

## **Mechanical Broom with Vacuum-Assist Filtration Street Sweeper – Item #2**

### **General**

- The intent of this specification is to secure the latest model and design “Mechanical Broom with Vacuum-Assist Filtration Street Sweeper”, high dump mechanical street sweeper capable of removing litter, debris, etc. from street surfaces, that shall effectively control dust with or without use of water or combination thereof. All items appearing in Manufacturer’s published literature and specifications as standard are assumed to be included in bidder’s proposal.

### **Cab/Chassis**

- Must be diesel engine; Shatterproof safety glass, tinted windshield and all windows; Dual two-speed windshield wipers with intermittent feature and washers; factory installed AC/Heater and defroster; high back air suspension bucket seats or mid-back in air ride seats for both operator positions.
- Dual operating controls, RH and LH Operator positions with all O.E.M.components , AM/FM radio, LH and RH grab handles, seatbelts, LH and RH electric remote West Coast type outside mirrors, with 8” convex spot mirrors.
- RH gauge package shall be identical to original LH gauge package on dash
- Controls for all drive and sweeping functions shall be in-cab mounted.
- Engine protection system utilizing coolant temperature, oil pressure, etc.
- Minimum H.P. on chassis engine to be 200
- Chassis must have a minimum 32,000 pound GVWR and meet all emission and motor vehicle standards

### **Auxiliary Engine**

- Minimum 4 cylinder turbocharged diesel. Fuel injected; dry type air cleaner
- A shutdown shall be supplied which stops the engine when the hydraulic oil in the reservoir falls below the acceptable level required.
- A shutdown shall be supplied which stops the engine when the engine temperature and oil pressure falls below the acceptable level required.

### **Instruments, Inside cab mounted**

- Water temperature, oil pressure and diesel gauges for all engines, ammeter, speedometer/odometer, tachometer, electric hour meter for all engines, broom hour meter. All instruments are to be located on dash of cab, centrally located for good vision from operator position(s).

### **Electrical System, 12 Volt**

- Complete 12 volt electrical system with a min. of 120 amp alternator and min. dual 925 CCA batteries
- (Preferred) Wiring harnesses are to be color coded with a preference for hot stamping and labeling a min. of every 12”.
- Battery box/holder(s) shall be mounted to chassis easily accessible

### **Steering**

- Full power hydraulic

### **Hopper**

- Minimum capacity 4 cubic yards; controlled from inside the cab. Dash mounted full load indicator light shall be furnished. Hopper inspection door to be included on the street side of the unit. An auxiliary emergency hopper lift system shall be included if needed for access to engine components.
- Hopper must have the ability to ground dump or dump at infinite levels up to a minimum of 9 ft. 6 inch height for truck loading. Fixed dump height units will NOT be acceptable.

### **Hydraulic System**

- Complete with all pumps and motors for driving elevator, pickup broom, gutter brooms and for operation of lift functions and steering.

### **Sweeping/Cleaning Equipment**

- Hopper and all wear areas are to be stainless steel or equivalent sprayed on LifeLiner coating in entire hopper area.

### **Filtration System**

- Dust filter bag to be made of synthetic material; minimum one vacuum fan required.
- Dust filter shaker required to clean filter when full; to be operated from inside the cab.
- To provide dust control without use of water in freezing temperature.
- Include water system complete with minimum 300 gallon reservoir, pump and lines to spray dust suppression nozzles that Operator can choose to use for certain applications.

### **Blower Fan & Exhaust**

- Fan housing shall be protected from debris via the baghouse filtration; fan speed to be independent of vehicle speed

### **Pickup Broom**

- Full floating with spring or air bag suspension, pneumatically or hydraulically raised and lowered.

### **Side or Gutter Brooms (LH and RH)**

- Free floating spring suspension, pneumatic or hydraulic lift control, automatic retract. The segments shall be disposable and quick replaceable type. Travel width not to exceed 8'. Core and Brooms to be Manufactures\_standard. Side broom tilt with in-cab controls.
- Brooms to be enclosed in dust-proof shrouding to prevent fugitive dust escape.

### **Water System**

- Industrial grade polyethylene or stainless steel water tank with filler hose pump, spray bars over each gutter broom and pickup broom; front spray bar; and tank level indicator
- Front mounted spray bar
- Stainless Steel mesh filter required in the water system to prevent spray bars from clogging.
- Hydrant fill hose required, minimum 16 feet.

### **Automatic Lubrication System**

- Complete with individually calibrated injector pumps and lines for each grease point. An electronic controller will allow for adjustment of lubrication cycles. A manual override button will provide for testing.

### **Engine, Sweeper (if applicable)**

- Minimum 4-cylinder turbo charged diesel; engine should have air-cleaner wet pre-cleaner, full flow oil filter, variable RPM control, temperature and oil shut-off, and emergency shut-off
- Engine compartment to be easily accessible from left and right for service

### **Control Panel**

- Shall include all sweeping and auxiliary engine controls. The control panel shall be mounted forward in the truck cab on a swivel base to allow easy viewing and access to all controls from either operator's position

### **Arrow Board**

- Arrow board specifications are attached. **LED warning lights shall be utilized.** Please list any alternative method and specifications for less cumbersome arrow signaling that will maintain the 6' X 3' size and effectiveness of safety. Price shall not exceed that of standard specifications. All new provisions subject for review by Missouri Department of Transportation Operations Division. ***If any questions, please call General Services Division.***

### **Accessories**

- A LifeLiner Coating or equivalent epoxy shall be provided to cover the entire interior surface in the hopper in lieu of Stainless Steel.

### **Safety Systems**

- Backup alarm when transmission is placed in reverse, all sweep functions shall stop rotating and rise.
- Two (2) top-mounted **LED warning** lights shall be supplied with light protector. One (1) **LED warning** light to be mounted rear of unit and one (1) **LED warning** light to be mounted rear of cab, but not on cab itself.
- Two (2) flush mounted **LED warning** lights shall be installed in tailgate/bumper, bottom right and left hand corner.
- A back-up camera shall be mounted to rear of hopper with a color monitor mounted in cab to the dash to show Operator performance behind sweeper and for safety when backing up

### **Paint**

- Color to be "Highway Yellow" #13432 or manufacturer's standard safety or industrial yellow over a prime coat. (IF YOU HAVE ANY QUESTIONS REGARDING COLOR PLEASE CONTACT THIS OFFICE.)

### **Options**

- Cab over trucks should include an *option* for a cab jack on the Bid Sheet. A cab jack will assist in raising the cab to prevent personal injury (e.g. Back strain). Ease of operability and safety are important features to MoDOT.