete and place the unit in successful operation, shall be furnished as though specifically mentioned in these specifications. The complete unit, and all parts thereof, shall conform in strength and quality of material and workmanship, to the best standards and engineering practice of the industry.
- 1.3 It will be the responsibility of the Bidder to inform the City of any deficiencies in these specifications, for under this Contract the Contractor shall be held responsible for the design, performance, reliability and satisfactory operational function of the unit.
- 1.4 The ratings specified herein merely state the minimum values acceptable to the City. There is no intent of implying that these values are sufficient for the design of the unit being bid.

2.0 STANDARDS

- 2.1 All applicable SAE standards form an integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.
- 2.2 The completed unit and all its components shall comply with all C.M.V.S.S. and Manitoba Highway Traffic Act regulations and requirements including, but not limited to, a Manitoba Government Inspection with Safety Sticker.

3.0 QUALIFICATIONS OF MANUFACTURER / CONTRACTOR

- 3.1 The Contractor shall have an authorized service facility located within 10 km of the boundaries of the City of Winnipeg. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the equipment being offered. Further to B9.1, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience on truck-mounted pothole patching equipment, and general service capabilities. A description of the service facility shall be provided within 3-Calendar Days upon request of the Contract Administrator.
- 3.2 If a suitable warranty facility is not available within 10 km of the boundaries of the City of Winnipeg, the Bidder may propose that warranty work be performed by the City of Winnipeg Repair Facilities. Any work performed by City of Winnipeg Repair Facilities shall be charged to the Contractor at the Facility's shop rate in effect at the time the work is performed (for example, shop rate for 2008: \$80.00/hr regular time, \$105.00/hr overtime and callout).

4.0 INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

- 4.1 All items in these specifications must be answered indicating compliance or non-compliance. **Bidders shall state "yes" for compliance or state deviation, or give a reply where requested to do so.** Deviations shall be clearly stated and fully detailed. Alternatives will be considered subject to evaluation.

4.2 Each bidder is required to fill in every blank. **Failure to do so may be used as a basis for rejection of bid.**

5.0 PERFORMANCE

5.1 Shall be capable of consistent top performance for transporting, heating and dispensing asphalt material, and making permanent asphalt repairs during the spring, summer and fall environments which are normal to the City of Winnipeg. _____

5.2 The machine shall be capable of continuously heating both liquid emulsion and asphalt 24-hours per day, 7-days a week if so desired, i.e., capable of heating asphalt material to a temperature of 150°C (300°F) and heating liquid asphalt to a temperature of 121°C (250°F) in both working/transport mode and off-hours/storage mode. _____

6.0 MAKE AND MODEL

6.1 State make and model of unit being bid. _____

7.0 WEIGHT AND DIMENSIONS

7.1 Weight – state weight of completed unit, less asphalt and tack oil. _____

7.1.1 Weight – state weight of completed unit with full load of asphalt, full full tack oil tank, plate compactor, fully fuelled with two (2) operators. _____

7.2 Overall length – state. _____

7.3 Overall width – state. _____

7.4 Overall height – state. _____

8.0 WEIGHT DISTRIBUTION

8.1 The completed vehicle shall not exceed the City of Winnipeg’s limit for gross vehicle weight, axle and tire loads with the unit (including the chassis) fully fuelled and operational, two (2) operators, full liquid asphalt tank, heat transfer oil (if applicable), and including a full payload (struck capacity) of hot asphalt.

Note: The City of Winnipeg and the Province of Manitoba limits the gross vehicle weight and axle and tire loads to:

- Front axle (steering axle) – 7300 kg (16,094 lbs.).
- Rear axle (single axle) – 9100 kg (20,062 lbs.).
- Tire load – 9 kilograms for each millimetre width of tire (approx. 500 lbs. per inch of tire width).

8.2 State weight distribution of the complete vehicle with the unit fully fuelled, with two (2) operators, full liquid asphalt tank, heat-transfer oil (if applicable), plate compactor and full payload (struck capacity) of hot asphalt @ 721 kg/m³ (1,215 lbs/yd³):

i) Front axle weight – state weight (lbs.). _____

ii) Rear axle weight – state weight (lbs.).

8.3 Weigh scale ticket – the Contractor shall provide a certified weigh scale ticket upon delivery of the completed unit. The scale ticket shall include front and rear axle weights including one (1) operator and a full tank of fuel.

9.0 HOPPER

9.1 Type – steel construction, fully insulated.

9.2 Dimensions – 284cm L x 137cm H x 198cm W (112"L x 54"H x 78"W) approx., state.

9.3 Capacity – 3.8 m³, 6.4 tonne (5 yd³, 7.0-ton) capacity approx., state.

9.4 Insulation – fully insulated with minimum 5 cm (2 in.) of high temperature, 12R factor insulation encased in a double steel jacket.

9.5 Hopper doors – dual top doors, hinged in centre of each door, fully insulated with minimum 5 cm (2 in.) of insulation, hydraulically operated with controls located in-cab, ergonomically located and accessible from a normal driving position.

9.6 Auger – approx. 2.7m L x 15 cm diameter (9' L x 6" diameter) progressive screw type conveyor, hard surfaced flights, continuously welded, reversible with control at operator's work station.

9.7 Delivery chute – designed for ergonomic shovelling of patching mix, minimum 90° of pivoting.

9.8 Agitator – full hopper length, hydraulically driven, reversible with control at operator's station.

10.0 LIQUID ASPHALT

10.1 Tank capacity – 400 L (105 US Gal) approx., state capacity.

10.1.1 Construction – double steel jacket with minimum 5 cm (2 in.) of R12 insulation.

10.2 Liquid asphalt pump and all lines shall be in an insulated, heated area with a hot well for storing spray wand in cold weather.

10.3 Liquid asphalt hand sprayer – 1.5m x 9.5mm (5' x 3/8") wand, equipped with fan nozzle and deadman control valve, 4.6m x 12.7mm (15' x 1/2") hose, reversible pump and diesel flush system for cleaning pump and lines.

10.4 Hose reel – spring loaded, auto-retractable, mounted at rear of unit.

11.0 HEATING SYSTEM

11.1 The unit shall be thermostatically controlled, capable of continuous heating of asphalt material to a temperature of 0-150°C (0-300°F).

11.2 Transport/operating mode – the hopper body and the tack oil tank shall

be heated either by:

- 1) Heat transfer oil system including a nominal 900 L (238 US Gal) tank, propane fired burner(s), two (2) horizontally mounted 190 L (50 US Gal) propane bottles, an electronic ignitor w/safety shut-off on loss of flame, and a thermostatically controlled circulating pump.

OR

- 2) Electrically powered by an on-board, 230 V electric generator. State details of working hours (transport mode) heating method. _____

11.3 After hours power source – 230 V heating elements or 230 V immersion heater, capable of keeping the asphalt material heated during non-working hours. _____

11.4 Tack oil thermostat – 0-120°C (0-248°F). _____

11.5 All thermostats shall have built in high limit safety shut down switches. _____

11.6 Temperature gauges – two (2) stainless steel gauges that constantly monitor the temperature of the asphalt hopper and road oil tank. _____

12.0 **HYDRAULICS**

12.1 PTO – Constant mesh, Muncie Powerclutch or Chelsea equivalent. State make and model. _____

12.1.1 Electric/Hydraulic power shift, operable from a normal driving position. _____

12.1.2 Warning light to show PTO engaged. _____

12.2 Hydraulic pump – sufficient capacity to operate all machine hydraulics. _____

12.2.1 State make and model being bid including gpm and pressure rating. _____

12.3.2 Pump drive – close coupled or drive shaft driven, state. _____

12.3 Hydraulic oil reservoir – steel construction, baffled as required, complete with breather type filler cap with filter, filler strainer, sight gauge (or dipstick) and drain plug. _____

12.3.1 Drain plug valve – ball-type shut-off valve required on drain plug. _____

12.4 Suction strainer – 100 micron with magnetic suction separator, in-tank

- mounted, flow capacity of 2-times pump capacity. _____
- 12.5 Shut-off valve – ball-type, located between reservoir and pump, secured in open position with bracket and bolt. _____
- 12.6 Return line filter – 10 micron, spin-on type, serviceable without oil loss. _____
- 12.7 Relief valve – provided to adequately protect the system and provide hydraulic overload protection to all functions. _____
- 12.8 Control valve(s) – rated for system pressure, suitable for controlling hydraulic screw conveyor/auger, hydraulic doors, asphalt agitator, and liquid asphalt pump. _____
- 12.8.1 Valve shall have an internal safety design that will not allow the screw conveyor or asphalt agitator to operate when the doors are open. _____
- 12.9 Auxiliary tool circuit – 7-9 gpm @ 1500-2000 psi, outlet at rear of body, suitable for use with a Stanley BR45125S Pavement Breaker (see 16.4). _____
- 12.10 Hydraulic hoses and fittings – min. 8000 psi burst pressure. _____
- 12.10.1 All hydraulic hoses shall be neatly routed and secured with plastic tie wraps where necessary. _____
- 13.0 OPERATOR CONTROLS**
- 13.1 Operator controls – ergonomically located for all machine functions, labelled with permanent type, engraved style labels. _____
- 13.2 State details of controls including locations and type of controls. _____
- _____
- _____
- _____
- 14.0 ELECTRICAL AND LIGHTING**
- 14.1 All vehicle lighting shall conform to CMVSS (latest revision) and Manitoba Highway Traffic Act requirements. _____
- 14.2 Supplier installed lighting shall be LED Truck-Lite (except where otherwise noted) and shall include the following components:
- 14.2.1 Combination stop, turn and taillights – P/N 44302R, one (1) per side with 40700 mounting grommets, fully enclosed in steel module box enclosures. _____
- 14.2.2 Turn signal flash rate – 70-90 flashes per minute. _____
- 14.2.3 Back-up lights – P/N 44206C, one (1) per side with 40700 mounting grommets, fully enclosed at rear. _____
- 14.2.4 Light cluster – three (3) P/N 10250R with P/N 10700 mounting grommets, located to be protected from damage, fully enclosed at rear. _____

- 14.2.5 Clearance lamps – P/N 10250 with P/N 10700 mounting grommets. _____
- 14.2.6 Licence plate lamp – P/N 15040, complete with licence plate bracket. _____
- 14.2.7 Harnesses – Truck-Lite 50 Series Harness system, properly routed and secured, protected from damage. _____
- 14.2.8 All harnesses shall be internally grounded, no exceptions. _____
- 14.3 Junction box – P/N 50400, complete with necessary compression fittings, required for all vehicle lighting harness connections, located inside rear of truck frame, protected from road debris including all harness connections. _____
- 14.4 All plug-in connectors shall be coated with Truck-Lite NYK compound prior to assembly. _____
- 14.5 Mini Light Bar – Grote 76813, pedestal mount, 360° visibility. _____
- 14.5.1 Branch guard – heavy duty branch guard constructed of 5/8 in. roundbar. _____
- 14.5.2 Oval LED warning lights – Two (2) Truck-Lite 60120Y, rear mounted, exact mounting location to be determined at time of installation. _____
- 14.5.3 Mini light bar and oval LED warning lights shall be wired through the ignition and accessory circuit, wired through a single, chassis manufacturer’s OEM dash mounted switch, labelled “Beacon” with a permanent type label. _____
- 14.6 Light board – Whelen model TA1652L c/w backboard, mounted to back of unit with in-cab controller. _____
- 14.7 Power take-off engagement switch – truck manufacturer’s OEM dash mounted switch c/w warning light, labelled. _____
- 14.8 Hourmeter – dash mounted, energized by engagement of PTO. PTO hourmeter to be labelled with a permanent type, engraved style label. _____
- 14.9 All switches and warning lights shall be identified with permanent engraved type labels or chassis manufacturer’s OEM labels. No labels allowed on upper surface of dash. _____
- 14.10 All wiring installed by body manufacturer/installer (including accessories, etc.) shall be colour coded, loomed, properly secured and protected from damage. _____
- 14.11 All electrical connectors shall be crimped and soldered, then sealed with heat shrink tubing. _____
- 14.12 All joining of wires and electrical connectors shall be soldered and sealed with heat shrink tubing (crimp-on electrical connectors for joining wires are not acceptable). _____
- 14.13 Any holes required to run wires through body, cab, steel sections, etc. shall be drilled (not punched), grommeted and sealed. _____

15.0 INSTALLATION

15.1 The Contractor shall install the asphalt hopper body and equipment on the chassis specified in Detailed Specifications 07118.

15.2 Mounting of the body and equipment shall be in accordance with the chassis manufacturer's guidelines for body mounting including, but not limited to, guidelines for tire and suspension clearance.

15.3 Bidders shall supply within forty-eight (48) hours of the request of the Contract Administrator, a diagram and description showing the manufacturer's recommended body to chassis mount.

15.4 Welding to truck chassis frame is not permitted.

15.5 Mounting brackets shall be bolted to chassis frame using Grade-8 fasteners.

15.6 Any holes required in chassis frame web must be drilled and reamed to fit bolts.

15.7 All non-continuous body seams (joints) shall be caulked with an automotive grade elastomeric sealant.

15.8 Departure angle of completed unit – 12° approx. State angle.

15.9 Overall height decal – engraved type, installed in chassis cab.

16.0 MISCELLANEOUS

16.1 Spoils bin – located behind cab, state dimensions.

16.2 Hand torch – 200,000 BTU with shut-off valve and 3m (10 ft.) of hose c/w torch hose reel.

16.3 Compactor lift platform – hydraulically operated lift platform for loading or unloading a City owned compactor. The platform shall be c/w a safety latch in the "up" position for use with compactor holding brackets. Controls shall be rear mounted, easily accessible by operator.

16.4 Pavement breaker – Stanley BR45125S c/w suitable storage compartment. Suitable for use in hydraulic tool circuit.

16.5 Air compressor – hydraulically driven, self contained, 25 CFM @ 125 psi c/w quick couplers, 6.1m (20 ft.) of air hose, blow gun with deadman control valve, min. 5-gallon air tank, relief valve, and spring loaded, auto retractable hose reel.

16.6 Diesel fuel / releasing agent storage tank – minimum 69 L (18-gallon) capacity tank, equipped with a pump, 1 in. drain and hand sprayer for cleaning tools and unit. Shall utilize a connector valve for flushing road oil pump and lines.

16.6.1 Diesel fuel hose reel – spring loaded, auto retractable reel c/w 6.1m (20 ft.) of hose and spray wand.

- 16.7 Tack oil hose reel – spring loaded, auto retractable reel c/w 4.6m (15 ft.) of hose. _____
- 16.8 Drip pan – 38 L (10-gallon) approx, mounted at rear of unit, suitable for collecting used waste oil. _____
- 16.9 Water tank – frame mounted, approx. 30 L (8-gallon) tank with valve and hose. Required to provide water supply for asphalt compactor plate. _____
- 16.10 Fire extinguisher – 10 lb. ABC type with mounting bracket and cover, located near rear of body, readily accessible in an ergonomic location. Exact mounting location to be confirmed at time of installation. _____
- 16.11 Controls – all machine controls to be ergonomically located at the rear-passenger side of the unit. _____
- 16.12 Conspicuity tape – Grote 41070 or equal, installed on sides and rear of unit. _____
- 17.0 PAINT AND FINISH**
- 17.1 All steel components (with the exception of inside of hopper) shall be sandblasted, properly cleaned, primed and finished as follows:
- 17.1.1 Primer – Endura EP32 Intermix Epoxy Primer. _____
- 17.1.2 Paint – 3-5 mils of Endura EX-2C Topcoat, black. _____
- 18.0 WARRANTY**
- 18.1 The Contractor shall warrant **all body equipment** (excluding consumables) and all parts thereof, against any defects of workmanship, construction and materials, and agrees to repair or replace without cost to the City any article that has become defective and not proven to have been caused by negligence on the part of the user within **two (2) years or 2000 hours** from the date the equipment is put into service by the City of Winnipeg. _____
- 19.0 PERFORMANCE RELIABILITY**
- 19.1 The responsibility for the design of the complete unit, its performance and reliability shall rest upon the Contractor. _____
- 19.2 The term "*repeat failures*" as used herein is defined to mean that the same component, assembly, or sub-assembly develops repeated defects, breakdowns and/or malfunctions rendering the unit inoperative, or requiring repeated shop correction, service and/or replacement during the warranty period applicable for said component, assembly, or sub-assembly. Minor items or ordinary service adjustments are not included, or considered under the scope of "repeated failures", as well as other factors, such as operational damage due to accidents, misuse or lack of proper maintenance, service and lubrication attention by not following the manufacturer's preventative maintenance schedules. _____
- 19.3 Where the unit develops "repeated failures" in service, the Contractor

shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance.

20.0 **MANUALS**

20.1 The following manuals shall be supplied with the unit when delivered. Manuals shall be in English and shall cover the complete equipment.

20.2 Operator's manual – quantity as per Form B: Prices.

20.3 Parts, repair and technical service manuals including preventative maintenance schedules for life of the unit – CDs preferred, quantity as per Form B: Prices.

21.0 **DELIVERY**

21.1 The unit shall be serviced, ready for operation and delivery F.O.B. with the freight prepaid to the City of Winnipeg, Winnipeg Fleet Management Agency, 185 Tecumseh Street, Winnipeg, Manitoba within **twenty-six (26) calendar weeks** from the date of official notification of award of Contract. The Contractor shall contact the Contract Administrator prior to delivery of the equipment. Equipment shall be delivered within 8:00am and 3:00pm on Business Days.

21.2 The Contractor shall fax all equipment serial numbers, hours to the Contract Administrator one (1) calendar week prior to delivery.

21.3 A pre-delivery inspection shall be performed by the Contractor on all equipment.

22.0 **TRAINING**

22.1 Operator training – the Contractor shall be required to provide **two (2) Business Days** of training, in Winnipeg by qualified staff, for City of Winnipeg operating personnel. All costs associated with the training, shall be at the Contractor's expense. The training sessions shall be sufficient in duration and shall provide adequate familiarization and orientation of the equipment, to the satisfaction of the Contract Administrator. All particulars surrounding the specified time required to perform the training shall be provided to the Contract Administrator by the Contractor, one (1) week prior to the delivery of the completed equipment. The training shall be coordinated through the Contract Administrator.

22.2 Mechanical training – the Contractor shall be required to provide **two (2) Business Days** of training, in Winnipeg by qualified staff, for City of Winnipeg maintenance personnel. All costs associated with the training, shall be at the Contractor's expense. The training sessions shall be sufficient in duration and shall provide adequate familiarization and orientation of the equipment, to the satisfaction of the Contract Administrator. All particulars surrounding the specified time required to perform the training shall be provided to the Contract Administrator by the Contractor, one (1) week prior to the delivery of the completed equipment. The training shall be coordinated through the Contract Administrator.

DETAILED SPECIFICATIONS 07118

39,000 LBS. GVWR CONVENTIONAL CAB & CHASSIS

1.0 TYPE

1.1 Shall be a minimum 39,000 lbs. GVWR Conventional Cab & Chassis suitable for use as a pothole patching machine and associated equipment. The vehicle shall be furnished complete and ready for use with all features and equipment as described herein.

1.2 **STATE MAKE AND MODEL BEING BID: 2008** _____

2.0 OTHER SPECIFICATIONS AND STANDARDS

2.1 All applicable SAE standards form an integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.

2.2 The completed unit and all its components shall comply with all C.M.V.S.S. and Manitoba Highway Traffic Act regulations and requirements including, but not limited to, a Manitoba Government Inspection with Safety Sticker on the driver's side window.

3.0 SERVICE FACILITY

3.1 For the purpose of warranty repairs, the cab & chassis supplier shall have an authorized service facility located within 10 km of the boundaries of the City of Winnipeg. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the type equipment being offered. Further to B9.1, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience, and general service capabilities within three (3) Business Days upon request of the Contract Administrator.

3.2 If a suitable warranty facility is not available within 10 km of the boundaries of the City of Winnipeg, the Bidder may propose that warranty work be performed by the City of Winnipeg Repair Facility. Any Work performed by the City of Winnipeg Repair Facility shall be charged to the Contractor at the Facility's shop rate in effect at the time the work is performed (for example, shop rate for 2008: \$80.00/hr regular time, \$105.00/hr overtime and callout).

4.0 INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

4.1 All items in these specifications must be answered indicating compliance or non-compliance. **Bidders shall state "yes" for compliance or state deviation**, or give reply where requested to do so. Deviations shall be clearly stated and fully detailed. Alternatives will be considered subject to evaluation.

4.2 Each bidder is required to fill in every blank. **Failure to do so may be used as a basis for rejection of bid.**

ITEM	SPECIFICATION	BIDDER TO STATE "YES" OR STATE DEVIATION
5.0 GVWR		
5.1 Total	39,000 lbs.	_____
5.2 Front	16,000 lbs. minimum	_____
5.3 Rear	23,000 lbs. minimum	_____

6.0 Dimensions

- 6.1 Wheelbase As required for nominal 5 yd³ asphalt hopper body and equipment, state _____
- 6.2 Cab to Axle As required for nominal 5 yd³ asphalt hopper body and equipment, 120 in. effective approx., state. _____

7.0 Engine

- 7.1 Type Diesel, inline 6-cylinder, DT466, MBE 900, Cummins ISC or Cat C7, state make, model and displacement _____
- 7.2 Horsepower 275 HP gross minimum _____
- 7.3 Torque 800 lb-ft minimum _____
- 7.4 Engine shut down Low oil pressure / high water temperature _____
- 7.5 Air intake warmer Required _____
- 7.6 Fuel shut-off Electric solenoid type _____
- 7.7 Air cleaner Dry type _____
- 7.8 Air intake restriction ind. Dash mounted restriction indicator _____
- 7.9 Oil drain plug Magnetic type _____
- 7.10 Oil filter Full flow, spin-on or cartridge type _____
- 7.11 Fuel filter Spin-on or cartridge type _____
- 7.12 Fuel/water separator Heated, drainable, mounted under hood, located to be protected from road spray _____
- 7.13 Block heater Immersion type, 1000 Watt minimum with plastic, covered recessed male plug, located under driver's side door _____
- 7.14 Coolant Extended life coolant, antifreeze to -35°F (-37°C) _____
- 7.15 Coolant hoses Silicone type, Gates Blue Stripe or Premium type hoses _____
- 7.16 Fan Drive Thermostatically controlled, automatic type _____
- 7.17 Air compressor Water cooled, pressure lubricated, minimum 15 cfm _____

8.0 Electrical system

- 8.1 Chassis wiring Multiplexed wiring _____
- 8.1.1 Diff. lock protection Shall disengage differential lock over 7 km/hr approx _____
- 8.1.2 Pre-trip lighting insp. Required to automatically inspect all vehicle lighting systems and circuits and inform driver of malfunction _____
- 8.1.3 Wipers override Required to automatically engage delay wipers with wipers "on" in Park _____
- 8.1.4 Park brake alarm Audible alarm to sound when transmission is shifted into gear with Park brake engage or neutral with park brake engaged _____
- 8.1.5 Automatic headlights Headlights automatically "on" when wipers actuated _____
- 8.1.6 Door ajar lockout Transmission shall not engage into gear when door(s) are ajar _____
- 8.2 Alternator Delco Remy 34-SI, 135 Amp minimum _____
- 8.3 Starter Delco Remy 41-MT/OCP 450 Series with thermal _____

		protection	_____
8.4	Circuit breakers	Auto-reset, readily accessible	_____
8.5	Batteries	Three (3), 12-volt, group 31, 2250 CCA combined capacity minimum, all exposed connectors shall be sealed with a dielectric grease	_____
8.6	Battery Box	Under cab or frame mounted c/w enclosure, readily accessible, state location	_____
8.7	Battery disconnect	In-cab mounted, state location	_____
8.8	Remote boost terminal	Remote battery boost terminal(s), protected from road spray, covered, state location	_____
8.9	Cab marker lights	LED	_____
8.10	Trailer plug wiring	Routed to end of frame plus 3 extra feet of wiring, c/w 6-pole plastic socket. Wiring shall be circuit breaker protected, wired separately from main truck lighting	_____
8.11	Back-up alarm	97 dBA, located on inside-rear of frame rails	_____
8.12	2-way radio circuit	Independent 20 Amp circuit	_____
8.13	Accessory switches	Three (3) required, dash mounted for "PTO", "Beacon" and additional switch labelled "Aux". All switches wired through ignition and Acc. circuit, complete and wired for body installation, labeled and backlit	_____
9.0	Exhaust system		
9.1	Configuration	Stationary extreme outboard single right hand, chrome vertical discharge on passenger side, underframe routing, vertical portion cab mounted. Discharge tip shall have a backlash type end	_____
9.2	Overall exhaust height	Approx. 12 in. higher than body	_____
9.3	Heat shield	Chrome, required over exhaust next to cab door	_____
10.0	Transmission		
10.1	Model	Allison 3500 RDS Series	_____
10.2	Shift selector	Digital push-button type, dash mounted	_____
10.3	Cooling capacity	Water to oil transmission cooler, as per manufacturer's recommendation for severe duty cycle	_____
10.4	Oil level dipstick	Bayonet type with high and low level markings	_____
10.5	Trans. drain plug	Magnetic type	_____
11.0	Front axle		
11.1	Capacity	16,000 lbs. minimum	_____
12.0	Rear axle		
12.1	Capacity	23,000 lbs. minimum	_____
12.2	Ratio	For 110 km/hr top speed, state ratio	_____
12.3	Differential lock	Required w/dash mtd. switch	_____
13.0	Front suspension		

13.1	Type	Taper-leaf spring suspension, 16,000 lbs. capacity minimum	_____
14.0	Rear suspension		
14.1	Type	Air ride suspension, 23,000 lbs. capacity minimum, state make and model of suspension being bid	_____
14.2	Susp. control valve	Manual dump valve for air suspension c/w dash mtd. switch	_____
15.0	Rims, wheels, hubs		
15.1	Front	22.5 x 9.00 steel disk, 10-bolt, hub piloted	_____
15.2	Rear	22.5 x 8.25 steel disk, 10-bolt, hub piloted	_____
15.3	Hubs	Steel or iron hubs, front and rear	_____
15.4	Hub Seals	Oil lubricated front and rear	_____
15.5	Wheel nut indicators	Required on all wheel nuts, front and rear	_____
16.0	Tires, front		
16.1	Make & Model	Michelin XZY-3 or Bridgestone M860, state tires	_____
16.2	Size	315/80R 22.5J	_____
17.0	Tires, rear		
17.1	Make & model	Michelin XDE M/S* or Bridgestone M775, state tires	_____
17.2	Size	11R 22.5G	_____
18.0	Frame		
18.1	Type	To match GVWR, 1,500,000 in-lb RBM minimum, outside frame clear	_____
18.2	Application	Suitable for asphalt hopper body installation	_____
18.3	Chassis fasteners	Grade-8 threaded hex headed frame fasteners or Huck-spin fasteners	_____
18.4	Afterframe	As required for asphalt hopper body installation	_____
19.0	Steering		
19.1	Type	Power	_____
20.0	Brakes		
20.1	Type	Air, ABS	_____
20.2	Slack adjusters	Haldex/Eaton (clearance sensing), automatic type with greasable slack adjuster pins	_____
20.3	Parking brake	Spring set, four (4) chamber system	_____
20.4	Dust shields	Required, front and rear	_____
20.5	Moisture ejector	Bendix DV-2, heated, required in wet tank	_____
20.6	Drain valves	Manual, cable operated, required on each air tank except wet tank	_____
20.7	Air drier	Bendix AD-IP, heated	_____
21.0	Fuel tank		
21.1	Type	Aluminium, 189 L minimum capacity, fully fuelled upon delivery	_____
21.2	Tank straps	Steel straps with minimum $\frac{1}{16}$ in. rubber or neoprene isolators to prevent galvanic corrosion	_____

21.3	Fuel separator	Heated, drainable	_____
22.0	Cab		
22.1	Type	Conventional, aluminum or steel w/corrosion inhibitor	_____
22.2	Hood	Fibreglass tilt	_____
22.3	Cab mounts	Air suspension	_____
22.4	Cab interior / trim	Extreme climate insulation including cloth or vinyl headliner on roof, door panels and rear interior of cab	_____
22.5	Cab silencer package	Required for minimal decibel level	_____
22.6	Hood/Firewall/Engine	Insulated hood liner, engine cover and firewall	_____
22.7	Floor covering	Rubber mat with under-padding	_____
22.8	Floor mats	Two (2), rubber	_____
22.9	Driver's seat	High back, air suspension w/foldable right hand armrest, seat belt, heavy-duty cloth upholstery, Cordura or equal, state material	_____
22.10	Passenger seat	High back, air suspension w/foldable left hand armrest, seat belt, heavy-duty cloth upholstery, Cordura or equal, state material	_____
22.11	Sun visors	Dual flip-up type	_____
22.12	Steering wheel	Tilt and telescopic type	_____
22.13	12-Volt power outlet	Required	_____
22.14	Radio	Factory installed AM/FM with CD	_____
22.15	Starter switch	Key operated c/w three (3) sets of keys	_____
22.16	Interior light	Dome light with driver and passenger door switches	_____
22.17	Heater / Defroster	High output, capable of keeping all windows clear at an outside temperature of -35°F (-37°C)	_____
22.18	Air conditioning	Required	_____
22.19	Door locks	Power on both driver and passenger doors	_____
22.20	Remote keyless entry	Two (2) remotes	_____
22.21	Brake and accel. pedals	Hanging type brake and accelerator pedals	_____
22.22	Horn	Dual electric	_____
22.23	Exterior mirrors	Dual polycarbonate unpainted aerodynamic mirrors, 7" x 14½" min., heated, electrically adjustable with integral convex mirrors	_____
22.24	Downview mirror	Required over passenger door, 5" x 4" approx.	_____
22.25	Windows & windshield	Tinted	_____
22.26	Windshield wipers	Electric, intermittent, arctic type blades	_____
22.27	Windshield washers	Electric	_____
22.28	Grab handles	Dual exterior	_____
22.29	Entrance steps	Dual each side, open grate / grip type	_____
22.30	Winter front	Heavy-duty vinyl w/twist lock or snap type fasteners	_____

23.0	Instrumentation		
23.1	Oil pressure	Gauge	_____
23.2	Coolant temperature	Gauge	_____
23.3	Transmission oil temp.	Gauge	_____
23.4	LOP/HWT	Warning light and buzzer	_____
23.5	Voltmeter	Gauge	_____
23.6	Air reservoir pressure	Gauge with LAP warning light and buzzer	_____
23.7	Engine hourmeter	Required, non-resetable type	_____
24.0	Tow hooks		
24.1	Location	Front mounted	_____
25.0	Front Bumper		
25.1	Type	Chrome steel, full width c/w license plate bracket	_____
26.0	Colour and Finish		
26.1	Exterior	White	_____
26.2	Interior	Blue or grey	_____
26.3	Frame & suspension	Primed and finished with black Imron 5000 paint or equivalent	_____
26.4	Wheels	Powder coated white	_____
27.0	Accessories		
27.1	Flare kit	Three (3) triangular reflectors, CVSA approved	_____
27.2	Fire extinguisher	5 lb. ABC type, required in cab with mounting bracket	_____
27.3	First aid kit	Required, Provincial 1 approved kit	_____
28.0	Manuals		
28.1	Operator's manual	Required, one (1) per vehicle	_____
28.2	Parts/Repair/Service	Required, including preventative maintenance schedules for life of unit, CD or online format preferred, quantity as per Form B: Prices	_____
29.0	Warranty		
29.1	Basic vehicle	Two (2) years, unlimited km	_____
29.2	Batteries	One (1) year or 100 000 km	_____
29.3	Drivetrain	Two (2) years, unlimited km	_____
29.4	Cab structure/corrosion	Five (5) years, unlimited km	_____
29.5	Frame & crossmembers	Five (5) years, unlimited km	_____
29.6	Cab paint	One (1) year or 100 000 km	_____
29.7	Engine	Four (4) years or 320 000 km including engine electronics and injectors	_____
29.8	Towing coverage	Four (4) year or 320 000 km	_____
29.9	Transmission	Two (2) years, unlimited km	_____
29.10	Axles, front & rear	Two (2) years or 240 000 km	_____
29.11	Exhaust system	Four (4) years or 160 000 km	_____
29.12	Biodiesel fuel	The above warranties shall be applicable with a	_____

		B5 biodiesel fuel or less	_____
30.0	Delivery		
30.1	Delivery point	Equipment shall be serviced, ready for operation and delivered F.O.B. with the freight prepaid to the WFMA 185 Tecumseh Street, Winnipeg, Manitoba	_____
30.2	Delivery time	Complete vehicle within 26-calendar weeks from the date of official notification of award of contract. Equipment shall be delivered within 8:00 am and 3:00 pm on Business Days	_____
30.3	Delivery contact	The Contractor shall contact the Contract Administrator prior to delivery of the equipment	_____
30.4	Vehicle specifics	The Contractor shall fax all vehicle serial numbers, hours/mileage to the Contract Administrator 1-calendar week prior to delivery	_____
30.5	PDI	A pre-delivery inspection shall be performed by the Contractor on all equipment	_____