

CITY OF CONWAY

CITY OF CONWAY STREET DEPARTMENT

BID INVITATION

Bid Number: 2015-24

BID OPENING LOCATION:
City of Conway Mayor's Office
1201 Oak Street
Conway, AR 72032

MAIL TO:
City of Conway Mayor's Office
1201 Oak Street
Conway, AR 72032

DELIVER TO:
City of Conway Mayor's Office
1201 Oak Street
Conway, AR 72032

Bid Opening Date: Wed., June 3, 2015 Time: 10:00 A.M.

Sealed bids for furnishing the commodities and/or services described below, subject to the Conditions on the reverse hereof and as may be attached hereto will be received at the above-noted mail and delivery locations until the above-noted bid opening date and time, and then publicly opened at the above-noted bid opening location. **Bids must be submitted on this form, with attachments when appropriate, or bids will be rejected. Late bids and unsigned bids will not be considered.**

In compliance with this Bid Invitation and subject to all the Conditions thereof, the undersigned offers and agrees to furnish any and all items upon which prices are quoted, at the price set opposite each item.

Company Name: _____

Name (Type or Print): _____

Address: _____

Title: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail Address: _____

Federal Tax ID or Social Security No.: _____

Signature: _____

Signature must be original (not photocopied) and in ink. Unsigned bids will be rejected.

Item No.	Description	Quantity	Unit	Unit Price	Total
1.	Dual Steering High Dump Regenerative Air Sweeper	1	Ea.		
2.	Training	3	Ea.		
3.	Air Purge System	1	Ea.		
4.	Arrow Stick	1	Ea.		
5.	Auto Sweep Interrupt	1	Ea.		
6.	Auxiliary Hand Hose	1	Ea.		
7.	DCVA Back Flow Protection	1	Ea.		
8.	Engine Block Heater	1	Ea.		
9.	Fire Extinguisher	1	Ea.		
10.	Gutter Broom	1	Ea.		
11.	Hazard Reflectors	1	Ea.		
12.	Hydrant Wrench	1	Ea.		
13.	Low Emission Package	1	Ea.		

14.	Removable Pick-up Head Front Curtain	1	Ea.
15.	Pick-up Head Curtain Front Lifter	1	Ea.
16.	Slow Moving Vehicle Emblem	1	Ea.
17.	Sweeper Deluge System	1	Ea.

FOB:

1 ea. – City of Conway Street Department

Sweeper proposed to furnish:

Make _____ Model _____ Warranty _____

If any literature and/or specifications of items conflict with City of Conway specifications,
The conflict(s) shall be specifically noted, corrected and submitted with the bid on a separate
Letterhead.

Note: Bid amount shall include all applicable taxes, fees, freight and delivery cost.

The successful bidder will be required to complete delivery within 45 days after award.

TOTAL BID

CONDITIONS

1. **ACCEPTANCE AND REJECTION:** The City of Conway (reserves the right to reject any or all bids, to accept bids in whole or in part (unless otherwise indicated by bidder), to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications where efficiency of operation will not be impaired, and to award bids to best serve the interest of the City of Conway.
2. **PRICES:** Unless otherwise stated in the Bid Invitation, the following will apply: (1) unit prices shall be bid, (2) prices should be stated in units of quantity specified (feet, each, lbs., etc.), (3) prices must be F.O.B. destination specified in bid, (4) prices must be firm and not subject to escalation, (5) bid must be firm for acceptance for 30 days from bid opening date. In case of errors in extension, unit prices shall govern. Discounts from bid price will not be considered in making awards.
3. **BID BONDS AND PERFORMANCE BONDS:** If required, a **Bid Bond** in the form of a cashier's check, certified check, or surety bond issued by a surety company, in an amount stated in the Bid Invitation, must accompany bid. **Personal and company checks are not acceptable as Bid Bonds.** Failure to submit a Bid Bond as required will cause a bid to be rejected. The Bid Bond will be forfeited as liquidated damages if the successful bidder fails to provide a required Performance Bond within the period stipulated by CITY OF CONWAY or fails to honor their bid. Cashier's checks and certified checks submitted as Bid Bonds will be returned to unsuccessful bidders; surety bonds will be retained. The successful bidder will be required to furnish a **Performance Bond** in an amount stated in the Bid Invitation and in the form of a cashier's check, certified check, or surety bond issued by a surety company, unless otherwise stated in the Bid Invitation, as a guarantee of delivery of goods/services in accordance with the specifications and within the time established in the bid. **Personal and company checks are not acceptable as Performance Bonds.** In some cases, a cashier's check or certified check submitted, as a Bid Bond will be held as the Performance Bond of the successful bidder. Cashier's checks or certified checks submitted as Performance Bonds will be refunded shortly after payment has been made to the successful bidder for completion of all terms of the bid; surety bonds will be retained. Surety bonds must be issued by a surety company authorized to do business in Arkansas, and must be signed by a Resident Local Agent licensed by the Arkansas State Insurance Commissioner to represent that surety company. Resident Agent's Power-of-Attorney must accompany the surety bond. Certain bids involving labor will require Performance Bonds in the form of surety bonds only (no checks of any kind allowed). In such cases, the company issuing the surety bond must comply with all stipulations herein and must be named in the U. S. Treasury listing of companies holding Certificates of Authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies. Any excess between the face amount of the bond and the underwriting limitation of the bonding company shall be protected by reinsurance provided by an acceptable reinsuring company.
4. **TAXES:** The CITY OF CONWAY is not exempt from Arkansas State Sales and Use Taxes, or local option city/City of Conway sales taxes, when applicable, and bidders are responsible to the State Revenue Department for such taxes. These taxes should not be included in bid prices, but where required by law, will be paid by the CITY OF CONWAY as an addition thereto, and should be added to the billing to the CITY OF CONWAY. The CITY OF CONWAY is exempt from Federal Excise Taxes on all commodities except motor fuels; and excise taxes should not be included in bid prices except for motor fuels. Where applicable, tax exemption certificates will be furnished by the CITY OF CONWAY.
5. **"ALL OR NONE" BIDS:** Bidders who wish to bid 'All or None' on two or more items shall so stipulate on the face of bid sheet; otherwise, bid may be awarded on an individual item basis.
6. **SPECIFICATIONS:** Complete specifications should be attached for any substitution or alternate offered, or where amplification is necessary. Bidder's name must be placed on all attachments to the bid.
7. **EXCEPTIONS TO SPECIFICATIONS:** Any exceptions to the bid specifications must be stated in the bid. Any exceptions to manufacturer's published literature must be stated in the bid, or it will be assumed that bidder is bidding exactly as stated in the literature.
8. **BRAND NAME REFERENCES:** All brand name references in bid specifications refer to that commodity or its equivalent, unless otherwise stated in Bid Invitation. Bidder should state brand or trade name of item being bid, if such name exists.
9. **FREIGHT:** All freight charges should be included in bid price. Any change in common carrier rates authorized by the Interstate Commerce Commission will be adjusted if such change occurs after the bid opening date. Receipted common carrier bills that reflect ICC authorized rate changes must be furnished.
10. **SAMPLES AND LITERATURE:** Samples or technical literature must be provided within 14 days of CITY OF CONWAY request unless CITY OF CONWAY extends time. Failure to provide samples or literature within this period may cause bid to be rejected. When required, samples of items must be furnished free of charge, prior to or after the opening of bids, and, if not destroyed, will be returned upon request at the bidder's expense. Each individual sample must be labeled with bidder's name and item number. Request for return of samples must be made within 10 days following submission of sample. Samples from successful bidders will be retained for comparison with items actually furnished.
11. **GUARANTY:** Unless otherwise indicated in Bid Invitation, it is understood and agreed that any item offered or shipped on this bid shall be newly manufactured, latest model and design, and in first class condition; and that all containers shall be new, suitable for storage or shipment and in compliance with all applicable laws relating to construction, packaging, labeling and registration.
12. **BACKORDERS OR DELAY IN DELIVERY:** Backorders or failure to deliver within the time required may constitute default. Vendor must give written notice to the CITY OF CONWAY, as soon as possible, of the reason for any delay and the expected delivery date. The CITY OF CONWAY has the right to extend delivery if reasons appear valid. If reason or delivery date is not acceptable, vendor is in default.
13. **DEFAULT:** All commodities furnished will be subject to inspection and acceptance by CITY OF CONWAY after delivery. Default in promised delivery or failure to meet specifications authorizes the CITY OF CONWAY to cancel award or any portion of same, to reasonably purchase commodities or services elsewhere and to charge full increase, if any, in cost and handling to defaulting vendor. Applicable bonds may be forfeited.
14. **ETHICS:** *"It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a State contract upon an agreement of understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the contractor for the purpose of securing business."* (Arkansas Code, Annotated, Section 19-11-708).

ACCEPTANCE (City of Conway Use Only)

Bid No. # _____ Accepted as to items numbered _____

Date _____ By _____

City of Conway Mayor's Officer

HIGH SIDE DUMP REGENERATIVE AIR SWEEPER

POWER UNIT

- The Sweeper power unit shall be a John Deere diesel fueled, water-cooled, charge-air-cooled, turbocharged electronic interim Tier-4 emissions, industrial engine, or approved equal. Piston displacement shall not be less than 276 cubic inch developing not less than 115 HP @ 1900 RPM and 354 ft. lbs. torque @ 1500 RPM. Engine shall be 4 cycle, 4.2-inch bore and 5.0-inch stroke.
- Engine shall use four sandwich mount rubber isolators to attenuate engine vibration, prevent structural compromise and reduce noise.
- Engine electronics shall use John Deere ECU module and CAN SAE J1939 data link for communication, or approved equal.
- Engine ECU shall be programmed to provide automatic engine monitoring and shutdown when engine problem is detected such as high coolant temperature or low oil pressure.
- All engine controls shall be located inside cab.
- Cylinder construction shall be wet sleeve type.
- Spin-on replacement type oil and fuel filter shall be included.
- The fuel system shall have a 2 stage filter system with water-in-fuel monitoring that will display a warning in the cab of the sweeper.
- Engine shall have a 12-volt ignition, electric starter and minimum 90-amp alternator.
- 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 PowerCore® 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.
- Power unit shall be located at rear of the sweeper for in-cab operator comfort and must be capable of daily and routine service at ground level. Forward mounted power units must incorporate sound and heat reduction materials for operator comfort and must be designed for safe, easy servicing without raising hopper.
- Heat exchanger assembly shall 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 shall 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 and by means of an independent multi-pass cylindrical, centrifugal, single chamber dust separator with a minimum size of 28" diameter and 48" width.
- The separator shall be designed so that it will not plug with normally encountered debris.
- The dust separator door shall be self-opening and self-emptying when the hopper tilts. The housing shall have a bolt-on abrasion resistant bonded rubber lining material for long life and serviceability.

HOPPER

- Hopper size shall be approximately five and seven tenths (5.7) cubic yard volumetric measurement with a useable capacity of not less than 4.0 cubic yards.
- Hopper weldment and dump door shall be constructed of non-magnetic stainless steel.
- When hopper is fully tilted to the dump position, the hopper floor shall have a 50° dump angle.
- When the hopper is stowed, the hopper floor shall have a 10° slope to assist with clean out and draining.
- Hopper shall discharge debris on the right side as viewed from the rear.
- The hopper dump height shall be infinitely variable from 24 inches to 132 inches from tip of discharge chute to the ground with the hopper fully tilted.
- Hopper door opening shall be a minimum of 68 inches wide by 57 inches tall.
- Hopper door shall be hydraulically locking. Hopper door shall have two (2) additional mechanical cam locks on door edge opposite from hinges to assure air and watertight operation.

- Hopper shall have a separate discharge chute to project debris into middle of dump container and shall be a minimum of 72 inches wide and 48 inches long with a minimum reach of 22 inches without the need of a side shift. For serviceability, the discharge chute shall have a structural frame and a replaceable stainless steel discharge surface.
- Discharge chute shall have side panels on each side to prevent lateral spillage.
- Discharge chute shall use a rubber seal in the lowered position to prevent leakage while dumping.
- A warning system shall be provided to indicate when the chute is down and when the hopper is tilted. Solid-state proximity switches shall be used to sense chute and hopper position.
- Hopper shall be maintained airtight through use of rubber seals on all doors and openings.
- Hopper suction inlet shall have a bolt-on replaceable wear resistant liner.
- The dump door and discharge chute shall be actuated by dual hydraulic cylinders that are attached between the door and chute, independent of the hopper. With the dump door cylinder fully extended, the chute must be capable of floating approximately 45° upward when contacted by a dump container on the bottom side without incurring structural damage to the sweeper.
- The dump door and discharge chute must be capable of being opened fully without tilting hopper to assist with clean out and service.
- The hopper shall have a two-piece stainless steel screen designed with integral openings for cleaning the hopper above the screen without the use of drop-down screens or access panels.
- Filters and baffles are not acceptable due to increased cost of replacement and cleaning.
- A hopper drain shall be integrated into the dump door with a hinged screen for easy cleaning.

LIFT MECHANISM

- Hopper elevation for dumping shall be accomplished by means of a two-stage scissor lift with a lift capacity of 10,000 lbs.
- Two (2) double acting hydraulic cylinders shall actuate scissor mechanism with integral counterbalance holding valves. Pilot operated check valves are not acceptable. Holding valves are to be plumbed into the cylinders via steel lines; hydraulic hoses are not acceptable between the holding valve manifold(s) and the cylinder ports.
- All pivots on the lift mechanism shall utilize self-lubricated bearings and require no grease fittings.
- Safety props shall be provided for scissor lift servicing. A location will be provided on the scissor mechanism to stow the props when not in use. Props must be capable of safely supporting the full payload capacity and the pull down force of the scissor actuators.
- Sweeper shall have left and right stabilizers which automatically deploy before the scissor mechanism begins to rise. Stabilizers shall remain in the down position until the lift mechanism is fully seated in the sweeping position.
- A warning system shall be provided to indicate when the stabilizers are deployed. Solid-state proximity switches shall be used to sense stabilizer position.
- Raising, lowering and tilting of the hopper shall be controlled from the operator console in the cab.

LIGHTS AND WARNING SYSTEMS

- An LED powered beacon light shall be furnished. The beacon light shall have a protective limb guard.
- Four (4) LED rear amber strobe lights shall be mounted on the rear doors of the engine compartment; thus, providing sweeper with rearward illumination.
- Two (2) LED stop/turn/tail lights shall be mounted on the rear doors of the engine compartment.
- Two (2) work lights shall be mounted on the rear of the sweeper to illuminate the swept path and engine compartment.
- One (1) work light shall be located on the right side for illumination when dumping.

HYDRAULIC SYSTEM

- The hydraulic system shall be adequate for use within the design requirements of the sweeper. The system shall include a minimum 34-gallon reservoir, sight level/temperature gauge, dual 60 mesh suction line strainers, replaceable 10-micron spin-on tank filler/vent port filter.
- The hydraulic system shall use a single spin-on 3-micron absolute synthetic media in-line return filter with 25 PSI bypass and restriction indicator for service.

- The hydraulic tank shall also incorporate an oil temperature sensor to automatically disable the blower if the tank oil approaches an unsafe operating level.
- The hydraulic system shall use high quality hydraulic cylinders, gutter broom drive motors, stackable control valves, cartridge relief valves, check valves, sequence valves and pressure compensated flow control valves.
- The hydraulic system oil cooler shall be integrated in the heat exchanger assembly located in the power unit.
- The hoses and fittings shall be adequate for operational pressures and parameters.
- Two (2) variable displacement piston pumps in tandem shall be located at the power unit flywheel and direct driven by a serviceable flex coupling.
- The blower pump drives a fixed displacement motor for the sweeper blower using a hydrostatic closed loop circuit to minimize tank capacity and maximize hydraulic efficiency.
- The blower pump is stroked and de-stroked by an electronic proportional pump controller for infinite control of the blower RPM and system simplicity, and it shall be controlled from the operator console in the cab.
- The blower pump control shall prevent power unit from being started under hydraulic load and for safety.
- The hydraulic blower pump and motor shall be warranted to be free from defective materials and workmanship for a period of three (3) years from date of delivery when properly serviced.
- The secondary variable piston load sense pump is an open loop pump and provides pressure and flow for the load sensing manifold that controls flow to the main hydraulic system manifold, the BAH manifold and for the hopper lift system.

AUXILIARY HYDRAULIC SYSTEM

1. The sweeper shall be supplied with an electric powered hydraulic pump to serve as a temporary system pump for lowering hopper and activating the sweeper components without the need to start the power unit.
2. The pump shall be rated with a minimum flow of 1.2 GPM at 2400 PSI.

BLOWER

- The blower shall be driven using a fixed displacement heavy-duty hydraulic motor.
- The blower motor shall use a flexible coupling to drive the sweeper blower for efficiency, noise reduction and ease of service. Belt driven is unacceptable.
- Blower motor shall use a sensor to provide blower RPM reading inside cab for operator control.
- Blower shall be heavy duty, wear resistant, turbine type open face constructed of high strength cast aluminum alloy and computer balanced within 4 grams 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. If bearings are not sealed and lubricated for life, then an automatic lube system must be furnished.
- Blower housing shall be Tilt-N-Seal design with adjustable spring balance to ensure long seal life.
- Blower shall be replaceable without having to remove blower housing from sweeper.
- Blower housing shall be lined with a bolt-in wear resistant, replaceable rubber liner for long life.
- Blower not to exceed 2800 RPM to insure smooth, safe and efficient performance.
- The blower shall be inoperable during any portion of the dump sequence, including deployed stabilizers, opened dump door or raised/tilted hopper to prevent exposing personnel to a rotating blower and to eliminate flying debris.

PICK-UP HEAD

- A spring balanced all steel fabricated pick-up head with maximum length and width of 87" x 30" I.D. 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 stainless steel 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 12 inch diameter (minimum) suction hose, attached to a disconnect transition between the hopper and pick-up head, 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.
- ❑ Pick-up head shall be equipped with 2" wide adjustable side mounted integral alloy steel and carbide runners. Skid runners to be warranted for 2 years/2,000 hours prorated. Runners shall be symmetrical.
- ❑ Pick-up head shall be raised and lowered hydraulically by a single switch on the control panel.
- ❑ Pressure inlet ring shall be equipped with an adjustable pressure relief for optimum leaf and light debris sweeping; control shall be mounted inside cab.
- ❑ Pick up head must be able to stay down and sweep in reverse
- ❑ Front curtain lifter must be installed to enhance the ability to sweep leaves and light debris. Unit shall have ability to lift curtain hydra-mechanically the entire front curtain set by utilizing a hydraulic actuated and retractable roller assembly that allows the pick-up head to sweep even larger volumes of leaves and light debris. Curtain lifter shall have a control switch located in cab.

GUTTER BROOMS

- ❑ Dual gutter brooms shall be 43-inch minimum diameter, wire filled vertical digger type for removing debris from gutter area.
- ❑ Gutter brooms shall be variable speed and controlled from operator console inside the cab.
- ❑ 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.
- ❑ Each 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.

DUST CONTROL WATER SYSTEM

- ❑ Water tank shall be 250-gallon capacity and constructed of 100% rustproof materials. Tank shall be slide-in design for easy removal of any other major components.
- ❑ Water from tank to be filtered by 80 mesh cleanable filter located between tank and water pump. A water shutoff valve shall be provided near the filter to prevent water from draining while servicing the filter strainer.
- ❑ High output water system shall be furnished with additional nozzles and deflectors strategically located to control extreme dust.
- ❑ 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; 2 for each gutter broom; 1 inside hopper. Water nozzles shall be located on the outside of pick-up head and suction tube.
- ❑ Water tank shall have anti-siphon/anti-pressure filler neck with air gap.
- ❑ 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.

STORAGE COMPARTMENT

- ❑ Storage compartment shall be fabricated of welded steel plate and have a total capacity of not less than 5.6 cubic feet and a lockable door.

MAINTENANCE AND SAFETY

- ❑ Power unit shall be located at rear of the sweeper for in-cab operator comfort and must be capable of daily and routine service at ground level. Forward mounted power units must incorporate sound and heat reduction materials for operator comfort and must be designed for safe, easy servicing without raising hopper.
- ❑ Sweeper control system shall have On Board Sweeper Diagnostics accessed from the Control Panel display as well as LED module diagnostics for ease of maintenance and troubleshooting.
- ❑ Safety props shall be provided for scissor lift servicing.
- ❑ All pivots on the lift mechanism shall utilize self-lubricated bearings and require no grease fittings.
- ❑ The blower shall be inoperable during any portion of the dump sequence, including deployed stabilizers, opened dump door or raised/tilted hopper to prevent exposing personnel to a rotating blower and to eliminate flying debris.
- ❑ To assure safe operation, the dump sequence shall be inoperable when the blower is turning, the park brake is not set, or the truck transmission is not in neutral.
- ❑ Stabilizers shall automatically lower when the dump switch is engaged to raise the hopper. The stabilizers shall remain in the down position until the hopper is fully seated in the sweeping position.
- ❑ The gutter broom design shall not require grease fittings and/or periodic greasing.
- ❑ The hopper shall not require grease fittings and/or periodic greasing.
- ❑ The broom assist pick-up head shall not require grease fittings and/or periodic greasing.
- ❑ If sweeper requires any lubrication, an automatic lube system must be furnished.

OPERATING CONTROLS

- ❑ All operating controls for sweeper shall be mounted inside truck cab and readily accessible to the operator in either left or right driving position.
- ❑ All main electrical systems shall be operated via a BlueLogic® or approved equivalent control system with LED diagnostics and integral solid-state circuit protection.
- ❑ A 12VDC fused power source panel for any needed additional electrical components or accessories (i.e. radios, warning lights, controls, etc.) shall be included.
- ❑ 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, engine fault codes and blower speed.
- ❑ The display shall also provide On Board Sweeper Diagnostics that includes but is not limited to: CAN Network Diagnostics, System Module Input/Output & Power Diagnostics, Programming Diagnostics, Sensor Diagnostics, & Service Reminders.
- ❑ The display shall provide visual indicator lights for several sweeper functions and warnings.
- ❑ The sweeper console shall incorporate resettable and non-resettable hour meters for the auxiliary engine; left hand, right hand and 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.
- ❑ Sweeper controls shall utilize rocker type switches consisting of, but not limited to, left gutter broom and tilt, right gutter broom and tilt, pick-up head, strobe light, water system, hopper lift, hopper tilt, broom assist head, etc. Manual lever control with indicator shall be provided for leaf pressure control.
- ❑ Standard sweeper control switches shall be multiplexed with BlueLogic or approved equal reducing the amount of wires in the control panel. Sweeper control switches will have multi-colored LED indicator lights to simplify diagnostics.
- ❑ Two-speed engine throttle control shall be automatically triggered by blower RPM switch from idle (1100 RPM) to operating (1800 RPM).
- ❑ Visual indicator lights will include, but not limited to, dust suppression water pump, low water, discharge chute down, stabilizer down, minimum dump height, hopper tilted, pick-up head down, etc.
- ❑ Audible alarm shall sound to indicate the following conditions: auxiliary engine shutdown warning, brake not set or transmission not in neutral with stabilizers down or with discharge chute down.
- ❑ 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 toggle switch to raise and lower hopper and a toggle switch to tilt hopper to the dump position. Stabilizers shall automatically lower when the dump switch is engaged to raise the hopper. The stabilizers shall remain in the down position until the hopper is fully seated in the sweeping position.
- The blower shall not be operational during the dumping sequence to prevent exposing personnel to the blower wheel and eliminate flying debris.
- To assure safe operation, the dump sequence shall be inoperable when the blower is turning, the park brake is not set, or the truck transmission is not in neutral.

OPTIONAL EQUIPMENT AVAILABLE FOR SWEEPER & CHASSIS

- Air purge system to facilitate purging dust control system during freezing conditions.
- Arrow Stick (Mounted): Indicating left, right or both
- Auto Sweep Interrupt (ASI), an electronic circuit that is designed to accomplish the following sequence of operations when the transmission gear selector is placed into reverse with the ASI set in the Auto mode. 1) The auxiliary engine is idled. 2) The water system is turned OFF. 3) The gutter broom is stopped and raised. 4) The pick-up head is raised.
- Auxiliary Hand Hose, eight inches in diameter, 10 foot hose with 52" nozzle, quick disconnect ring, shutter plate and right side hose storage compartment. The standard right side 4.5 cu.ft. storage compartment shall be relocated to the left side.
- DCVA water system back flow protection.
- Engine block heater for auxiliary engine.
- Fire extinguisher, refillable, dry chemical unit, DOT approved, cab mounted.
- Gutter broom – drop down feature allows gutter brooms to drop down for road surface agitation in front of the pick-up head.
- Hazard reflectors, 3 triangular red reflectors.
- Included High output water system shall be furnished with additional nozzles and deflectors strategically located to control extreme dust.
- Hydrant wrench.
- Low Emission Package to provide Rule 1186 compliant.
- Pick-up head front curtain lifter to provide the pick-up head the ability to sweep large volumes of light debris such as leaves, grass, paper, etc. without causing excessive debris accumulation at the pick-up head inlet. It shall be hydraulically controlled with a switch within the cab of the sweeper.
- Pick-up head removable front curtain set.
- Reverse pick-up head system shall be furnished to allow unit to back up without damage to the pick-up head.
- Slow moving vehicle emblem, reflective triangular emblem, rear mounted.
- Sweeper deluge system mounted in the hopper with a water fill hose quick coupler for connection to a fire hydrant. Also included in the system is a pick-up head cleanout system with a water fill hose quick coupler for connection to a fire hydrant.

TRAINING

- Sweeper school for service technician and sweeper training shall be supplied. A full hands on class of sufficient length (2 day minimum) to provide instruction on hands on care, maintenance, troubleshooting and operation of unit shall be supplied for three City of Conway employees.

CHASSIS

(Freightliner M2-106)

GENERAL

- Chassis/cab shall be conventional Freightliner M2-106 or approved equal with a tilt hood. Frame to be straight full channel steel rails (80,000 PSI). Gross vehicle weight rating to be not less than 33,000 GVW. Curb weight with cab, fuel, water, oil and tires shall be approximately 9,300 lbs. Standard truck cab enclosed and equipped with tinted safety glass all around and two individual, adjustable, high back air seats with mechanical lumbar support and safety seat belts. (Sliding windows not acceptable.)
- Front tow hooks shall be front bumper mounted.

WARRANTY

- Total chassis coverage of 24-months/unlimited mileage.
- Engine (diesel) coverage of 24-months/unlimited miles.
- Drive train coverage of 24-months/unlimited mileage.
- Frame coverage of 60-months/unlimited mileage.
- Cab corrosion coverage of 60-months/unlimited mileage.
- Warranty shall cover 100% parts and labor unless otherwise noted as provided by chassis manufacturer.

WHEELBASE

- Shall be minimum 167" and shall provide approximately 102" between back of cab and center of rear axle for proper load distribution.

AXLES

- Front axle to be minimum of 10,000 lbs. with taper-leaf suspension of 10,000 lbs.
- Rear axle shall be 23,000 lbs. single speed with a ratio of 6.43, Hendrickson air suspension (HAS230 or approved equal) to be minimum of 23,000 lbs.

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 18.7 cfm air compressor.
- Air tank drain valve, manual with pull cable.
- Front brakes Q-Plus shall be 15" x 4" and have front shock absorbers.
- Rear brakes Q-Plus shall be 16½" x 7" with dust shields.
- 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.
- Bendix AD-9 or approved equal air dryer shall be provided.

CAB

- Cab shall have in-dash chassis manufacturer's factory installed air conditioner with a fresh air filter. After market air conditioners are unacceptable.
- Cab to have individual driver and passenger air, high back adjustable seats with cloth inserts and lumbar supports.
- Tinted glass shall be provided.
- External grab handles on the left and right side with standard interior grab handles shall be provided.
- Dual sun visors, coat hook, storage pocket on driver door, cigar lighter/power source, 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 Clock shall be provided.

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 (1850 CCA total) maintenance free batteries.
- Shall have a 160 amp alternator.

ENGINE

- Shall be In-Line Six turbocharged and air-to-air intercooled diesel with a minimum 200 HP at 2300 RPM, 6.7L, 520 lb/ft torque @ 1600 RPM.
- Left hand outboard frame mounted vertical after-treatment device with topstack shall be provided.
- Dual element dry type air cleaner with restriction indicator mounted on cleaner.
- Automatic glow plug with indicator light shall be supplied.
- Automatic shutdown/over temperature protection engine coolant.

FUEL

- A 50 gallon steel 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.
- Spare tire and wheel to match tires and wheels on truck shall be furnished.

TRANSMISSION

- Shall be heavy duty Allison 2500RDS-P electronic, six-speed forward, one reverse, automatic, with external oil filter, or approved equal.
- A transmission temperature gauge shall be supplied.
- Synthetic transmission oil shall be supplied.