



CITY OF SPRINGFIELD

Public Works Department

Street • Sanitation • Vehicle Maintenance • Storm Water

2809 Clinard Drive • Springfield, TN 37172

Telephone (615) 384-2746 • Fax (615) 382-2205

Revised ASE

BID #971

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INVITATION:

The City of Springfield is requesting bids for a **REGENERATIVE AIR, MUNICIPAL STREET SWEEPER** for the Public Works Department.

CONDITIONS:

Units offered under this advertisement shall be new, standard production model and series that must have been in production a minimum of five (5) years. Bidder shall provide a list of 10 cities which currently use the model as bid.

Materials shall be of good commercial quality for the intended service and shall be produced by use of current manufacturing processes. Material shall be treated to resist rust, corrosion and wear.

The design of the mechanical members shall be such that the stress imposed through normal shock loads at maximum engine torque shall not cause rupture or permanent deformation of undue wear on any member. The unit shall be delivered completely assembled, serviced and ready to operate. The bidder shall have a qualified service representative in attendance with the sweeper during start-up operation to make any adjustments and give instructions to assure proper operation of the sweeper.

The bidder shall satisfy the purchasing official that he maintains a store or branch within 50 miles of the working location of the machine, with provisions for storing a representative supply of parts for the machine offered and with provisions for securing parts from the manufacturer within a reasonable length of time.

The unit being bid must meet the following Buy America Requirements noted in Code of Federal Regulations Title 49: Transportation: Part 661-Buy America Requirements Section 661.11 Rolling stock procurements that domestic content be of more than 60 percent of the cost of all components and final assembly takes place in the United States of America. (no exceptions)



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The unit bid shall be a diesel powered regenerative air sweeper mounted on a diesel powered truck chassis such as a TYMCO Model 600 REGENERATIVE AIR SWEEPER or EQUAL.

Bidders must submit with their bid a thorough and concise Warranty on the proposed equipment, printed specifications and advertising literature on the unit they propose to furnish.

Bidder shall supply one (1) parts & service manual, one (1) operator manual and one set of each on CD with the unit.

The bidder shall list on a separate sheet of paper any variations from, or exceptions to, the conditions and specifications of this bid. This sheet shall be labeled "Exception(s) to Bid Conditions and Specifications," and shall be attached to the bid.

Bidder shall be prepared to give a complete demonstration of the merits of the machine offered as directed by the purchaser. The machines so demonstrated shall be complete as offered by the bidder for this bid.

Purchaser desires delivery to be completed within 90 days from date of award. Bidder certifies delivery will be completed _____ days from date of award.

The price or prices quoted shall include all transportation charges fully prepaid to the City of Springfield, Tennessee.

Awards will be made to the lowest responsible bidder. The quality of the articles to be supplied, their conformity with the specifications, their suitability to requirements, delivery terms and guarantee clauses shall be taken into consideration. Guarantee Clauses: Clauses requiring specific guarantees to cover parts delivery, parts repair, total repairs and resale value may be included.

The purchaser reserves the right to reject any or all bids, to waive any informality in bids, to accept in whole or in part such bid or bids as may be deemed in the best interest of the purchaser.

BID PROPOSAL

BASE BID:

**REGENERATIVE AIR, MUNICIPAL
STREET SWEEPER
(per attached specifications)**

Please submit complete specification sheet with bid.

Respectfully submitted,

(Signature Bidder)

(Date)

(Company)

(Telephone)

(Address)

(Fax)

SPECIFICATIONS

Diesel Powered 7.3 Cubic Yard Volumetric Capacity (Min) Municipal Street Sweeper, Twin Gutter Brooms & Dual Steering

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COMPLIANCE TO SPECIFICATIONS

MANUALS/TRAINING

_____ Manufacturer shall have available certifiable training course for complete maintenance and operation of sweeper. Manufacturer must have scheduled a minimum of 25 training courses per year for convenience of customers scheduling.

Bidder shall provide in his bid, all cost (travel, food, room, etc.) for one representative of the purchaser to be trained at a manufacturer's certified training location, the operation and maintenance of the sweeper selected by the City of Springfield.

_____ Bidder shall provide operator instruction/safety/maintenance procedures on DVD with the unit.

PAINT - COLOR

_____ The entire unit shall be painted with manufacturers standard white paint applied over a suitable primer. Pick-up head, gutter brooms and truck frame shall be painted black.

REGENERATIVE AIR SWEEPER

POWER UNIT

The sweeper power unit shall be a diesel fuel, Final Tier 4 emissions (no exceptions) John Deere turbo charged four cylinder engine developing not less than 99 HP @ 2200 RPM (Min).

_____ Engine shall be equipped with a variable speed radiator fan, auxiliary drive, and engine mounted after treatment device.

_____ Spin on replacement type oil filter.

_____ Unit shall have a fuel/water separator and fuel filter remote mounted for easy access with water-in-fuel monitoring that will display a warning in the cab of the sweeper.

_____ 12 volt ignition, electric starter and minimum 90 amp alternator

_____ Engine electronics shall use John Deere ECU module and CAN SAE J1939 data link for communication or equal.

_____ Engine ECU shall be programmed to provide automatic engine monitoring and shutdown when engine problem is detected such as high coolant temperature, low coolant level, or low oil pressure.

_____ All engine controls shall be located inside cab.

_____ Unit shall share a 50 gallon fuel tank and batteries with chassis engine.

Unit shall have a heavy-duty dry type air cleaner with replaceable cleaner element, safety element, and integral precleaner.

_____ Air cleaner restriction must be displayed to operator from control panel including air cleaner restriction percentage and filter service warning.

_____ Engine shall be programmed for isochronous governor feature for engine speed control.

_____ A heat exchanger assembly will provide adequate cooling for three different systems: engine coolant system, engine intake charge air and hydraulic system oil. It must be modular in design for ease of maintenance with each cooler located side-by-side rather than stacked in series. Air will be circulated through the heat exchanger assembly by a variable speed, engine mounted fan.

DUST SEPARATOR

_____ Separation of the dirt and refuse from the air stream shall be accomplished within the hopper by means of a stainless steel **high capacity** multi-pass cylindrical centrifugal single chamber dust separator. The separator shall be designed so that it will not plug with normally encountered debris.

_____ The dust separator shall have a curved, easy to open door allowing inspection and cleaning of the interior. The door shall have an abrasion resistant bonded rubber lining material for long life.

_____ The entire dust separator inlet area shall be lined with a bolt-in replaceable, wear resistant rubber liner for long life.

_____ The dust separator shall be constructed of non-magnetic stainless steel.

_____ A stainless steel screen of not less than 13 gauge shall be provided to allow air to move freely from the hopper into the centrifugal dust separator.

_____ Filters and baffles are not acceptable due to increased cost of replacement and cleaning.

HOPPER

_____ Hopper size to be approximately seven and three tenths (7.3) cubic yard (minimum) volumetric measurement.

_____ Dumping shall be accomplished by means of hydraulically actuated cylinders. These cylinders shall raise the body or operate a raker bar moving inside hopper as door is opened and closed to dump debris behind the rear wheels.

_____ Hydraulic cylinder movement shall be controlled with the use of an electric toggle switch located on the side of the hopper and a switch inside the cab.

_____ If a raker bar is used, the hopper floor shall have a minimum of 22 degree slope.

Hopper door shall be opened and closed hydraulically and be held in the closed position by means of a lock valve located in the hydraulic dump circuit.

_____ An inspection door shall be provided on both left and right side of the hopper for easy viewing inside hopper and insertion of large debris.

_____ Hopper shall be maintained airtight through use of rubber seals on all doors and openings.

_____ Hopper suction inlet roof area shall have a bolt on replaceable wear resistant liner.

_____ An amber LED beacon light shall be mounted on the rear of the sweeper hopper. The beacon light shall have a protective limb guard.

_____ Two (2) work lights shall be at the rear of the hopper to illuminate the dump area.

_____ Two (2) amber LED flashing warning lights shall be mounted at the rear of the hopper.

_____ An LED Arrowstick directional arrow shall be mounted on the rear of the hopper. Controls shall be mounted inside the cab with high/low setting, directional right, directional left, and flash patterns.

_____ A comprehensive abrasion protection system shall be provided including (but not limited to) the following; (Please respond with your compliance / non-compliance to EACH item.)

_____ A bolt-in rubber liner in the dust separator

_____ A bolt-in rubber liner in the pick-up head pressure chamber

_____ A wire-reinforced rubber liner in the suction transition portion of the pick-up head

_____ A bolt-in liner in the suction throat of the hopper

_____ Rubber wall liners in side the hopper

_____ Baffle curtains installed on the hopper screen

_____ Heavy duty pressure and suction hoses

_____ Hopper roof, floor, and side walls to be constructed of non-magnetic stainless steel.

_____ Hopper rear door and side inspection doors shall be constructed of non-magnetic stainless steel.

_____ Bid package must include a **lifetime hopper warranty against rust-through.**

HYDRAULIC SYSTEM

_____ The hydraulic system shall be adequate for use within the design requirements of the sweeper. Systems incorporating pneumatic-type controls will not be accepted. The system shall include a minimum 25 gallon reservoir, sight gauge, temperature gauge, 80 mesh suction strainer, spin-on replaceable full flow oil filter, hydraulic cylinders, gutter broom drive motors, control valves, relief valves, oil cooler, hydraulic hoses and standard fittings.

_____ The hydraulic pump shall be engine mounted, gear driven by the auxiliary engine.

Pressure shall be 2500 PSI maximum for gutter brooms and all functions, or 1500 PSI maximum for pick-up head and dump door.

_____ A hydraulic shutdown system shall be installed to automatically shut down the sweeper in the event of low hydraulic oil level.

_____ Hydraulic oil temperature shall be monitored and the gutter brooms shall automatically shut down if the hydraulic temperature gets too high.

_____ An auxiliary hydraulic system shall be provided to enable operation of all hydraulic functions (including full dump capabilities) without operating the auxiliary engine.

_____ If required by the system dynamics, system shall have a 9,000 BTU oil to air radiator-type hydraulic oil cooler.

BLOWER

_____ Heavy duty, wear resistant, high strength cast aluminum alloy turbine type open face blower computer balanced within 4 grams shall be provided to create air pressure and suction.

_____ Blower wheel shall be covered with wear resistant rubber for long life.

_____ Blower shall be mounted on self aligning anti-friction bearings, sealed and lubricated for life.

_____ An autolube system shall be installed to service all greasable bearings on the sweeper unit.

_____ Blower shall be driven from PTO off auxiliary engine by heavy duty power belt which shall be adjustable for tension.

_____ Blower housing shall be lined with a bolt-in wear resistant, replaceable rubber liner for long life.

_____ Blower not to exceed 3000 RPM to insure smooth efficient performance. (no exceptions)

PICK-UP HEAD - BROOM ASSIST

_____ A spring balanced all steel fabricated pick-up head shall be provided.

_____ The pick-up head shall have a separate upper and lower chamber where pressurized air is blasted from upper chamber through an elongated blast orifice to street surface.

_____ Blast orifice flange shall be of bolt-on design so that flange is easily replaced and shall have adjustment mechanism so that blast orifice gap is easily adjusted without removing pick-up head from sweeper.

_____ Pick-up head shall have a 14 inch diameter (minimum) pressure inlet ring located on left side of pick-up head.

_____ A 14 inch diameter (minimum) pressure hose attached between pick-up head and blower housing shall be provided.

_____ A bolt-on pressure inlet ring with turning vanes shall be provided for efficient performance and easy service.

_____ A 14 inch diameter (minimum) suction hose, attached to a quick disconnect transition at the hopper, shall extend down to the right side of the pick-up head and shall be attached to the pick-up head suction nozzle ring which shall be constructed of 1/4 inch steel.

_____ Suction hose shall have a minimum 3/8 inch wall construction for long life.

_____ Pick-up head shall be equipped with 2" wide adjustable side mounted integral alloy steel and carbide runners for maximum pick up ability and long life. Skid runners to be warranted for 2 years/2,000 hours prorated. Runners shall be symmetrical for optimum life.

_____ Pick-up head shall be raised and lowered hydraulically by a single switch on the control panel.

_____ Pick-up head shall be equipped with a hydraulically actuated front curtain lifter to aid in sweeping leaves and bulky debris. This curtain lifter shall be in addition to the pressure bleeder / vacuum enhancer.

_____ Pressure inlet ring shall be equipped with an adjustable pressure relief for optimum leaf and light debris sweeping; control shall be mounted inside cab.

_____ Control for pressure bleeder shall be electric with a gauge located on the display screen.

_____ A broom shall be mounted inside of the pick-up head and shall be fully enclosed.

_____ Control of broom rotation and positioning shall be accomplished by a single toggle switch located on the control console in the cab.

_____ The broom shall be driven hydraulically at 230 RPM. A separate hydraulic pump will be provided for all broom functions.

_____ Broom pattern shall be easily adjustable by mechanisms on the top of pick-up head.

_____ Nominal broom replacement time shall be 15 minutes.

_____ Design of broom suspension shall provide automatic independent adjustment of each broom end to the surface being swept.

_____ Two (2) hydraulic cylinders shall be incorporated to provide positioning and the independent suspension of the broom ends.

_____ Down pressure and broom pattern shall be hydromechanically controlled to provide maximum broom performance and life.

_____ Sweeper shall be equipped with a function that automatically pauses the sweeping functions when the truck is placed in reverse. This auto-sweep interrupt system shall perform the following functions in order; (Please respond with your compliance / non-compliance to EACH line item.) When the sweeper is placed in reverse:

_____ The auxiliary engine idles down

_____ The gutter brooms slow, and then raise

_____ The water system is placed in standby mode

_____ The pick-up head is raised

_____ Once the sweeper chassis is placed back into a forward gear the operator hits "reset" to resume sweeping

- _____ The pick-up head lowers
- _____ The water system re-engages
- _____ The gutter brooms are lowered
- _____ The auxiliary engine returns to its last operating speed
- _____ The auto-sweep interrupt system shall also be capable of acting as a one-button system to pause and the restart all sweeping functions while on the route.
- _____ The sweeper shall be equipped with an overspeed warning and shutdown system. The system shall provide an audible and visible alarm when the recommended safe sweeping speed is being exceeded and a shutdown feature when the maximum safe sweeping speed is being surpassed.
- _____ Both overspeed warning and overspeed shutdown speeds shall be user programmable by maintenance personnel and passkey protected.
- _____ The shutdown system shall include a log of the number of times speeds were exceeded and the date and time of the last event.
- _____ If auto-pick-up feature is disabled the pick-up head must be capable of sweeping in forward or reverse.

GUTTER BROOM(S)

- _____ Dual gutter brooms shall be 43 inch minimum diameter, wire filled vertical digger type for removing debris from gutter area.
- _____ Gutter brooms shall be hydraulic motor driven and shall be positioned laterally and vertically by one hydraulic cylinder.
- _____ Gutter broom down pressure shall be automatically adjusted to load by a pressure sensing sequence valve inline with gutter broom torque motor.
- _____ Each gutter broom shall have adjustment for bristle contact pattern and wear.
- _____ Each gutter broom shall have lateral flexibility to swing rearward 15" when encountering the impact of an immovable object thus avoiding damage to the broom assembly.
- _____ Each gutter broom shall have a spring adjustment to allow downward compensation for bristle wear and shall be free floating to follow street contour.
- _____ Each gutter broom shall be held in the up and transit position by use of an electric lock valve attachment. Upward motion of gutter broom shall be regulated by an adjustable flow control valve.
- _____ Each gutter broom shall be controlled from inside the cab by a single electric toggle switch.
- _____ The right gutter broom shall additionally incorporate a hydraulically actuated tilt capability of 27 degrees, remotely controlled from the operator's seat to allow instant adjustment for debris removal from deep gutters (such as those resulting from multiple overlays of blacktop).
- _____ With both gutter brooms down the sweeper shall have a minimum sweeping path of 142".
- _____ The machine must be capable of broom sweeping the full 142" with the combination of the two gutter brooms and the center broom. Because of this drop-down brooms or brooms that retract to sweep in front of the head are not an acceptable substitute for the center broom.
- _____ Gutter brooms shall have variable speed control.

DUST CONTROL WATER SYSTEM

_____ Water tank shall be 330 gallon capacity (min), constructed of recyclable polyethylene for strength and puncture resistance. Tank shall be 100% rustproof. Tank shall be of bolt-in design for easy removal. Tank shall have a water level sight gauge.

_____ Water from tank to be filtered by 80 mesh cleanable filter located between tank and water pump.

_____ A diaphragm water pump shall be provided with an electronic solid state liquid level sensor to automatically shut off pump and turn on low water warning lamp when water is depleted.

_____ The water pump shall be powered by the truck air system so that the auxiliary engine does not have to be running to use the water.

_____ Electric solenoid water control valves shall be cab controlled. Spray system shall include spray nozzles to be located as follows: minimum of 4 on outside of pick-up head; 5 for each gutter broom; 1 inside hopper. Water nozzles to be located on outside of pick-up head and suction tube for easy inspection and superior dust control.

_____ Water tank shall have anti-siphon/anti-pressure filler neck with air gap.

_____ Water tank shall not be an integral part of the hopper.

_____ Flexible 20 foot (minimum) long water fill hose with 2½ inch coupling for filling water reservoir and hose storage rack shall be provided. Water fill hose shall include a stainless 100 mesh cleanable filter.

_____ A 20' wash down hose shall be provided with a wash down gun and two connectable lances to allow for hopper cleaning capabilities and cleaning catch basins.

_____ A water tank level gauge shall be supplied on the in-cab display.

_____ An air purge system shall be provided to enable winterization of the water system utilizing a shop air connection.

STORAGE

_____ A lockable storage compartment shall be provided.

_____ Compartment shall have ample storage for wash down lances, hose nozzles, hydrant wrench, and shutter plate.

_____ An additional hose rack shall be supplied.

OPERATING CONTROLS

_____ All operating controls for sweeper (including dump control) shall be mounted inside truck cab and readily accessible to the operator in either right or left driving position.

_____ All main electrical systems, i.e. ignition, lights, hydraulic and water shall be separately fused to isolate electrical problems to fused area and speed service.

_____ All main sweeping functions shall be operated via a control system with LED diagnostics and integral solid-state circuit protection.

_____ Auxiliary engine controls shall be mounted on console panel.

_____ A multi-function, color display shall be provided on the console panel to display engine conditions consisting of, but not limited to engine RPM, percent load, engine torque, engine hours, engine oil pressure, coolant temperature, air filter restriction, battery voltage, fuel rate, and engine faults codes.

- _____ The display shall be a touch screen design and shall be mounted on a swivel base to optimize operator viewing and control.
- _____ The display shall also provide sweeper diagnostics.
- _____ The display shall provide visual indicator lights for several sweeper functions and warnings including, but not limited to, dust suppression water pump, low water, pick-up head down, etc.
- _____ The sweeper console shall incorporate resettable and non-resettable hour meters for the auxiliary engine; left hand, right hand and optional BAH brooms; pick-up head; and blower for collecting data about sweeping route performance and maintenance. It will also store hydraulic system and engine service timers.
- _____ Standard sweeping function switches will be multiplexed to reduce the amount of wires in the control panel. Switches will have multi-colored LED indicator lights to simplify diagnostics.
- _____ Standard sweeping functions switches shall consist of, but not limited to, right gutter broom, left gutter broom, pick-up head, engine rpm, and water system.
- _____ Other sweeper controls shall consist of, but not limited to, gutter broom tilt, beacon or strobe light, water system circuits, dump door, and work light lighted paddle type switches, and leaf pressure knob.
- _____ Audible alarm shall sound to indicate auxiliary engine fault codes, hydraulic oil temp, and other optional warning equipment.
- _____ All external wiring, harnesses and terminations shall be of a sealed, weather-tight design utilizing heat-shrinkable components. Additionally, where feasible, all connectors shall utilize solid, cold-formed, nickel-plated copper alloy contacts with gas-tight crimps (Deutsch).
- _____ Dump control shall consist of a single weatherproof toggle switch located on the exterior of sweeper just above the left side fender well and a switch inside the cab.

HYDRAULICALLY ACTUATED AUXILIARY HAND HOSE

- _____ For cleaning remote areas and catch basins, an auxiliary hand hose shall be provided. It shall be eight (8) inch diameter, 10 feet long and have a 52" long metal nozzle. It shall be suspended from a hydraulically actuated swivel boom.
- _____ The hand hose operations shall be controlled by either a wireless handheld pendant or by a control box that can be easily mounted on the hand hose tube (both must be included with the sweeper).
- _____ The following functions shall be controllable from either the ring or the pendant; (Please note your compliance / non-compliance to EACH item.)
- _____ Boom up/down
- _____ Throttle up/down
- _____ Auxiliary engine start/stop

CHASSIS International 4300-DT or equal

GENERAL

- _____ Chassis/cab shall be conventional with a tilt hood. Frame to be straight full channel steel rails (50,000 PSI). Gross vehicle weight rating to be not less than 31,000 GVW. Curb weight with cab, fuel, water, oil and tires shall be approximately 9,550 lbs. Standard truck cab enclosed and equipped with tinted safety glass all around and two individual, adjustable, high back air seats with lumbar support and safety seat belts. (Sliding windows not acceptable.)

WHEELBASE

- _____ Shall be minimum 165" and shall provide approximately 98" between back of cab and center of rear axle for proper load distribution and **tighter turning radius.**
- _____ Special frame drilling and brake chambers relocation.

AXLES

- _____ Front axle to be minimum of 10,000 lbs. with suspension of 10,000 lbs.
- _____ Rear axle shall be 21,000 lbs. two-speed with a ratio of 6.17/8.42, suspension to be minimum of 31,000 lbs. vari-rate with 4,500 lbs. capacity multi-leaf auxiliary rubber spring.
- _____ Body builders wiring to back of cab at frame

STEERING

- _____ Dual operator controlled integral power steering with cruise control, tilt and dual gauge package.
- _____ Diameter of steering wheel will be minimum 18".

BRAKES

- _____ Service brakes to be full air with 13.2 cfm air compressor.
- _____ Air tank drain valve, manual with pull cable.
- _____ Front brakes shall be 15" x 3½".
- _____ Rear brakes shall be 16½" x 7".
- _____ Shall have automatic slack adjusters front and rear.
- _____ Parking brakes shall be spring actuated, double diaphragm, 30" MGM Chambers air chambers, with warning light.
- _____ Brake chambers, spring relocated to rear of rear axle for maximum ground clearance.
- _____ 4-Channel anti-lock brake system shall be provided.

CAB

- _____ Cab shall have in-dash chassis manufacturer's factory installed air conditioner for operator safety and comfort with a fresh air filter. After market air conditioners are unacceptable.
- _____ Cab to have individual driver and passenger air, high back adjustable seats with lumbar support.
- _____ Tinted glass shall be provided.
- _____ Dual sun visors, coat hook, storage pocket on driver door, cigar lighter, electric horn, electric windshield washer and 2 speed electric wipers with intermittent wiper switch shall be provided.
- _____ Chassis shall be equipped with fresh air heater, defroster, dual 7" x 16" remote controlled heated electric powered mirrors, two separate 10.5" diameter parabolic mirrors.
- _____ AM/FM stereo radio with auxiliary input shall be provided.
- _____ Instrument panel shall be flat .

ELECTRICAL

- _____ Shall consist of two, multiple beam headlights with dash beam indicator, instrument panel, taillights, stop lights, front and rear turn signals, and self canceling signal switch, equipped for four way flashing. Taillights, stop lights and signal lamps may be in combination.
- _____ Shall have two 12volt (1300 CCA total) maintenance free batteries.
- _____ Shall have an 120 amp alternator.
- _____ A safety camera shall be supplied with an in-cab monitor and two cameras; one at the rear of the sweeper, and one on the right side showing the front of the pick-up head.

ENGINE

- _____ Shall be in-line six cylinder, turbocharged diesel with a minimum 215 HP at 2200 RPM, 390 cu. in (6.4L), 560 lb/ft torque @ 1400 RPM.
- _____ Dual element dry type air cleaner with restriction indicator dash mounted.
- _____ Automatic glow plug with indicator light shall be supplied.
- _____ Automatic shutdown/over temperature protection engine coolant.
- _____ Remote engine control wiring shall be supplied.

FUEL

- _____ A 50 gallon **aluminum** tank shall be supplied and shall supply fuel to both engines.

TIRES AND WHEELS

- _____ Heavy duty first line quality tubeless tires to be minimum 11R x 22.5, 14 ply rating with duals in rear for adequately carrying full load of sweeper and maximum stability.
- _____ Wheels to be 10 hole disc 22.5 x 8.25 DC.

TRANSMISSION

_____ Shall be heavy duty Allison 2500RDS-P electronic, five-speed forward, one reverse, automatic, with external oil filter.

SAFETY EQUIPMENT

_____ Chassis shall have cab mounted first aid kit, safety triangle kit and 5# fire extinguisher.
_____ Unit shall be equipped with color rear view camera with flat screen in cab color monitor.
_____ Camera shall automatically engage when transmission is in reverse, and may be manually engaged at any time.

DELIVERY

_____ The unit shall be delivered completely assembled, serviced, and ready to operate.
_____ Bidder shall state delivery date, after receipt of order

WARRANTY

- A. Sweeper – Minimum 1 Year or 1000 hours – Parts & Labor
- B. Auxiliary Engine – Minimum 2 years or 2000 hours - Parts & Labor
- C. Impeller and Housing – Minimum 1 year or 1000 hours – Parts & Labor
- D. Truck – Minimum 2 year – Parts & Labor
- E. Stainless Steel Hopper – Lifetime No Rust – Labor & Materials
- F. Cameras and Monitor - 36 months.