FORM A: BID (See B8)

1.	Contract Title	SUPPLY AND DELIVER	Y OF INDUSTRIAL LOADER B	ACKHOES
2.	Bidder			
		Name of Bidder		······································
		Usual Business Name of Bidd	er as it appears on Invoice (if different fro	om above)
		Street		
		City	Province	Postal Code
	(Mailing address if different)	Email Address of Bidder		
		Facsimile Number		
		Street or P.O. Box		
	(0	City	Province	Postal Code
	(Choose one)	GST Registration Number (if a	pplicable)	
		The Bidder is:	,	
		a sole proprietor		
		a partnership		
		a corporation		
		carrying on business un	der the above name.	
3.	Contact Person	The Bidder hereby auth the Bidder for purposes	orizes the following contact per of the Bid.	son to represent
		Contact Person	Title	
		Telephone Number	Facsimile Number	
		Email Address		
1 .	Definitions	All capitalized terms u	sed in the Contract shall hav	e the meanings

ascribed to them in the General Conditions and D3.

5.	Offer	The Bidder hereby offers to perform the Work in accordance we Contract for the price(s), in Canadian funds, set out on Form B: appended hereto.			
6.	Commencement of the Work	The Bidder agrees that no Work shall commence until he/she 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 shadeemed to be incorporated in and to form a part of this notwithstanding that not all parts thereof are necessarily attache accompany this Bid.	s offer		
8.	Addenda	The Bidder certifies that the following addenda have been receive agrees that they shall be deemed to form a part of the Contract:	ed and		
		No Dated			
9.	Time	This offer shall be open for acceptance, binding and irrevocable for period of sixty (60) Calendar Days following the Submission Deadle			
10.	Signatures	The Bidder or the Bidder's authorized official or officials have signe	ed this		
		, 20 , 20	·		
		Signature of Bidder or Bidder's Authorized Official or Officials			
		(Print here name and official capacity of individual whose signature appears above)	- - I		
		(Print here name and official capacity of individual whose signature appears above)	- -		
		, , , , , , , , , , , , , , , , , , ,			

FORM B: PRICES

(See B9)

SUPPLY AND DELIVERY OF INDUSTRIAL LOADER BACKHOES

UNIT PRICES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	QUANTITY	UNIT PRICE
1.	Industrial Loader Backhoe (90HP, with 4-in-1, General Purpose, Snow Loader Buckets and Dig, Trench Backhoe Buckets, Auger and Breaker)	14013	Each	1	
2.	Industrial Loader Backhoe (90HP with General Purpose Loader Bucket and Cemetery Dig Backhoe Buckets)	14048	Each	1	

Name of Bidder	

FORM N: DETAILED SPECIFICATIONS 14013

INDUSTRIAL LOADER BACKHOES

1.0 DESCRIPTION OF EQUIPMENT

- 1.1 These specifications describe **Industrial Loader Backhoes** and other equipment and features as specified herein.
- 1.2 The <u>Industrial Loader Backhoes</u> shall be a new 2014 model year or newer.
- 1.3 The <u>Industrial Loader Backhoes</u> and all other items/components shall be the manufacturer's latest model. The equipment shall be furnished complete and ready for operation. Any parts or accessories not specifically mentioned, but which are required to complete and place the equipment and associated attachments in successful operation shall be furnished as though specifically mentioned in these specifications. The equipment and associated attachments, and all parts thereof, shall conform in strength and quality of material and workmanship, to the best standards and engineering practice of the industry.
- 1.4 It will be the responsibility of the Bidder to inform the City of any errors or omissions in these specifications, for under this Contract the Contractor shall be held responsible for the satisfactory operational function of the equipment.

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 Industrial Loader Backhoes shall comply with the applicable regulations:

National Safety Mark, NSM = http://www.tc.gc.ca/eng/acts-regulations/acts-road.htm

Manitoba Safety and Health Act, Parts 12, 22 = http://web2.gov.mb.ca/laws/statutes/ccsm/w210e.php and http://www.gov.mb.ca/labour/safety/

Canadian Standards Association, CSA = http://www.csa.ca/about/Default.asp?language=english

Under Writers of Canada, U/L = http://www.ulc.ca/

Society of Automotive Engineers, SAE =http://www.sae.org/

City of Winnipeg Lighting Visibility

Standard=http://winnipeg.ca/matmgt/pdfs/PublicWorksEquipLightingVisibility.pdf.

2.3 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 units.

3.0 SERVICE FACILITY

3.1 For the purpose of warranty repairs, the Bidder 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 the City of Winnipeg Repair Facility perform warranty work. 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 2014: \$88.00/hour and \$118.00/hour for overtime and callout).

3.3	Location of the service facility located within 10 km of the boundaries of the City of Winnipeg.
	The Bidder shall choose and fill in one of the Clauses listed below 3.4) or 3.5)
3.4	Bidder's own facility location. State the location of the service facility below.
3.5	Bidder elects to have warranty work be performed by the City of Winnipeg. Bidder shall provide all warranty authorization processes.
4.0	REFERENCES
4.1	Provide five (5) Canadian references where this equipment is used in a working environment where climatic conditions are similar to the City of Winnipeg.
5.0	MAKE & MODEL

5.1 State make and model of the equipment bid-

6.0 INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

- 6.1 Each bid will be evaluated based on adherence to all terms, conditions and requirements outlined in the Bid Opportunity package.
- 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.
- 6.3 EACH BIDDER IS REQUIRED TO FILL IN EVERY BLANK. FAILURE TO DO SO MAY BE USED AS A BASIS FOR REJECTION OF BID

7.0 PERFORMANCE RELIABILITY

- 7.1 The responsibility for the design of the **Industrial Loader Backhoes**, its performance and reliability shall rest upon the Contractor.
- 7.2 The term "repeated failures" as used herein is defined to mean that the same component, subassembly, or assembly develops repeated defects, breakdowns and/or malfunctions rendering the vehicle inoperative, or requiring repeated shop correction, service and/or replacement during the warranty period applicable for said component, subassembly, of 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 schedule.

- 7.3 Where the <u>Industrial Loader Backhoes</u> develops "repeated failures" in service, the Contractor shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance.
- 7.4 The equipment shall be capable of consistent top performance in City of Winnipeg Environment. Note: The City of Winnipeg has four seasons with ambient temperatures ranging from approximately 90°F (32°C) to -40°F (-40°C)

8.0 <u>FUEL</u>

8.1 Where applicable, all equipment must be fully fuelled upon delivery (no exceptions).

9.0 QUALIFICATIONS OF MANUFACTURER & CONTRACTOR

- 9.1 The manufacturer of the <u>Industrial Loader Backhoes</u> shall have five (5) years continuous experience manufacturing Specialized Utility Vehicles and associated.
- 9.2 The manufacturer shall have in effect a documented quality control program ensuring that the quality of materials and workmanship, including welding, conforms to the best standards and engineering practice of the industry.
- 9.3 The Contractor shall have five (5) years continuous experience servicing, repairing and maintaining **Loader Backhoe and associated attachments** of the type being offered.

10.0 SPECIFICATIONS

ENGINE

10.1	Engine make & model	State	
10.2	Engine specification	Diesel, Emissions Tier IV Diesel Interim or Final, must meet current Emission Standards.	
10.3	Horse Power	Net 90 hp. State	
10.4	Torque	Net torque, State	
10.5	Engine Aspiration	State	
10.6	Fuel shut off	Electric solenoid type	
10.7	Fuel Filter	With water separator	
10.8	Oil filter	Full flow, spin-on type	
10.9	Air cleaner	Dry cartridge type with dash mounted	
10.10	Throttle	restriction indicator Hand operated with foot override	
10.11	Exhaust	Mufflered, vertical discharge with bend and 40° cut-off (rain cap unacceptable)	
10.12	Coolant	Extended life, protected to -40° C.	
10.13	Engine Block Heater	Approx. 750 Watts	

10.14	Cold weather starting aid	Glow plugs or air intake warmer, state type	
10.15	Engine protection shutdown system	Visual and audible warning of principle machine systems including engine oil pressure and coolant temperature c/w engine shutdown.	
10.16	Fuel tank	State capacity	
	ELECTRICAL/ LIGHTING/ SAFETY		
10.17	Туре	12-Volt, negative ground electrical system	
10.18	Electric starter	with key starter switch	
10.19	Batteries	Dual 1500CCA combined capacity	
10.20	Alternator	Approx. 65 Amp, state capacity	
10.21	Combined stop and tail lights	Two (2)	
10.22	Signal lights with warning	Two (2) front and two (2) rear	
10.23	flashers Warning flashers	Operable with key removed	
10.24	Headlights	Two (2)	
10.25	Working lights	Front- four (4) front mounted, adjustable, located immediately below cab roof line	
		Rear-four (4) rear mounted, adjustable, located immediately below the cab roof line	
		Side-two (2) side mounted, located immediately below cab roof line.	
10.26	Light switches	Independent on/off switch for each pair of work lights, dash mounted, wired through ignition, labeled with permanent type, engraved style labels	
10.27	Cab interior light	Interior light	
10.28	Radio	AM/FM/CD or MP3	
10.29	Radio installation provision	12 volt, 20Amp spate/independent circuit available at a spare circuit breaker, suitable for installation of a 2-way mobile radio	
10.30	Horn	Operable from driving position and from backhoe position	

10.31	Safety lighting (beacon)	Make and Model: Whelen L32 Series Super-LED, SAE Class 1 (or equivalent) Blue/Amber (individual control) Low Dome Beacon, 360 degree visibility. Wired through ignition, lights shall be wired for separate amber and separate blue labelled independently "winter", "off", "summer". The winter mode will turn on both blue and the summer will only turn on the amber lights.	
10.32	Beacon guard	Ramped, heavy duty bolt-on metal guard, designed to permit servicing of beacon without being removed.	
10.33	Back-up alarm	97 dB, factory installed, mounted to be protected from damage.	
10.34	Wiring	All locally installed accessories shall be color coded, loomed and properly secured. Splicing in any factory harness is unacceptable. All electrical power for locally supplied electrical components to be supplied from an OEM power distribution box. All joining of wires and electrical connectors shall be soldered and sealed with heat shrink tubing. All wiring for work lights and warning lights shall be supplied with no exposed wiring.	
10.35	LED lighting	All lighting LED, state	
10.36	Slow moving sign	Grote 71152 or equivalent with bracket mounted to rear of backhoe	
	TIRES, RIMS, FENDERS		
10.37		Michelin or Bridgestone preferred radial or bias, state	
10.38	Ply rating	State ply rating	
10.39	Tread Rear tires	R4,Industrial tractor	
10.40 10.41	Ply rating	Michelin or Bridgestone preferred radial or bias, state State ply rating	
10.42	Tread	R4, industrial tractor	
10.43	Fenders	Front and rear, rubber or polymer, state , material	
	AXLES & BRAKES		
10.44	Front axle	Driven type (4WD) with guarded drive shaft (limited slip differential)	
10.45	Rear axle	Differential lock, push button activation	

10.46	Brakes	Wet disk type with individual pedals simultaneous or independent operations	
10.47	Parking brake	Foot or hand operated, state type	
	TRANSMISSION		
10.48	Туре	Power-shift transmission with torque convertor, manual shift with power reverser preferred, state	
10.49	Shifting	Fully synchronized	
10.50	Speeds forward	Four (4)	
10.51	Speeds reverse	Three (3)	
10.52	Power-shift	Direction reverser	
	<u>DIMENSIONS</u>		
10.53	Overall transport width	Approx. 7', state	
10.54	Overall width	Stabilizer spread, outside edge of pad, state	
10.55	Overall height (top of cab)	Approx. 8' 9", state	
10.56	Overall transport height	Approx. 11', state	
10.57	Overall transport length	Approx. 24', state	
10.58	Wheelbase	Approx. 84", state	
10.59	Operating weight (as bid)	Approx. 16,000lbs, (without attachments) state weight	
10.60	Turning radius	Curb clearance with brakes applied, state	
	FRONT END LOADER		
10.61	Lift capacity, full height	Approx. 6500lbs., state	
10.62	Bucket breakout force	Approx. 10,000lbs., state	
10.63	Dump clearance as bid	Bucket @ 45 ⁰ approx. 105 inches, state	
10.64 10.65	Controls Self-levelling bucket	Single lever with clutch disconnect button, return –to-dig and float With level indicator	
10.66	Wear plate (s)	Required to prevent bucket heel from	
10.00	rroal plato (o)	rubbing on ground with bolt-on cutting edge in place	
10.67	Lashing ring	Heavy duty, steel weld-on hook with spring mounted clasp, top-center mounted at front of loader bucket	

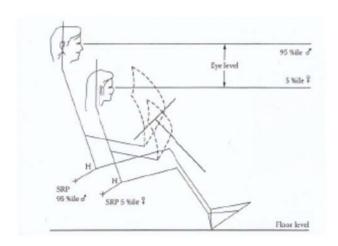
10.68	Loader safety prop bar	Preferred	
10.69	Hydraulic function	3 function hydraulics	
10.70	Hydraulic quick attach	For loader bucket	
10.71	OEM ride control	state	
	FRONT BUCKETS		
10.72	Clam bucket	4 in 1, With certified lifting hooks and bolt on edge. Approx. width 92" with 1.32 yd ³ capacity, state	
10.73	General Material bucket	Approx. 92" width 1.32 yd3 capacity, state	
10.74	Snow bucket	Approx. 92" width, 2.5 yd ³ capacity, state	
	BACKHOE		
10.75	Туре	Centre pivot with extendable dipper-stick	
10.76	Maximum digging depth	Approx. 18', state digging depth	
10.77	Digging force	Bucket cylinder (SAE), with 24 inch bucket approx. 14,000lbs., state	
10.78	Dogging force	Crowd cylinder (SAE), with dipper-stick retracted approx. 9,000lbs., state	
10.79	Controls	SAE excavator style, pilot operated hydraulic joystick controls	
10.80	Multi-brand Quick coupler attachment bracket	For quick attachment of all buckets and hydraulic hammers, state make model being bid	
10.81	Attachment bracket	Permit use of two (2) bucket positions	
10.82	Attachment bracket	Permit bucket, bucket position changes and hydraulic hammer	
10.83	Certified lifting hooks	All buckets to be complete with certified lifting hooks	
10.84	Stabilizer pads	Reversible, flip-over type pads.	
10.85	Front counterweight	Supplied as to provide proper machine balance and roading characteristics	
10.86	Replaceable bushings and grease fittings	At backhoe pivot points, cylinder rod and closed ends, and bucket links	
10.87	Auxiliary hydraulics	Couplers and controls shall be provided as required on all machines to accommodate hydraulic hammers	
10.88	Hydraulic thumb	Factory installed, state	

	BACKHOE BUCKETS		
10.89	36 inch digging bucket	36 inch heavy duty digging bucket with replaceable pin-on teeth, complete with required attachment pin(s) and certified lifting hooks. Backhoe to be delivered with 36inch digging bucket (w/teeth) installed.	
10.90	18 inch trench bucket	18 inch heavy duty trench bucket with replaceable pin-on teeth, complete with required attachment pin(s).	
10.91	24 inch trench bucket	24 inch heavy duty trench bucket with replaceable pin-on teeth, complete with required attachment pin(s).	
	HYDRUALIC BREAKER		
10.92	Hydraulic breaker	NPK (6-9 ton) breaker or equivalent with required attachment pins and quick couplers. Complete with lashing ring and suitable length heavy duty chain with forged slip hooks for safe and secure transport of hydraulic hammer in loader bucket.	
	HYDRAULIC AUGER		
10.93	Hydraulic auger	Planetary drive	
10.94	Auger bit	24" x 48" with 2" hex collar	
	OPERATOR CAB		
10.95	Type-ROPS	Roll-over protective structure complete with pressurized cab, OSHA certified or equal	
10.96	Insulation and headliner	For sound suppression and severe weather/climate	
10.97	Floor covering	Rubber matting, throughout	
10.98	Seat	Cushioned, adjustable bucket type with arm rests, cloth upholstery air suspension with retractable seat belt	
10.99	Ride control	Factory installed	
10.100	All Windows	Tinted safety glass with appropriate markings for all panes and opening type where applicable	
10.101	Ignition keys	Three (3) sets required per machine	

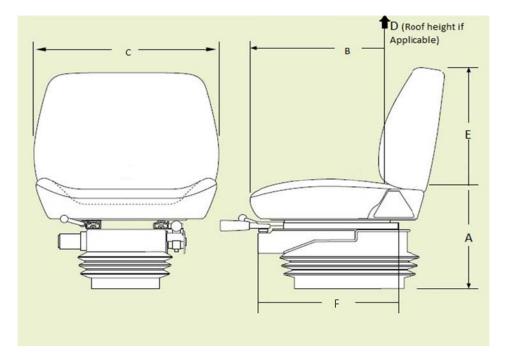
10.102	Doors	One (1) each side with spring assisted strut, lockable with common key	
10.103	Interior rear-view mirror	Adjustable	
10.104	Windshield wipers	Intermittent preferred, requires front and rear	
10.105	Heater/defroster	Heavy duty, hot water type with multi- speed fan, capable of keeping all windows clear at -40 ⁰ C	
10.106	Window fans	Two (2) with guards	
10.107	Air conditioning	Factory installed with under hood compressor. (Note: roof mounted air conditioners are not acceptable)	
10.108	Steps	Open grate style	·
10.109	Toolbox	Lockable, state location	
10.110	Instrumentation	Coolant temperature-gauge with audible alarm. Engine oil pressure- gauge or warning light with audible alarm. Engine hour meter-non resettable type. Tachometer. Fuel gauge.	
10.111	Noise Level, interior	85 dB(A), measured in accordance with SAE J336, state noise level	
10.112	Fire extinguisher	Five (5) lbs. High volume ABC type, State location	

OPERATOR STATION ERGONOMICS

10.113 Cab or station layout should provide a comfortable seating position for the 5th to the 95th percentile of personnel. Figure 1 below illustrates the variance between a 5th to a 95th percentile of North American males and females when seated.



10.114 Figure 2: Use the below diagram to answer the specifications for Operator Station Ergonomics.



10.115	Sitting height range from floor (where feet rest) (A)	State, seat height range in inches	
10.116	Seat length/depth (B)	State, seat length/depth in inches	
10.117	Seat width (C)	State, seat width in inches	
10.118	Cab height from seat to roof (if applicable) (D)	State, cab height range in inches	
10.119	Back rest height (E)	State, back rest height in inches	
10.120	Seat travel range (F)	State, seat travel in inches	
10.121	Include any other relevant ergonomic specifications and applicable range of adjustment		

GREASING SYSTEM

OKEAGING OTOTEM		
10.122 Greasing system	Groeneveld/CPL Systems Inc. complete CPL automatic greasing system including all required grease points on the flusher body, and automatic low level shut-off with in-cab red light indicator.	
10.123 Greasing points	State, quantity of greasing points	
10.124 Grease fittings	Readily accessible with remote grease zerks	

11.0 **WARRANTY**

11.1 All warranty information shall be detailed and include all exclusions. The successful bidder shall provide all published warranty information upon delivery of the equipment. Bidder shall state all warranty information.

11.2	Basic coverage	(Complete Machine) Warranty 2 years, 2000 hours	
11.3	Power train	(Engine, Transmission) Warranty 2 years 2000 hours	
11.4	Hydraulics warranty	(Hydraulics) Warranty 2 years, 2000 hours	
11.5	Batteries warranty	(Batteries) Warranty 1 year	
11.6	Tires warranty	(Tires) Warranty 1 year	
11.7	Electrical warranty	(Electrical) Warranty 2 years, 2000 hours	
12.0	DELIVERY		
12.1	applicable) to the WFMA 185 Tecum	prepaid, including invoice and N.I.V.S. (if seh Street, Winnipeg MB. The successful ctor Administrator the delivery address	
12.2	Delivery Time: Sixteen (16) calenda Equipment shall be delivered between	ar weeks from the date of award. en 8:00 am and 3:00 pm on Business Days.	
12.3	Delivery Contact: The Contractor sha prior to delivery of the equipment.	all contact the Contract Administrator	
12.4	P.D.I: A pre-delivery inspection shall equipment. Proof upon inspection in	be performed by the Contractor on the cluding completed check list	
13.0	MANUALS		
13.1	Manuals supplied under this contract complete equipment including all coravailable.	The manuals shall cover the nponents thereof, CD is preferred where	
13.2	The following manuals shall be supp	lied with the units when delivered:	
	a) Operator's manual – Two (2) per ube sent to the Equipment Operator T		
	b) Parts and service manuals – one (maintenance schedules. CDs are pr	(1) complete sets including preventative eferred.	

FORM N: DETAILED SPECIFICATIONS 14048

INDUSTRIAL LOADER BACKHOES

1.0 DESCRIPTION OF EQUIPMENT

- 1.1 These specifications describe **Industrial Loader Backhoes** and other equipment and features as specified herein.
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ENGINE

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10.2	Engine specification	Diesel, Emissions Tier IV Diesel Interim or Final, must meet current Emission Standards.	
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10.4	Torque	Net torque, State	
10.5	Engine Aspiration	State	
10.6	Fuel shut off	Electric solenoid type	
10.7	Fuel Filter	With water separator	
10.8	Oil filter	Full flow, spin-on type	
10.9	Air cleaner	Dry cartridge type with dash mounted restriction indicator	
10.10	Throttle	Hand operated with foot override	
10.11	Exhaust	Mufflered, vertical discharge with bend and 40° cut-off (rain cap unacceptable)	
10.12	Coolant	Extended life, protected to -40° C.	
10.13	Engine Block Heater	Approx. 750 Watts	

10.14	Cold weather starting aid	Glow plugs or air intake warmer, state type	
10.15	Engine protection shutdown system	Visual and audible warning of principle machine systems including engine oil pressure and coolant temperature c/w engine shutdown,	
10.16	Fuel tank	State capacity	
	ELECTRICAL/ LIGHTING/ SAFETY		
10.17	Туре	12-Volt, negative ground electrical system	
10.18	Electric starter	with key starter switch	
10.19	Batteries	Dual 1500CCA combined capacity	
10.20	Alternator	Approx. 65 Amp, state capacity	
10.21	Combined stop and tail lights	Two (2)	
10.22	Signal lights with warning flashers	Two (2) front and two (2) rear	
10.23	Warning flashers	Operable with key removed	
10.24	Headlights	Two (2)	·
10.25	Working lights	Front- four (4) front mounted, adjustable, located immediately below cab roof line	
		Rear-four (4) rear mounted, adjustable, located immediately below the cab roof line	
		Side-two (2) side mounted, located immediately below cab roof line.	
10.26	Light switches	Independent on/off switch for each pair of work lights, dash mounted, wired through ignition, labeled with permanent type, engraved style labels	
10.27	Cab interior light	Interior light	
10.28	Radio	AM/FM/CD or MP3	
10.29	Radio installation provision	12 volt, 20Amp spate/independent circuit available at a spare circuit breaker, suitable for installation of a 2-way mobile radio	
10.30	Horn	Operable from driving position and from backhoe position	

10.31	Safety lighting (beacon)	Make and Model: Whelen L32 Series Super-LED, SAE Class 1 (or equivalent) Blue/Amber (individual control) Low Dome Beacon, 360 degree visibility. Wired through ignition, lights shall be wired for separate amber and separate blue labelled independently "winter", "off", "summer". The winter mode will turn on both blue and the summer will only turn on the amber lights.	
10.32	Beacon guard	Ramped, heavy duty bolt-on metal guard, designed to permit servicing of beacon without being removed.	
10.33	Back-up alarm	97 dB, factory installed, mounted to be protected from damage.	
10.34	Wiring	All locally installed accessories shall be color coded, loomed and properly secured. Splicing in any factory harness is unacceptable. All electrical power for locally supplied electrical components to be supplied from an OEM power distribution box. All joining of wires and electrical connectors shall be soldered and sealed with heat shrink tubing. All wiring for work lights and warning lights shall be supplied with no exposed wiring.	
10.35	LED lighting	All lighting LED, state	
10.36	Slow moving sign	Grote 71152 or equivalent with bracket mounted to rear of backhoe	
	TIRES, RIMS, FENDERS		
10.37	Front tires	Michelin or Bridgestone preferred radial or bias, state	
10.38	Ply rating	State ply rating	
10.39	Tread	R4,Industrial tractor	
10.40	Rear tires	Michelin or Bridgestone preferred radial or bias, state	
10.41	Ply rating	State ply rating	
10.42	Tread	R4, industrial tractor	
10.43	Fenders	Front and rear, rubber or polymer, state , material	
	AXLES & BRAKES		
10.44	Front axle	Driven type (4WD) with guarded drive shaft (limited slip differential)	

10.45	Rear axle	Differential lock, push button activation	
10.46	Brakes	Wet disk type with individual pedals simultaneous or independent operations	
10.47	Parking brake	Foot or hand operated, state type	
	TRANSMISSION		
10.48	Туре	Power-shift transmission with torque convertor, manual shift with power reverser preferred, state	
10.49	Shifting	Fully synchronized	
10.50	Speeds forward	Four (4)	
10.51	Speeds reverse	Three (3)	
10.52	Power-shift	Direction reverser	
	<u>DIMENSIONS</u>		
10.53	Overall transport width	Approx. 7', state	
10.54	Overall width	Stabilizer spread, outside edge of pad, state	
10.55	Overall height (top of cab)	Approx. 8' 9", state	
10.56	Overall transport height	Approx. 11', state	
10.57	Overall transport length	Approx. 24', state	
10.58	Wheelbase	Approx. 84", state	
10.59	Operating weight (as bid)	Approx. 16,000lbs, (without attachments) state weight	
10.60	Turning radius	Curb clearance with brakes applied, state	
	FRONT END LOADER		
10.61	Lift capacity, full height	Approx. 6500lbs., state	
10.62	Bucket breakout force	Approx. 10,000lbs., state	
10.63	Dump clearance as bid	Bucket @ 45 ^o approx. 105 inches, state	
10.64	Controls	Single lever with clutch disconnect button, return –to-dig and float	
10.65	Self-levelling bucket	With level indicator	

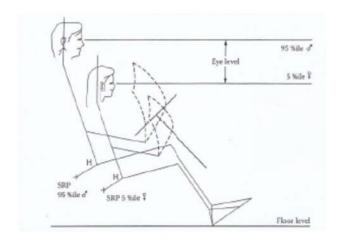
10.66	Wear plate (s)	Required to prevent bucket heel from rubbing on ground with bolt-on cutting edge in place	
10.67	Lashing ring	Heavy duty, steel weld-on hook with spring mounted clasp, top-center mounted at front of loader bucket	
10.68	Loader safety prop bar	Preferred	
10.69	Hydraulic function	3 function hydraulics	
10.70	Hydraulic quick attach	For loader bucket	
10.71	OEM ride control	state	
	FRONT BUCKETS		
10.72	General Material bucket	Approx. 92" width 1.32 yd ³ capacity, state	
	BACKHOE		
10.73	Туре	Centre pivot with extendable dipper-stick	
10.74	Maximum digging depth	Approx. 18', state digging depth	
10.75	Digging force	Bucket cylinder (SAE), with 24 inch bucket approx. 14,000lbs., state	
10.76	Dogging force	Crowd cylinder (SAE), with dipper-stick retracted approx. 9,000lbs., state	
10.77	Controls	SAE excavator style, pilot operated hydraulic joystick controls	
10.78	Multi-brand Quick coupler attachment bracket	For quick attachment of all buckets and hydraulic hammers, state make model being bid	
10.79	Attachment bracket	Permit use of two (2) bucket positions	
10.80	Attachment bracket	Permit bucket, bucket position changes and hydraulic hammer	
10.81	Certified lifting hooks	All buckets to be complete with certified lifting hooks	
10.82	Stabilizer pads (cemetery)	Oversized rectangle winter pads for stabilizers, with three separate spike pad areas within each rectangle	
10.83	Front counterweight	Supplied as to provide proper machine balance and roading characteristics	
10.84	Replaceable bushings and grease fittings	At backhoe pivot points, cylinder rod and closed ends, and bucket links	

10.85	Auxiliary hydraulics	Couplers and controls shall be provided as required on all machines to accommodate hydraulic hammers and augers	
10.86	Hydraulic thumb	Factory installed, state	
	BACKHOE BUCKETS		
10.87	32 inch cemetery dig bucket	32 inch heavy duty digging bucket with replaceable pin-on teeth, complete with required attachment pin(s) and certified lifting hooks	
10.88	36 inch cemetery dig bucket	36 inch heavy duty digging bucket with replaceable pin-on teeth, complete with required attachment pin(s and certified lifting hooks). Backhoe to be delivered with 36inch digging bucket (w/teeth) installed	
	OPERATOR CAB		
10.89	Type-ROPS	Roll-over protective structure complete with pressurized cab, OSHA certified or equal	
10.90	Insulation and headliner	For sound suppression and severe weather/climate	
10.91	Floor covering	Rubber matting, throughout	
10.92	Seat	Cushioned, adjustable bucket type with arm rests, cloth upholstery air suspension with retractable seat belt	
10.93	Ride control	Factory installed	
10.94	All Windows	Tinted safety glass with appropriate markings for all panes and opening type where applicable	
10.95	Ignition keys	Three (3) sets required per machine	
10.96	Doors	One (1) each side with spring assisted strut, lockable with common key	
10.97	Interior rear-view mirror	Adjustable	
10.98	Windshield wipers	Intermittent preferred, requires front and rear	
10.99	Heater/defroster	Heavy duty, hot water type with multi- speed fan, capable of keeping all windows clear at -40 ⁰ C	
10.100	Window fans	Two (2) with guards	

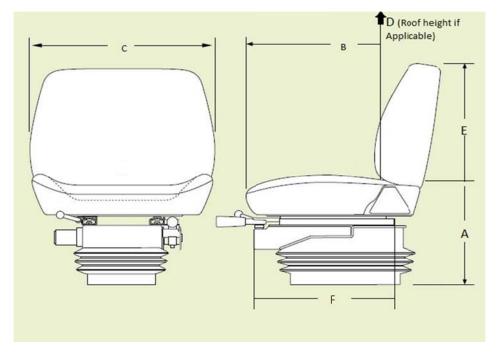
10.101	Air conditioning	Factory installed with under hood compressor. (Note: roof mounted air conditioners are not acceptable)	
10.102	Steps	Open grate style	
10.103	Toolbox	Lockable, state location	
10.104	Instrumentation	Coolant temperature-gauge with audible alarm. Engine oil pressure- gauge or warning light with audible alarm. Engine hour meter-non resettable type. Tachometer. Fuel gauge.	
10.105	Noise Level, interior	85 dB(A), measured in accordance with SAE J336, state noise level	
10.106	Fire extinguisher	Five (5) lbs. High volume ABC type, State location	

OPERTAOR STATION ERGONOMICS

10.107 Cab or station layout should provide a comfortable seating position for the 5th to the 95th percentile of personnel. Figure 1 below illustrates the variance between a 5th to a 95th percentile of North American males and females when seated.



10.108 Figure 2: Use the below diagram to answer the specifications for Operator Station Ergonomics.



10.109	Sitting height range from floor (where feet rest) (A)	State, seat height range in inches	
10.110	Seat length/depth (B)	State, seat length/depth in inches	
10.111	Seat width (C)	State, seat width in inches	
10.112	Cab height from seat to roof (if applicable) (D)	State, cab height range in inches	
10.113	Back rest height (E)	State, back rest height in inches	
10.114	Seat travel range (F)	State, seat travel in inches	
10.115	Include any other relevant ergonomic specifications and applicable range of adjustment		

GREASING SYSTEM

CKLADING OTOTEM		
10.116 Greasing system	Groeneveld/CPL Systems Inc. complete CPL automatic greasing system including all required grease points on the flusher body, and automatic low level shut-off with in-cab red light indicator.	
10.117 Greasing points	State, quantity of greasing points	
10.118 Grease fittings	Readily accessible with remote grease zerks	

11.0 **WARRANTY**

11.1 All warranty information shall be detailed and include all exclusions. The successful bidder shall provide all published warranty information upon delivery of the equipment. Bidder shall state all warranty information.

11.2	Basic coverage	(Complete Machine) Warranty 2 years, 2000 hours	
11.3	Power train	(Engine, Transmission) Warranty 2 years 2000 hours	
11.4	Hydraulics warranty	(Hydraulics) Warranty 2 years, 2000 hours	
11.5	Batteries warranty	(Batteries) Warranty 1 year	
11.6	Tires warranty	(Tires) Warranty 1 year	
11.7	Electrical warranty	(Electrical) Warranty 2 years, 2000 hours	
12.0	DELIVERY		
12.1	Delivery Point: The complete unit shall be serviced, ready for operation and delivered F.O.B. with the freight prepaid, including invoice and N.I.V.S. (if applicable) to the WFMA 185 Tecumseh Street, Winnipeg MB. The successful bidder shall be notified by the Contractor Administrator the delivery address prior to issuance of the purchase order		
12.2	Delivery Time: Sixteen (16) calendar weeks from the date of award. Equipment shall be delivered between 8:00 am and 3:00 pm on Business Days.		
12.3	Delivery Contact: The Contractor shall contact the Contract Administrator prior to delivery of the equipment.		
12.4	P.D.I: A pre-delivery inspection shall be performed by the Contractor on the equipment. Proof upon inspection including completed check list		
13.0	MANUALS		
13.1	Manuals supplied under this contract. complete equipment including all compavailable.	The manuals shall cover the ponents thereof, CD is preferred where	
13.2	The following manuals shall be supplied	ed with the units when delivered:	
	a) Operator's manual – Two (2) per ur be sent to the Equipment Operator Tra		
	b) Parts and service manuals – one (1 maintenance schedules. CDs are pre) complete sets including preventative ferred.	