



City of Lewiston
Finance Department
Allen Ward, Purchasing Agent
27 Pine Street, Lewiston ME
207-513-3040
award@lewistonmaine.gov

2019-069
Two (2) 4 Wheel Drive Wheeled Loader w/ Plow & Wing
October 8, 2019

Sir/Madam:

Sealed bids will be received in the office of the Purchasing Agent on **Tuesday, October 29, 2019 until 2:00 p.m.** at which time they will be at which time they will be publicly opened and read aloud on the enclosed specifications for **Two (2) 4 Wheel Drive Wheeled Loader w/ Plow & Wing** for the Lewiston Public Works Department.

The Finance Committee reserves the right to accept or reject any and all proposals.

Please use a sealed envelope clearly marked with the bid name and number when submitting your bid. **Only sealed bids will be accepted. Faxed bids will not be considered.**

Sincerely,

Allen Ward
Purchasing Agent

ASW/mrr

City of Lewiston, Maine
DEPARTMENT OF PUBLIC WORKS

2 - 4 WHEEL DRIVE WHEELED LOADER W/PLOW & WING

Bid #: 2019-069

Bid Date: Tuesday, October 29, 2019

Detailed specifications for a **Two (2) 4 Wheel Drive Wheeled Loaders w/plow & wing** for the Public Works Highway Division for snow plowing, snow removal and general bucket loader work.

The following specification shall be minimum requirements and bid shall be of the manufacturer's latest model and design. The bid item must also comply with applicable federal and Maine laws. All items appearing in the bidder's regular published specifications are assumed to be included in the bidder's proposal.

Equipment that is not equipped with Factory Installed Loader Boom Arm and Articulation locking devices for OSHA required lockout, that need to be in place before Operators or Mechanics work or service a piece of equipment are excluded from consideration due to safety concerns.

Public works must be satisfied that the Equipment Dealer maintains adequate parts and service facilities to include a full shop and field service performed by factory trained mechanics within 75 mile radius of 103 Adams Ave Lewiston. Venders outside this radius are excluded from consideration due to time requirements to pick up parts and deliver units for service/ repairs.

Loaders that use optional counterweights or rear tire ballast will not be considered.

Furnishing and Mounting of all additional equipment shall be the responsibility of the equipment bidder. All addition equipment added to the unit will be appropriately matched to the machine. All hydraulics and electrical components will be appropriately installed in good working order and secured, subject to approval by a representative from the City of Lewiston.

The City of Lewiston reserves the right to reject any and all bids when deemed to be in the best interests of the City, and waive any minor discrepancy or technicality in the bid specifications.

The bid will be awarded based 4 factors. Each of these factors will be worth a certain percent value. The values are as follow:

- | | |
|---|-----|
| 1. Total bid price including all options selected by the city. | 35% |
| 2. Compliancy to the bid specification | 30% |
| 3. Other Maine Municipalities experience with this exact make, model and application of machine that appears in the spec/Bid proposal. | 10% |
| 4. Lewiston Public works experience/ history with equipment from this manufacture and the selling dealer. As well as how it effects the standardization of the fleet. | 25% |

The above Item # 3: The dealer must supply in writing a list with contact information of other municipalities within the state of Maine that have this Make, and Model machine. This machine must be equipped and used in similar fashion as it would be used here at the City of Lewiston Maine. This unit will be equipped with plow gear W/ wing and will spend most of its life on paved roads and plowing snow.

The successful bidder shall provide a machine for testing prior to bid being awarded. Any differences in the demo unit must be identified at time of demonstration or machine shall be assumed to be equal to the final unit delivered to the city.

The successful bidder shall furnish a complete, job ready machine and it shall conform in strength, quality and workmanship to what is provided in general by the loader manufacturing industry.

Specifications and ratings must conform to all S.A.E. Standards.

The Finance Committee reserves the right to waive any formality and may consider as informal any Proposal not prepared and submitted in accordance with these provisions. The Finance Committee reserves the right to accept any Proposal or reject any or all Proposals if it is deemed to be in the public interest to do so.

Any Questions about the specification or to arrange to see the trade please call Phil Brienza @ 513-3145

The proposal must be signed by the bidder with his/her full name and address and be enclosed in a sealed envelope. The sealed envelope shall be marked with the name and address of the bidder and entitled: **Two (2) – 4 Wheel Drive Wheeled Loaders w/ Plow & Wing**, and be addressed to: **Purchasing Agent, City Hall, 27 Pine Street, Lewiston, Maine 04240**. All mailed proposals should be sent by registered mail to insure delivery.

SPECIFICATIONS FOR THE 4 WHEEL DRIVE WHEELED LOADER W/ PLOW & WING.

If it is necessary to bid alternate equipment or to take exceptions to the specifications as set forth, this must be so stated in your bid. For each item, please place an X in the appropriate space (Yes__ No__) to signify whether or not you are in complete compliance with the specification. Failure to follow the format or answer the specification may cause your bid to be disqualified. If you need extra space to describe your product, please attach extra sheets. When doing this, be sure your description references the appropriate question number.

City of Lewiston, Maine

Department of Public Works

Two (2) 4 Wheel Drive Wheeled Loaders W/ Plow & Wing Specifications

Bid #: 2019-069

Bid Date: October 29, 2019

Specifications: Two (2) 4 Wheel Drive Wheeled Loaders w/ Plow & Wing			
Specification must be met to qualify for consideration			
ENGINE:		YES	NO
1	Six Cylinder, turbocharged, charge air cooled diesel engine and shall be designed and built by the manufacturer		
2 *	Engine shall be certified to Min. EPA Final Tier 4 emissions		
3	Engine shall have a wet-sleeve cylinder liner design for improved cylinder cooling over dry sleeve and cast-in-bore design.		
4	Engine displacement shall be no less than 6.6 liters		
5	Engine net peak power shall be no less than 185 Hp. @ 1800 rpm With 64% Net Torque rise, Min. Net peak torque of 600Lb-ft @ 1300 RPM		
6	Fuel system shall be high-pressure, common rail		
7	Daily check points shall be accessible from one side of the engine and shall be done from ground level		
8	Under-hood engine air cleaner shall be dry type, dual element with a restriction sensor and in-cab restriction warning light. Must not require tools to service		
9	The loader will have pre-screened under hood air intake to minimize plugging		
10	Access to engine will be open from both sides with side opening full access to coolers, radiator		
11	Engine shall have 10-micron rated primary fuel filter with water separator		
12	Loader shall be equipped with a heavy-duty steel fuel tank guard		
13	Service interval for the engine oil and filter shall be Min. of 500 hours		
14	The unit shall have an auto-idle, auto-shutdown feature for the engine.		
15	The electrical system shall be 24 volt W/ batteries, min 950CCA with Min.130 amp alternator		
COOLING:			
16	Unit shall have a proportionally controlled automatic reversing fan drive W/ monitor adjustable time increments, hydraulically driven, 90 degree-swing-out fan.		
17	The unit will have Min. two-side access to all coolers		

18	Air intake shall be pre-screened for each cooling component		
19	Cooling system shall be isolated from the engine compartment		
20	Unit shall have a coolant recovery tank provided		
21	Unit shall have a fan-guard		
22	Fluid levels should be easily checked by sight gauges or overflow tank		
POWER TRAIN:			
23	The transmission shall be electronically modulated, adaptive, load and speed dependent shift modulated		
24	Shift modes shall be manual, auto to 1st or 2nd, kick down or kick up/down.		
25	Service interval for the transmission oil filter shall be min. 2000 hours		
26	The transmission clutch calibration shall be performed from the cab monitor. Unit shall be equipped with a selectable wheel spin limiting device to limit wheel spin while loading the bucket.		
27	Unit shall have steering column or joystick mounted F-N-R and gear-select lever, kick-down button on hydraulic lever. Will also have quick shift feature that allows pushbutton gear changes, one gear at a time		
28	Sight gauge showing transmission fluid shall be at ground-level		
29	The transmission shall be able to reach a min. of 24 mph in 5th gear and Min. of 15 mph in fourth gear with 20.5R25 Michelin snow plus tires. (or equal tire approved By the city representative)		
AXLES/BRAKES:			
30	The final drives shall be heavy-duty mid-board mounted planetary		
31	The service brake shall be hydraulically actuated, in-board sun shaft mounted, oil cooled, self-adjusting disc. Brakes shall have easy access for inspection.		
32	The parking brake shall be automatic spring applied, hydraulically released, oil cooled, driveline mounted, and multi-disk		
33	The dipstick port and housing fill shall be at the top of the axle		
34	The front axle shall be hydraulically actuated, disc clutch style, locking differential.		
35	The loader shall have front and rear axles with hydraulic locking differentials and automatic differential lock.		
TIRES & RIMS:			
36	20.5R 25 Michelin Snow Plus. (or equal tire approved By the city representative)		
37	One Spare matching Tire and Rim per unit.		
HYDRAULIC SYSTEM:			
38	Hydraulic filter shall be in the hydraulic tank with service interval of 4000 hours Min.		
39	The hydraulic fluid shall have a rated life of 4000 hours Min.		
40	The hydraulic system shall be pressure-compensating and load sensing		

41	Hydraulic tank capacity should be no less than 26 gallons for extended hydraulic fluid intervals and cooler system temperature		
42	Unit will be provided with an automatic return to dig level attachment		
43	In cab adjustable automatic boom height kick out control		
44	Unit will be provided with in-cab adjustable automatic boom return-to-carry control		
45	Unit shall be equipped with three function single-lever joystick and third function axillary		
46	A sight gauge will be provided for checking hydraulic reservoir fluid		
47	Hydraulic pump shall be variable-displacement, axial-piston pump: closed-center, pressure-compensating system		
48	Loader steering articulation angle shall be no less than 80 degrees, 40 degrees in each direction		
49	Third valve to control left to right swivel for front plow. To have added detent to supply constant supply of oil to city owned street broom. Piped to midpoint of loader arms exact location to be determined		
50	Steering designed to allow unit to track straight for prolonged driving over the road during snow plowing operations.		
ELECTRICAL:			
51	Two batteries shall be included, 24 volt, 950 CCA, with a rated reserve of no less than 25 amps for 190-min at 80F.		
52	The unit shall have a solid-state electrical power distribution system using circuit board technology and solid-state switches		
53	All LED lighting Package.		
54	The unit shall be provided with a master electrical disconnect switch		
55	Cab to have to LED strobe lights mounted on the rear of the cab on adjustable pedestal mounts. To have factory wiring and switches.		
56	The in-cab switch module shall be sealed to keep out dirt, dust and airborne debris		
57	Unit shall be equipped with driving lights with guards, turn signals and flashers, stop and tail lights. The tail lights shall be LED type mounted high up in the rear grille for protection from damage and better sight visibility.		
58	Unit shall be equipped with gauges for: engine coolant temperature, transmission oil temperature, hydraulic oil temperature, and engine oil pressure		
59	Unit shall have digital readout for: engine rpm, odometer, transmission gear direction indicator, speedometer, hour meter,		
60	Unit shall have operator warning lights for: check engine, engine oil pressure, engine air restriction, battery voltage, transmission filter restriction, brake pressure, hydraulic oil filter, transmission fault, hydraulic oil temperature		
61	Engine compartment light, Rear view camera, color coded remote battery jump start terminals.		
62	AM/FM Stereo W/ blue tooth phone capabilities.		

OPERATOR STATION:			
63	Unit shall be equipped with canopy with ROPS/FOPS Level 1 protection, and be multiplane isolation mounted for noise/vibration reduction		
64	3" retractable seat belt shall be provided		
65	Steering wheel shall be tillable		
66	3-point contact at all times at the front & rear of the loader and around the roof-line		
67	Heated operators seat W/ head rest, independent height and weight adjustments.		
68	A seat backrest extension will be standard		
69	Cab shall have a minimum of 2 cup holders, personal cooler holder, and storage compartment for operator's manual and removable rubber floor mat.		
GENERAL SPECIFICATIONS:			
70	All tires shall have fenders		
71 *	The counterweight shall be built-in		
72	License plate bracket and light		
73	Unit will be provided with a rear hitch with locking pin		
74	Unit shall have an articulation locking bar		
75	Unit shall have vandal protection with lockable operator station doors, engine enclosures, external storage compartments, battery box, and filler access for radiator/fuel/DEF/hydraulic/transmission.		
76	All service openings in the chassis are to have bolted on removable covers where available to include but not limited to the transmission side frame covers.		
77 *	The unit shall be provided with a loader boom service locking bar		
78	Loader shall have reinforced articulation joints with double tapered roller bearings		
79	Fuel tank capacity shall be no less than 75 gallons Specify Gallons _____		
80	Operating weight with standard equipment, Hydraulic coupler 3.5 Gp. Bucket with Bolt-On Edges, 175 lb. operator and full fuel tank shall be no less than 34,500 lbs.		
81	Bucket breakout force shall be no less than 28,000 lbs. with manufacturer's standard Z-Bar linkage with GP Bucket with Bolt-on Edge, 3.5 cu yd.		
82	Ground clearance under the loader shall be no less than 15"		
83	Loader with attachment coupler and bucket shall have height to hinge pin no less than 13 feet		
84	Machine Full turn tipping load with standard Z-Bar linkage with GP Bucket with Bolt-on Edge, 3.5 cu yd. shall be at least 26,350 lbs.		
85	Dump clearance at 45 degrees at full height shall be no less than 8 ft. 9 in		
86	Reach at 45 degree dump, 7 ft. clearance shall be no less than 4 ft. 9 in		
FRAMES & STRUCTURES:			

87	Machine shall be equipped with an exterior mounted, ground level storage compartment		
88	Transmission bottom and side guards.		
OPTIONAL CONFIGURATION:			
89	Unit to have axle coolers		
90	Ride control, automatic with monitor adjustable speed settings		
91	Centrifugal engine air intake pre-cleaner.		
92	Centrifugal cab fresh air pre-cleaner for heavy airborne debris and dust.		
93	Heated Mirrors.		
94	Environmental drains and oil sampling for the engine oil, transmission oil, hydraulic oil, and engine coolant.		
95	Full fenders with mud flaps all four wheels		
96	One quick coupler blank compatible with the John Deere Hi-Vis couplers presently in place at the city		
97	Electrical corrosion protection package		
98	3 sets of full function keys for all locks		
99	3.5 CY Heavy Duty GP bucket with bolt on cutting edge.		
100	Hydraulically driven quick coupling system Compatible with the city's existing attachments that use the John Deere High-Vis System and hydraulic quick couplers compatible with those already in use on the attachments presently owned by the city.		
<p>The unit must Electrically, Hydraulically and Mechanically support the loader attachments in place at the city. This must be done without the needs of adapters of any sort. Unit must also accept the John Deere HI-Vis style couplers used on the attachments presently owned by the city. This must be done without the needs of adapters of any sort.</p>			
<p>Training to be conducted at the time of delivery by a Factory Trained Qualified Representative at 103 Adams Ave Lewiston Me.</p>			
<p>OPTIONAL EQUIPMENT/ TRAINING: Optional equipment/ Training will be listed & priced separately from the machine bid to include individual pricing, complete specifications & literature on each item.</p>			
101	<p>OPTION # 1 - Upgraded front hydraulics. Any hydraulic lines and controls that would be required to operate the loader mounted open broom and side dump buckets the city presently owns. These would be above and beyond the hydraulic lines and controls need for the quick coupler and plow reversing that are included earlier in this specification.</p> <p style="text-align: right;">\$ _____</p>		
102	<p>OPTION # 2 Diagnostic/ repair software required to work on the unit that is being bid.</p> <p style="text-align: right;">\$ _____</p>		
103	<p>OPTION # 3 Diagnostic communications cable required to connect lap top to unit being bid</p> <p style="text-align: right;">\$ _____</p>		

104	<p>OPTION # 4 Diagnostic/ repair training for shop mechanics. To be conducted by factor representative. Training to be held over two days @ LPW 103 Adams Ave location. One day to be class room/ computer training and the second day to be hands on training with minimum of two units to be supplied by vender for the hands on training.</p> <p style="text-align: right;">\$ _____</p>
105	<p>OPTION # 5 Future costs related to any and all yearly fees related to the use of manufacturers software/ technology</p> <p style="text-align: right;">Future costs \$ _____</p>
<p>TRADE-INS: 2003 Kawasaki 65 ZV loader W/ Plow and Wing VIN # 65C45110 HOURS APPROX. 5,300 +</p> <p>2001 John Deere 624H Loader W/ Plow and Wing VIN# DW624HX582231 HOURS APPROX. 14,400 +</p>	
<p>PLOW EQUIPMENT: American/HPF or Viking Plow Gear only</p>	
107	<p>Plow gear to be mounted on quick couple plate compatible with the John Deere Hi-Vis coupling system.</p>
108	<p>Wing tower & hydraulic lines to be mounted for quick removal hydraulic line to have quick couplers</p>
109	<p>All hydraulic couplers to be stainless steel and are to have caps on both ends of the couplers for storage when not in use.</p>
110	<p>Front wing post (Viking FH-20 or H.P. F Patrol wing only Height to not exceed 6'</p>
111	<p>Rear high lift cable wing tower (Viking H 300 or H P F 714 only)</p>
112	<p>Cable control package to control plow and wing functions.</p>
113	<p>Hydraulic control valve to be shielded from weather by means of a cover or position in the chassis <u>to be determined by representative of the City of Lewiston</u></p>
114	<p>Full trip wing. (12' Wing with 11' edge) W/ spring loaded Heavy Duty full trip arms, Heavy duty lower arm to with shock absorption spring. (Viking 144WHD or HPF 12DRA only</p>
115	<p>12' Trip edge reversible polymer plow W/ heavy duty double ram push frame with cushion valve Viking R1242TEP or HPF 4512RR85</p>
116	<p>Plow frame painted to match the loader</p>
117	<p>Front plow to have a Valley Blades Polar Flex edge installed on it.</p>
118	<p>Heavy duty 14' Loader mounted Snow pusher W/ Heavy duty independent metal trip edges installed. Floating Bucket coupler. Pusher to be mounted by way of quick coupler compatible with the present John Deere HI-VIS coupler already in place at the city</p>

