



City of Kingman Street Department

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Advertisement For Bid

Bid and Specifications for City of Kingman Street Department Trailer Mounted Injection Spray Patcher.

Please submit a written/sealed bid to the office of the City Clerk at 310 North Fourth Street, Kingman, AZ 86401. Bids will be accepted until **4:00 PM Local Time on March 21, 2024.** Bids will be opened and announced at this time.

Bidder must state the approximate time required for delivery after receipt of order on the Bid Sheet.

Delivery: **Equipment shall be delivered to the City of Kingman Street Department at 3700 E. Andy Devine Ave. in Kingman, AZ, on or before the delivery date as submitted on the bid sheet. A vehicle that is bid with an expected delivery time in excess of 60 days from the date of order may be grounds for the bid to be awarded to the second lowest bidder.**

If you have any questions regarding these bid specifications, please contact Shane Shilstone, Project Manager at 928-692-3106 or email sshilstone@cityofkingman.gov within 5 business days from the closing of the bid. Responses to all questions posed will also be posted within 5 business days of the closing of the bid.

The undersigned certifies that he or she is an authorized agent of the bidder and is empowered to enter into a contract with the City of Kingman for the purpose stated herein. Further, this offer must meet all of the bid specifications and requirements. Please see the attached sheet for the requirements. The bid must include sales tax and the price of delivery to City of Kingman Street Department.

Bidder's Legal Name: _____

Address: _____

Phone Number: _____

Authorized Signature: _____

Printed Name & Title: _____

AZ Sales Tax (use tax) License No. _____



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BID SHEET

The City of Kingman is soliciting bids to purchase a Trailer Mounted Injection Patcher.

The bid shall include all applicable costs for equipment, as specified, a one-time purchase, *including tax and delivery*. Payment will be a one-time purchase.

Cost of Equipment \$ _____

Delivery:

Bid _____ Days

Warranty:

Bid _____

Conditions:

If any of the equipment bid varies from the specifications, such variations must be submitted in writing and included with the bid package.

The City of Kingman reserves the right to waive minor variations if, in the opinion of the City of Kingman, the basic unit meets the general intent of these specifications.

The complete equipment/material bid shall not include a major component that is a prototype nature or has not been in production a sufficient length of time to demonstrate reliability.



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Substitution for Specifications:

Whenever in the specifications any materials or process is indicated or specified by patent or proprietary name and/or by the name of the manufacturer, such specifications shall be deemed to be used for the purpose of facilitating descriptions of the material and/or process desired and shall be deemed to be followed with the words “or equivalent.” The bidder may offer any material(s) or process(as) which shall be equal in every respect to that so indicated or specified provided, however, that if the material(s), process(as), or article(s) delivered by the bidder must furnish the material(s), process(as) or article(s) specified, or one that, in the opinion of the City of Kingman, is equal.

Exceptions to Specifications:

The fact that manufacturers choose not to produce equipment or materials to meet these specifications will not be considered sufficient cause to adjudge these specifications as restrictive. Bidders shall offer the equipment that comes closest to meeting these specifications. The bidder shall note where deviations from specifications are necessary.

Warranty:

Bidder shall state on the Bid Sheet the conditions and durations of the warranty being offered and include pertinent information in detail on an attachment to the bid. For bidding purposes, only standard warranty coverage will be considered. Additional warranty coverages may be offered at the time of the bid but will not be considered part of the bid and shall not be included in any bid prices.

City of Kingman Contact:

Shane Shilstone – Project Manager – 3700 E Andy Devine - Kingman, AZ 86409
OFFICE: (928) 692-3106 sshilstone@cityofkingman.gov



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BID

Street Department– is requesting bids for a trailer-mounted injection spray patcher.

1. These specifications are intended to describe a trailer-mounted, tow-behind injection spray patcher designed to repair potholes, seam cracks, alligator cracks, and radius drop-off areas that must be operated from outside. The unit must be equipped with an auxiliary engine to power the patcher functions, a heated emulsion tank, a heated spray nozzle, a variable emulsion control, and a rearview color camera system with a flat-screen monitor.
2. The unit shall be new to the current manufacturer. No prototype, demo, or used pothole patchers will be used.
3. The bid shall conform in strength, quality of materials, and workmanship to what is normally provided to the trade in general. Axle weights and dimensions must meet state and federal requirements without requiring oversized or overweight permits.
4. No deviations to these specifications will be allowed.

AUXILIARY ENGINE

- _____ A. An auxiliary diesel engine shall be provided to power the pothole patcher functions. The engine shall be a four-cylinder, water-cooled, Tier 4 Final with a horsepower rating of not less than 74 HP at 2600 RPM.
- _____ B. Engine to be equipped with a 3-point safety engine shutdown device that shuts down the engine for low oil pressure, high coolant temperature, and low coolant level. The warning lights and alarms must be located at the operator's station.
- _____ C. Engine shall be equipped with a full-flow spin-on oil filter and spin-on fuel filter.
- _____ D. Twelve-(12) volt electrical system, 550 CCA electric starter, and 85-amp alternator shall be provided.
- _____ E. Auxiliary engine to be protected from the elements by being installed inside the patcher body enclosure.
- _____ F. Engine enclosure shall be designed to reduce auxiliary engine noise.
- _____ G. The engine and blower shall be direct coupled then bolted to a rubber mounted sub frame. This will insure a proper line up of the components and reduce vibration wear and fatigue
- _____ H. The diesel engine must receive fuel from a forty-gallon fuel tank.



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HYDRAULIC SYSTEM

- _____ A. Single 12-volt DC pump shall be provided to operate optional boom hydraulic leveling. The pump must be capable of .026 Cu. Inches per revolution.

AIR DELIVERY SYSTEM

- _____ A. Patcher to be equipped with a 5” high volume, medium pressure, lobe-type air delivery blower.
- _____ B. Blower must be capable of producing 670 CFM (18.97 cubic meters per minute) @ 2200 RPM.
- _____ C. Air delivery system to be equipped with long life cleanable, dry type filter
- _____ D. Blower is direct drive from diesel engine

AGGREGATE DELIVERY HOSE

- _____ A. Pothole patcher to be equipped with a 3-1/2" (88.9 mm) I.D. gum-lined, abrasion-resistant, non-kinking spiral reinforced hose to deliver aggregate.

AGGREGATE FEEDER

- _____ A. An aggregate hopper to be provided to transfer aggregate through the aggregate hose to the delivery nozzle.
- _____ B. Aggregate hopper to be venturi type. Hopper to be replaceable.
- _____ C. The trailer-mounted road repair system shall receive its aggregate from a truck with a tailgate feed tube, supplied by the dealer. This feed system must be easy to install and remove, so the dump truck can be used for multipurpose work without being dedicated to the road repair system.
- _____ D. The road repair system feed tube must transfer the aggregate from the truck to the rock box inside the frame of the trailer without any mechanical devices.
- _____ E. The rockhopper dimensions must be 30 1/8” X 14 1/2” X 11 7/16”. Rockhopper must have a volumetric capacity of 2 cubic feet.



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- _____ F. The rockhopper must have a screen for safety to protect the operator. This screen will be patterned to allow the aggregate to flow past it at a rate needed for a continuous operation.
- _____ G. The aggregate flow on and off will be regulated by a single slide gate opened and closed with an electro-hydraulic cylinder located at the bottom of the rockhopper.
- _____ H. The venture air flow system must have the capability of passing 2-1/2 inch stone if needed without clogging
- _____ I. The system must have the ability to deliver rock effectively between 1400 RPM and 2000 RPMs, with the rock flow adjusted by the throttle without leaving the operator's station.
- _____ J. The Unit must have the ability to produce the amount of rock needed to do a small, or large, job with a continuous flow up to 125 pounds per minute

BOOM ASSEMBLY

- _____ A. A boom assembly to be provided to support the aggregate delivery hose, the insulated heated emulsion hose, two coolant lines that carry hot coolant to the end of the boom, and the delivery nozzle.
- _____ B. Rear boom shall include a hydraulic assist from a single 12-volt electric pump to provide the operator with the ability to level the boom on uneven surfaces for ease of operation.
- _____ C. The wire-reinforced, flexible, gum-lined delivery hose and heated emulsion coating system will be carried and supported by a Tri-folding weightless hydraulic leaving boom system. The support system can not have any moving or swinging parts or segments over the operator's head for safety and ease of operation
- _____ D. All controls must be mounted on the boom for on-the-spot changes, safety, and ease of operation. The operator must be able to shut down the engine from the operator's station
- _____ E. The Tri-folding boom system must fold against the rear of the unit for operator safety and travel. Folding against the rear keeps the operator in the same lane as the unit for safety. The end of the secured boom must be seen out the driver's side mirror during transportation.



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- _____ F. This support system, for the boom, must have been in production for more than five years.
- _____ G. Controls must be located on the boom and move with the operator giving them full control and the ability to operate all functions without leaving the workstation.
- _____ H. Controls at the work station must consist of a keyed ignition, warning lights, and sound for the engine safety system, tach, throttle, hour meter, horn, fuel gauge, glow plug, emulsion flow, and boom controls.
- _____ I. Throttle must be easy to operate, and responsive, without pushing buttons and turning knobs.
- _____ J. The boom must be able to repair the center line without exposing anything other than the delivery nozzle in traffic. The unit must be capable of achieving this repair with the machine in the standard direction of traffic flow.
- _____ K. The entire “patching” process must be able to be delivered from the unit with the boom at a locked 90-degree angle to ensure a compacted repair with no voids or cavities.

DELIVERY NOZZLE

- _____ A. A hardened steel delivery nozzle to be provided to coat the aggregate with the heated asphalt emulsion as the aggregate is blown from the delivery hose.
- _____ B. The hardened steel delivery nozzle to have 8 holes from which the asphalt emulsion is sprayed to coat the aggregate.
- _____ C. The delivery nozzle to contain a water jacket that is heated by continuously circulating hot auxiliary engine radiator coolant through it.
- _____ D. Nozzle must maintain heat to allow the unit to operate in temps below freezing.
- _____ E. A cam lock quick coupling cap to be provided to seal the nozzle when not in use.

ASPHALT EMULSION STORAGE AND DELIVERY

- _____ A. Asphalt emulsion to be stored in a pressurized, horizontally mounted 300-gallon tank.
- _____ B. Tank to be fully foam insulated with polyurethane foam. Foam must have a minimum of 2-inch thickness with an insulation R-value of at least 20



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- _____ C. The asphalt emulsion tank to have a 12-inch diameter fill opening with a hinged safety closure. Fill opening to be ASME certified.
- _____ D. Emulsion to be transported to the delivery nozzle through a petroleum-resistant delivery hose. Hose to have push-on fittings for ease of repair and replacement. Hose to be foam insulated.
- _____ E. Emulsion delivery system to be pressurized at 70 PSI and protected with a regulator and a water separator.
- _____ F. All pressurized tanks on carrier to meet or exceed FMVSS certification.
- _____ G. All pressurized tanks on body to have ASME certification
- _____ H. Asphalt emulsion tank to be heated by 110-volt, 2,000-watt thermostatically controlled heating element with temperature probe immersed in a heated coolant cell. The system must have the ability to keep the emulsion at or above 150 degrees while in the tank.
- _____ I. The Heating element must have the ability to be replaced in a fifteen-minute time frame. This must be completed without removing any insulation from emulsion tanks.
- _____ J. The 110-volt heat system can be plugged in and operated safely with the emulsion tank empty or full.
- _____ K. During patching operations, heating of the emulsion to be accomplished by circulating hot coolant from the auxiliary engine throughout the system.
- _____ L. A flush system to be provided to flush & clean the asphalt emulsion from the emulsion delivery hose and nozzle. A 3-way valve to be provided to control emulsion delivery, emulsion flush, or emulsion off functions.
- _____ N. The entire system must be capable of operation in temps as low as twenty degrees Fahrenheit.

EMULSION FLUSH SYSTEM

- _____ A. A pressurized 29-gallon flush tank to be provided to store cleaning solution.
- _____ B. The flush tank must have the capability of holding 29 gallons to ensure over 60 flushes produced without refilling or pressurizing.



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- _____ C. The flush process will be engaged by turning 1 valve 180 degrees. This valve must be mounted within two inches of the emulsion pick-up tube to ensure a complete flush of the line.
- _____ D. The entire process must be done with the operator staying clean and not having to touch the delivery nozzle. This must be done with less than ½ gallon of flush at a time with no disassembly needed.

AIR COMPRESSOR

- _____ A. Air compressor must be directly driven by the diesel engine.
- _____ B. The unit must carry a supply tank with 120 psi air pressure availability.
- _____ C. Air pressure to the emulsion and flush tank must be adjusted by a regulator/air dryer combination.
- _____ D. Air compressor must produce 12CFM @ 120 psi minimum.

OPERATING CONTROLS

- _____ A. An outside mounted box-type panel with easy operator access shall be mounted on the delivery boom.
- _____ B. Control panel to be equipped with ignition start/stop with pre-heat.
- _____ C. Control panel to be equipped with operator-to-driver signal horn switch.
- _____ D. The aggregate flow and compaction will be regulated by the throttle without having to leave the operator's station.
- _____ E. The operator must be able to operate within three feet of cars and pedestrians without any risk of exposure from blowout during the repair process.
- _____ F. The unit must be capable of repairing above-mentioned damages with a four-step process. Clean, Tack, Fill / Compact, and Dry coat.

TRAILER

- _____ A. Shall be equipped with a heavy-duty frame, tandem axles, and leaf spring suspension, with a minimum capacity of 14,000 lbs.
- _____ B. Tires must be LT235/85R16BG, and must have a maximum load capacity of 3500 lbs @ 80 psi. Rims must be 6.5" Width X 31.05 Outer Diameter.



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- _____ C. The trailer must be equipped with an electric braking system on each axle and a breakaway system at the tongue.
- _____ D. Unit must come equipped with DOT-approved Lighting.
- _____ E. Trailer must have a vertical adjustable hitch.
- _____ F. Trailer, fully loaded (fuel, flush, & emulsion) must not exceed 80% of rated trailer weight capacity. No Exceptions.

- _____ G. Engine, Compressor, Blower, Air Tank, Emulsion Tank, Batteries, Hydraulic Pump, Flush Tank, and Diesel Engine Fuel Tank must be fully enclosed within a single body. The enclosure must have easy open doors for ease of access to the daily maintenance points. All panels must be removable for any major repairs. No Single component shrouding will be allowed.

SAFETY EQUIPMENT

- _____ A. Patcher to meet all federal motor vehicle safety standards.
- _____ B. Patcher shall to be equipped with an amber strobe light mounted on the patcher.
- _____ C. Permanent warning labels shall be provided at all hazard areas.
- _____ D. To maintain a safe operational environment, all moving components must not exceed a height of 54” other than safety lighting.
- _____ E. Unit shall be equipped with a rear view wireless camera and 7” color wireless flat screen monitor with sound. The system is capable of night vision with auto dimming monitor. Capable of continuous viewing. Equipped with a watertight case for monitor storage.

PAINT COLOR

- _____ A. The patcher shall be painted with 1 coat of sealer/primer and 2 coats of Axalta Imron Elite polyurethane paint in the manufacturer’s standard yellow color. Paint shall be lead-free.



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PATCHER WARRANTY

- _____ A. Per the manufacturer-published warranty, the patcher shall be warranted to be free of defective materials and workmanship for a period of 12 months or 1,200 hours from the date of delivery. No exceptions.

- _____ B. Patcher engine shall be warranted for not less than 24 months or 2000 hours, whichever occurs first from the date of delivery.

- _____ C. Sweeper hydraulic system shall be warranted for not less than 60 months or 6000 hours, whichever occurs first from the date of delivery.