

The Roscommon County Road Commission will receive sealed bids until 2:00 p.m. on Wednesday, July 11th, 2018. (Bids will be opened at 2:00 p.m. for tabulation and review. Bid results and staff recommendations will be presented to the board at their regular meeting July 12th, 2018 beginning 7:00 p.m.). Our office is located at 820 E. West Branch Road, Prudenville, MI 48651, for the purchase of one Spray Injection Road Repair Machine.

(1) 2018 New Trailer Mounted Spray Injection Road Repair Machine

Specifications may be obtained by contacting the Roscommon County Road Commission at the above address.

Submit bids in a sealed envelope that is clearly marked with the words: "**SPRAY INJECTION ROAD REPAIR MACHINE**".

The Roscommon County Road Commission reserves the right to reject any or all bids, to waive irregularities in the bid, to waive details in the specifications, and to accept the bid deemed to be in the best interest of Roscommon County.

Board of Roscommon County
Road Commissioners

Jim Porath, Chair
Fred Chidester, Vice-Chair
Clint L. Stauffer, Member
Brian Vaughn, Member
John Earley, Member

**ROSCOMMON COUNTY ROAD COMMISSION
BID SPECIFICATIONS
FOR**

(1) 2018 New Trailer Mounted Spray Injection Road Repair Machine

Trailer Mounted Spray Injection Road Repair Machine

General:

The unit shall be trailer-mounted and designed to repair potholes, cracks or board distressed areas in paved surfaces. The unit shall be capable of blowing water, dust or debris from the pothole or surface to be repaired. The unit then shall apply a spray of hot asphalt emulsion on the cleaned surface to provide a tack coat and then inject emulsion coated aggregate over the repaired area. Unit must be capable of functioning in temperatures down to 15 degrees Fahrenheit. Unit must produce 130 lbs. of mix per minute in continuous operation to be considered. Unit must also not get oil or rock on the operator during operation.

_____ YES, MEETS ALL SPECIFICATIONS
_____ NO, DESCRIBE _____

Aggregate System:

The pothole patching machine shall receive aggregate from a dump truck with tail gate modified by the pothole patching machine supplier to gravity feed the hopper box of the unit. No augers, conveyors, or any other mechanical devices shall be allowed. The hopper box shall be designed to hold the aggregate before it enters the air stream created by the blower. The hopper box shall have a safety screen welded in place and will allow aggregate up to 2-1/2" in size to pass into the system without clogging. The hopper box shall be equipped with a slide opened and closed by a 3-1/4" diameter, 4" stroke air ram. The electric/air solenoid valve that controls the air gate must have a manual push button system incorporated within the valve to allow the air gate to be operated in both directions from the electric / air solenoid valve in the event of a failure of air gate switch.

_____ YES, MEETS ALL SPECIFICATIONS
_____ NO, DESCRIBE _____

Aggregate Conduit System:

Shall consist of an abrasion resistant 3-1/2" ID schedule 40 pipe 10' long connected to a flexible 3-1/2" ID non-kinking, plastic wire reinforced rubber neoprene-lined hose, 16'-4" long. The flexible hose shall be fitted with an automatic pressure compensating nozzle. This nozzle shall be a perforated tube, 3-1/2" in diameter and 13" long. It shall be attached to a separate manifold block that contains a 1" by 1/16" spray slot for coating aggregate. This manifold block is permanent. This manifold block must also accept a crack seal attachment. When the perforated tube needs replacing due to wear, the heated manifold does not have to be replaced. The unit must not produce over spray of material, and must keep the operator clean and free of oil and rock. **Unit must not clog up when transported in cold weather.**

_____ YES, MEETS ALL SPECIFICATIONS
_____ NO, DESCRIBE _____

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Zero Intrusion Hose Carrier:

The flexible hose and aggregate flow nozzle shall be supported by a Reflective hose carrier. This device shall allow the operator to repair an area within an 18' radius from the pivot point where the boom is mounted to the trailer frame, The boom shall be a three section device that allows the operator to move throughout its full radius using only very light force from one hand, and shall be adjustable for height with little effort. A yellow strobe light shall be mounted at the top of a vertical pole located at the rear of the machine which engages automatically when the engine is running. A flip over reversible handle bar, with multi point support position, must allow the operator to operate the boom controls from either side with no compromise. The handle bar control shall include a ball valve to regulate emulsion flow and a high grade sealed electric toggle switch to open and close the air ram. The engine throttle will be mounted at the boom control station to allow the operator to vary the engine speed from the work position. A signal horn control button for the air hour will also be located on the boom control station. A multi function lighted arrow board must be mounted on an elevated support system.

_____ YES, MEETS ALL SPECIFICATIONS
_____ NO, DESCRIBE _____

Blower System:

The blower shall be directly coupled to the flywheel of the engine. It shall produce 450 CFM at 7 psi at 1500 RPM using approximately 42 BHP. The blower must be capable of producing 14 PSI to insure ample power for any application. Blower must have a built in sight gauge. The unit shall be protected from overheating by a pop-off valve set at 10 PSI. The blower shall intake air from an easily accessible caged paper element filter of not less than 300 inches of filtration surface area covered by a foam per-cleaner element. Blower must have bearing at both ends of the input and output shafts, no bushings. Unit must have helical gearing for long life. Blower shaft and lobes must be of a single machined assembly

_____ YES, MEETS ALL SPECIFICATIONS
_____ NO, DESCRIBE _____

Air Compressor:

The unit shall be directly driven by the engine. It shall be of heavy duty construction and shall deliver a continuous pressure with a pop-off regulator set at between 70 PSI and 95 PSI. It shall produce 15 CFM.

_____ YES, MEETS ALL SPECIFICATIONS
_____ NO, DESCRIBE _____

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Emulsion System:

The emulsion tank shall be an ASME certified pressure vessel with a 250 gallon capacity. It shall have a 200 PSI working pressure at 500 degrees F. The entire tank shall be insulated by R-15 weatherproof, fire-retardant high density fiberglass. This insulation must cover the entire tank, including the heat blanket area as standard equipment. It shall be equipped with (2) 1500 watt, 120 volt heater blankets thermostatically controlled. The tank heating system must be capable of operating continuously regardless of whether the emulsion tank is empty or full with no damage to the heating elements or other components. This allows an empty tank to be pre-heated. The tank shall have a pressure relief valve set between 100 PSI and 110 PSI. The unit must feed its emulsion via a pressurized emulsion tank to allow the system to be unaffected by cold weather. This system will be controlled by a rotary style heavy duty 2-way valve that has an emulsion and a cleanout position.

_____ YES, MEETS ALL SPECIFICATIONS
_____ NO, DESCRIBE _____

Emulsion Clean-out Tank:

Shall be a 15 gallon pressurized vessel with a 200 PSI working pressure at 450 degrees F. This tank shall be equipped with a pressure relief valve set at 100 PSI to 110 PSI. In the open position, diesel fuel from the clean-out tank will flow through the emulsion line allowing the system to be shutdown without clogging. No disassembly and soaking of any part of the emulsion system will be necessary. The entire nozzle clean out procedure may not get emulsion or diesel on the operator.

_____ YES, MEETS ALL SPECIFICATIONS
_____ NO, DESCRIBE _____

Hot Fluid Mobile Heating System:

A 12 volt circulator pump shall circulate heated fluid through a 2" diameter 4' long pipe inside the emulsion tank, located at the **bottom** of the tank so as to heat the entire load of emulsion, and then through a 3/8" diameter hose to the heated manifold block, then back through the heat exchanger system. This will keep the tank, emulsion line, and heated manifold block at 150 degrees F for cold weather operator down to 15 degrees F. Every part of the emulsion valves, hoses, heated manifold block, and complete delivery system will be heated by this hot fluid mobile heating system.

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_____ NO, DESCRIBE _____

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Engine:

The pothole patching machine shall be powered by a John Deere **non DEF** water cooled, naturally aspirated diesel engine with a rated gross power of 80 BHP. The engine must carry a factory warranty of two years. Engine must be enclosed by an engine compartment that is manufactured by the engine manufacturer, with access door, lined with sound suppression material.

_____ YES, MEETS ALL SPECIFICATIONS
_____ NO, DESCRIBE _____

Trailer:

The trailer shall be constructed on a 1/4" steel rectangle tube frame equipped with a dual axle with 12,000 lb. capacity. The 4 tires shall be a load ranger D on eight bolt wheels. Axles must also be fitted with a grease fitting at each end to facilitate greasing the wheel bearings. The trailer shall have electric brakes on all four wheels, with a re-settable break-away unit, brake and tail lights with directional signals. The entire machine must come standard with 2 coats of primer and 2 coats of high visibility orange paint. The trailer must be certified and meet all Federal Motor Vehicle Safety Standards and is assigned a VIN number.

_____ YES, MEETS ALL SPECIFICATIONS
_____ NO, DESCRIBE _____

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OF ROAD COMMISSIONERS**

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**ROSCOMMON COUNTY ROAD COMMISSION
BIDDERS SHEET
FOR
(1) 2018 New Trailer Mounted Spray Injection Road Repair Machine**

Make & Model _____

Warranty _____

Voluntary Options: _____

Delivery Date _____ Bid firm for _____ Days.

TOTAL BID PRICE \$ _____

Company Name Phone

Address Fax

Date

Representatives Signature

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