

INVITATION TO BID

Sealed bids will be received by the City of Auburn, until 10:30 a.m. local time, on Thursday, June 07, 2007 in the Office of the City Manager, 144 Tichenor Avenue, Auburn, Alabama, and then publicly opened and read for furnishing the following:

ONE (1) AUTOMATIC DRY PRIME PUMP TRAILER MOUNTED

Bid specifications are attached. The City is requiring bid prices on one (1) automatic dry prime pump trailer mounted. Please direct any questions to Sandy Leonard (334) 501-3097. Bids must be submitted on the attached form within a sealed envelope addressed:

Purchasing Office, City of Auburn
144 Tichenor Avenue, Suite 1
Auburn, Alabama 36830

Envelope must be plainly marked on the outside as follows:

BID: One (1) Automatic Dry Prime Pump Trailer Mounted
OPENING: 10:30 a.m., local time
DATE: Thursday, June 07, 2007

The City of Auburn reserves the right, as the best interest of the city may require, to award the purchase contract from any of the bids, to reject any or all bids, and to waive any informalities in bids received. Bid will be good for ninety (90) days after being opened by the City of Auburn, Alabama. The City reserves the right to revert to the State of Alabama Contract if the bid price is higher than the contracted amount through the State.

The successful bidder will note that the City pays by invoice on each Friday of the month. Invoices must be received by accounts payable at least seven working days before the scheduled check write. If you have any questions concerning billing, contact our accounts payable office at (334) 501-7237.

CITY OF AUBURN

Karen S. Broome
Purchasing Officer

CITY OF AUBURN, AL
 BID SPECIFICATIONS
 ONE (1) AUTOMATIC DRY PRIME PUMP TRAILER MOUNTED

It is the intent of these specifications to describe an Automatic dry prime pump trailer mounted. These specifications describe and state minimum requirements of this item. Bids submitted on equipment not meeting these minimum capacities and requirements will be subject to rejection. All bidders must fill in all blanks: YES if meeting or exceeding specifications and NO if exceptions are taken. Any exceptions taken must be explained in written detail on bidder's letterhead and attached to the bid submitted. Bidder must attach a copy of factory warranty for equipment being bid.

The following are intended as guidelines, all equivalent or comparable units will be considered.

A. DESIGN REQUIREMENTS	<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
1. OPERATING SPEED (MAXIMUM) 2200 RPM	_____	_____	_____
2. SOLIDS HANDLING SIZE 3 INCHES	_____	_____	_____
3. IMPELLER DIAMETER: 256 mm	_____	_____	_____
4. SUCTION SIZE: 4 INCHES	_____	_____	_____
5. DISCHARGE SIZE: 4INCHES	_____	_____	_____
6. MAXIMUM SUCTION LIFT : 28 FEET	_____	_____	_____
7. MAXIMUM DUTY POINT: 680 GPM AT 120'TDH (including a 15' suction lift)	_____	_____	_____
8. SECOND DUTY POINT: 720 GPM AT 100'TDH (including a 25' suction lift)	_____	_____	_____
9. MINIMUM SHUTOFF HEAD: 170 FEET	_____	_____	_____
B. EQUIPMENT			
1. CASING, SUCTION COVER, SEPARATION TANK: Pump castings shall be cast iron. Pump design shall incorporate a direct suction flow path that is in axial alignment with the impeller eye. There shall be no turns, chambers, or valves between the suction flange and the impeller eye.	_____	_____	_____

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	<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
2. IMPELLERS: The pump impeller shall be an open, three-bladed, non-clog type with pump-out vanes on the back shroud and fabricated from hardened cast- chromium steel construction (minimum Brinell Hardness 340 HB).	_____	_____	_____
3. WEARPLATES: Shall be fully adjustable and replaceable, fabricated of cast iron. Wear plate clearances shall have no relationship to the ability of the pump to achieve a prime.	_____	_____	_____
4. BEARINGS AND SHAFTS: Pump shall be fitted with a bearing bracket to contain the shaft and bearings. Bearings shall be tapered roller bearings of adequate size to withstand imposed loads for sustained pumping at maximum duty points. Minimum ISO L ₁₀ bearing life to be 100,000 hours. Impeller shafts shall be fabricated of 1.5% chromium alloy.	_____	_____	_____
5. SEALS: Seals shall be high pressure, mechanical self-adjusting type with silicon carbide faces capable of withstanding suction pressures to 100 psi. The mechanical seal shall be cooled and lubricated in an oil bath reservoir, requiring no maintenance or adjustment. Pump shall be capable of running dry, with no damage, for periods up to twenty-four hours. All metal parts shall be of stainless steel. Elastomers shall be Viton.	_____	_____	_____
6. PUMP SUCTION AND DISCHARGE FLANGES: Shall be 4" cast iron ANSI (B16.1) Class 150, raised faced with male camlock quick release fittings.	_____	_____	_____
7. PUMP GASKETS: Shall be compressed fiber and/or Teflon.	_____	_____	_____
8. PUMP O RINGS: Shall be Viton.	_____	_____	_____
9. PRIMING SYSTEM: Pump shall be fitted with a fully automatic priming system incorporating a twin-cylinder compressor and air ejector assembly. No vacuum pumps will be accepted. The compressor shall be installed on the engine auxiliary drive and shall be gear driven, lubricated and cooled from the engine. The priming system shall require no fail-safe protection float gear or any adjusting at high or low suction lifts.	_____	_____	_____

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	<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
10. CHECK VALVE: Pump shall be supplied with an integral swing check valve mounted on the discharge of the pump, allowing unrestricted flow from the impeller. The check valve shall prevent in-line return of flow when the pump is shut off. Non-return valve elastomers shall be Nitrile rubber and shall be field replaceable.	_____	_____	_____
11. DRIVE UNIT: The drive unit shall be a diesel water-cooled engine. The engine shall drive the pump by use of direct-connected intermediate drive plate. Starter shall be twelve-volt electric. Safety shut down switches for low oil pressure and high temperature shall be provided. Battery shall have 180 amp hour rating. Unit shall include a tachometer and an hour meter. Drive unit shall be a John Deere 4024T or equal, rated at 37 H.P. (continuous) at 2000 R.P.M. A certified continuous-duty engine curve shall be supplied to the owner/engineer. Drive Unit shall be supplied with an integral engine coolant heater (20-amp, 115 VAC required) hard-wired to the junction box within the enclosure. A battery charger will be included.	_____	_____	_____
12. GOVERNOR: An automatic throttle system shall be included with the controls to automatically vary the speed of the engine.	_____	_____	_____
13. TRAILER: The pump and engine shall be trailer mounted with pintle type trailer hitch. Tires and torsion bar suspension shall be adequately sized for the required load range ratings. Trailers shall be equipped with fenders, front and rear support stands, lifting bar, safety chains and side and rear reflectors. Trailer design shall be in compliance with applicable DOT regulations and include DOT lights.	_____	_____	_____
14. EXHAUST: Exhaust system shall include a hospital grade muffler housed in a separate chamber within the enclosure. All exhaust piping and manifolds shall be encased in fitted acoustic blankets. They shall be constructed of high-density fiberglass material with waterproof jacketing.	_____	_____	_____
15. FACTORY PAINTING: Pump, engine, and base shall be shop primed and finish painted at the place of manufacturer. Materials and dry film thickness for priming and finish paint shall be in accordance with customer specifications.	_____	_____	_____
A. COLOR: <u>Orange</u>			

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	<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
C. AUTOMATIC STARTING CONTROL SYSTEM			
1. The engine shall be equipped with a factory installed microprocessor-based controller, to start/stop the engine at a signal supplied by high and low level floats.	___	___	_____
D. ENGINE / PUMP CONTROL SPECIFICATIONS			
1. The engine shall be started, stopped, and controlled by a high performance state of the art digital controller. The controller shall be weather proof enclosed, and contain an external weatherproof 12-position keypad accessible without the need to remove or open any protective cover or enclosure. It shall be designed to start/stop the engine at a signal supplied by high and low level floats or a 4-20 mA transducer. The pump control shall provide the following functions without modification, factory recalibration or change of chips or boards by simply accessing the keypad.	___	___	_____
2. The keypad shall be a capacitive touch sensing system. No mechanical switches will be acceptable. The keypad shall operate in extreme temperatures, through ice, snow, mud, grease, etc. and maintain complete weather tight sealing of the control panel.	___	___	_____
3. In automatic mode, the unit shall conserve energy and go to "sleep".	___	___	_____
4. The control panel shall function interchangeably from; float switches, pressure switch, or transducer as well as manual start/stop by selection at the keypad. No other equipment or hardware changes are required.	___	___	_____
5. The control panel shall be capable of varying the engine speed to maintain a constant level in a process without a change to the panel other than via the keypad.	___	___	_____
6. The start function can be programmed to provide 3 separate functions each day for 7 days (i.e. a start, warm up, exercise cycle on two separate days at different times and for a varying length of time all via the keypad).	___	___	_____

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	<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
7. Manual-Automatic Button			
a. In Manual Mode, Manual “Start” button starts engine and runs until “Stop” button is depressed or an emergency shutdown occurs.	___	___	_____
b. In Automatic Mode start/stop sequencing is initiated by either one-normally open and one-normally closed narrow angler float switches, pressure switch, transducer or a signal from a digital input.	___	___	_____
8. The controller shall integrate the engine safety shut-off for low-oil temperature, high-temperature, and provide over-speed protection.	___	___	_____
9. The controller shall include standard field adjustable parameters for engine cycle crank timer, shutdown time delay, warm-up time delay, and cool-down time delay.	___	___	_____
10. The control panel shall have only one circuit board with 8 built in relays. Each relay can be named to provide any function all via the key play without changing relays, chips, printed circuits or any hardware or software.	___	___	_____
11. Standard components shall consist of (24) digital inputs, (7) analog inputs, (1) magnetic pick-up input, (8) 20-amp form “C” relays, (1) RS232 port, (1) RS485 port, (1) RS232/RS485 port, (1) J1939 port, and (1) 64X128 pixel full graphic LCD display with backlight.	___	___	_____
12. The industrially hardened control panel shall withstand Vibration of 3 g, 3 axis, frequency swept 10-1000 Hz, in an operating temperature Range of 4° to 176°F (-20° to 80°C) and an operating humidity range of 0-95% Non-Condensing.	___	___	_____
E. OPINIONAL			
1. The unit shall include a fully automatic trickle charger powered by 10-amps, 115 VAC. It shall be hard-wired into the junction box within the enclosure.	___	___	_____

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- | | <u>YES</u> | <u>NO</u> | <u>OFFERED</u> |
|---|------------|-----------|----------------|
| 2. Two lengths of 4" diameter by 20' long suction hose will be provided with a suction strainer. Six lengths of 50' sections of discharge hose will be included. All connections are to be camlock type quick release fittings. | _____ | _____ | _____ |

F. OTHER GENERAL SPECIFICATIONS:

1. Any other standard equipment not mentioned to be included.
2. Successful bidder must inspect the system prior to delivery, supervise the start up and testing of the system and certify the system has been properly furnished and is ready for operation.
3. Successful bidder shall furnish an Operations and Maintenance manual for the pump and engine.
4. Successful bidder must provide competent representative to instruct operating personnel in the proper operation and maintenance of the system for a period of not less than one-half day if needed.
5. Successful bidder must be capable of performing own warranty work in his maintenance department.
6. Unit shall be manufactured in the United States of America.

G. WARRANTY

1. Successful bidder shall furnish a copy of the engine manufacturer's parts and labor warranty.
2. A one-year Parts and Labor Warranty issued by the successful bidder on the Pump System. This warranty must cover all pump parts, including the mechanical seal.

H. DELIVERY

Unit to be delivered to the following address:
356 North Donahue Drive
Auburn, Alabama 36830
Bid price will F.O.B. Auburn

