Item 2


**Branch Office**
P.O. Box 692109
Tulsa, OK 74169
918-809-8011

**Branch Office**
P.O. Box 11035
Kansas City, KS 66111
913-371-8260

**Main Office**
P.O. Box 2007
Maryland Heights, MO
63043


February 28, 2012

Reva Jones, GS Specialist/Buyer
MODOT
P.O. Box 270
Jefferson City, MO 65102

Dear Reva,

Thank you for the opportunity to provide the all MODOT Districts the 2012 Elgin Eagle Waterless Twin Engine Mechaincal Street Sweeper with Vacuum Filtration Assist. Key Equipment and Supply Company is proud to provide the safest, durable and most dependable street sweepers on the market today.

Please review the following standard features:

- Air conditioning
- Air cleaner, dry type with safety element and restriction indicator, truck & sweeper engines
- Alternator, 120 amp, sweeper
- Alternator, 130 amp, truck (GMC)
- Auxiliary engine, John Deere 4045 4 cylinder diesel, Horsepower: 99 HP at 2500 RPM
- Displacement: 276 cu. in. (4.5 L)
- Dust Skirts
- Torque: 274 lb ft (372 Nm) at 1400 RPM
- Axle, rear, two-speed
- Back-up alarm, electric
- Battery, maintenance free, two
- Brakes, full air
- Broom, main air suspension, cab-controlled
- Broom, main, down pressure gauge
- Broom, main, double wrap
- Camera, Rear with in-cab monitor
- Conveyor, flushing system
- Conveyor, lower roller washout
- Engine, block heater, chassis
- Engine, hour meter, sweeper
- Fresh air ventilator/heater/defroster
- Fuel tank, 50 gallon
- Fugitive dust control filter with in-cab cleaning
- Hopper inspection door
- Hose, hydrant fill, 16'8" (5080 mm) with strainer and coupling
- Lights, automatic backup
- Lights, 2 combination, tail/stop lights
- Lights, flood light, one per broom
- Lights, headlights, 2 dual rectangular
- Light, water level
- Manuals, operator and parts
- Mirrors, West Coast type with 8" diameter convex, both sides
- PM-10 compliant water system
- Signals, self-canceling directional with hazard switch
- Sun visors
- Tachometer, engine, truck and sweeper
- Rocker switch controls for all sweep hydraulic functions
- Tow loops or tow pins, front only; tie-down hooks, rear
- Transmission, Allison, standard with oil cooler
- Water spray, anti-siphon fill
- Water tank, molded polyethylene, 315 gallon total nominal capacity
- Wheels, dual rear with tubeless radial tires
- Windshield washer
- Windshield wipers, two-speed, intermittent feature
- Fugitive dust control fan

In addition to the standard features, the following product enhancements meet and or exceed the current MODOT specifications:

- Robert Shaw automatic lubrication system with an individual pump for each zerk
- Complete hopper constructed of grade 304 Stainless Steel
- Front and rear LED strobe lights with limb protectors
- Left and Right gutter broom tilt angle control from in cab
- All brooms raise when vehicle is placed in reverse
- AM/FM stereo weatherband with CD player and two speakers
- Cab painted yellow to match sweeper
- Heated remote controlled West Coast mirrors
- Alternating LED strobe lights flush mounted to rear of sweeper
- Front spray bar
- (2) Bostrom 905 mid-back air suspension seats
- Main broom hour meter
- Turbo II air precleaner
- Sweep resume after transport
- Service, parts and operators manuals to meet specifications
- MODOT special arrowboard

**Delivered Price per Unit $298,895.00**
**Price is good through February 28, 2013**
**Includes on site factory certified training by Key Equipment for service and operation**
**Payment Terms are Net 10**
**Delivery in approximately 90 days A.R.O.**
**Base chassis is a 2012 Freightliner M2/106 with dualization. Chassis subject to availability.**
**Other product enhancements are available to add to these specifications...see enclosure.**

If you need any information, please call our Kansas City office at 800-262-0149 or our St. Louis office at 800-325-4323. If I am traveling and you have an urgent need for information, a message will be forwarded immediately to my mobile phone. I am also available by e-mail at steve@keyequipment.com .

Yours truly,

Steven Hyink

Steven Hyink
President

MODOT Eagle Options

| | Options for Dual Eagle Waterless RED denoted items are included in 2012 MODOT Bid | Add/Delete |
|---|---|---|
| | MODOT LED ARROW BOARD | $7,500.00 |
| | LED ALTERNATING FLUSH MOUNT STROBES, REAR | $800.00 |
| | AUTOLUBE SWEEPER - ROBERT SHAW | $3,600.00 |
| | TURBO II AIR PRECLEANER | $350.00 |
| | MAIN BROOM HOUR METER | $250.00 |
| | RESUME SWEEP AFTER TRANSPORT | $550.00 |
| | EAGLE SERVICE MANAUL | $100.00 |
| | JOHN DEERE SERVICE MANUAL | $125.00 |
| | PAINT SWEEPER RAL 1037 YELLOW | $0.00 |
| | PAINT CAB YELLOW (FREIGHTLINER) | $1,850.00 |
| | PAINT CAB YELLOW (AUTOCAR) | $2,500.00 |
| | AM/FM STEREO RADIO WITH CD PLAYER | $500.00 |
| | HEATED REMOTE CONTROLLED MIRRORS | $1,200.00 |
| | (2) BOSTROM 905 HI-BACK AIR-SUSPENSION SEATS | $1,000.00 |
| | SIDE BROOM TILT FROM CAB - LH | $500.00 |
| | SIDE BROOM TILT FROM CAB- RH | $500.00 |
| | FRONT SPRAY BAR | $350.00 |
| | FRONT AND REAR LED STROBE LIGHTS WITH LIMB PROTECTORS | $800.00 |
| | COMPLETE STAINLESS STEEL HOPPER | $8,000.00 |
| | **2012 FREIGHTLINER M2/106 CHASSIS** | **$70,000.00** |
| | 2013 FREIGHTLINER M2/106 CHASSIS | $72,000.00 |
| | 2012 AUTOCAR EXPERT CAB-OVER CHASSIS | $98,000.00 |
| | **ALARMS** | |
| 1035625 | CONVEYOR STALL ALARM | $440.00 |
| 1038264 | ECCO SMART ALARM | $230.00 |
| 1048753 | BACK UP ALARM - PRECO | $245.00 |
| 1049403 | BACKUP ALARM - SMART | $245.00 |
| | **AUX ENGINE** | |
| 1078177 | AUXILIARY ENGINE AUTO SHUTDOWN | $645.00 |
| 1084416 | BATTERY DISCONNECT SWITCH AUXILIARY ENGINE | $285.00 |
| 1084384 | ENGINE COOLANT FILTER | $325.00 |
| 1091003 | JOHN DEERE BLOCK HEATER | $325.00 |
| | **BROOMS** | |
| 1035621 | (1) ALUMINUM SIDE BROOM SEGMENT PER SIDE | $440.00 |
| 1084918 | CARBIDE DIRT SHOES | $635.00 |
| 1095046 | ALUMINUM SIDE BROOM SEGMENTS - BLUE STEEL | $500.00 |
| | **DECALS** | |
| 1048642 | SLOW MOVING VEHICLE SIGN | $100.00 |
| 1078556 | RED LOGO/SWOOSH - EAGLE WATERLESS | N/C |
| 1078557 | WHITE LOGO/SWOOSH - EAGLE WATERLESS | N/C |
| | **LIGHTS** | |
| 1055272 | STROBE LIGHT | $325.00 |
| 1070369 | (2) REAR 7" ALTERNATING FLASHERS | $565.00 |
| 1070639 | LED/STOP/TAIL/REAR TURN LIGHT | $535.00 |
| 1080672 | ARROWBOARD | $685.00 |
| 1099175 | BEACON WIRE/MOUNT - FRONT & REAR W/GUARDS | $1,150.00 |
| 1099176 | BEACON WIRE/MOUNT - FRONT & (2) REAR W/GUARDS | $1,660.00 |
| 1099177 | STROBE WIRE/MOUNT - FRONT & REAR W/GUARDS | $1,220.00 |
| 1099178 | STROBE WIRE/MOUNT - FRONT & (2) REAR W/GUARDS | $1,770.00 |
| 1099179 | LED BEACON WIRE/MOUNT - FRONT & REAR W/GUARDS | $1,695.00 |
| 1099180 | LED BEACON WIRE/MOUNT - FRONT & (2) REAR W/GUARDS | $2,480.00 |
| | **LIFELINER** | |
| 1085062 | LIFELINER HOPPER SYSTEM W/WARRANTY | $3,650.00 |
| | **PAINT** | |
| SPECIAL | PAINT SWEEPER NON-RAL COLOR | $3,630.00 |
| SPECIAL | PAINT SWEEPER RAL COLOR | $1,200.00 |
| | **SAFETY** | |
| 9306848 | TRIANGLE REFLECTIVE FLARES (3) | $60.00 |
| 1035572 | 2 1/2 LB. FIRE EXTINGUISHER | $155.00 |
| 1035641 | REFLECTORS, SET OF 6 | $95.00 |
| 1080828 | 10 LB. FIRE EXTINGUISHER | $295.00 |
| 1094513 | REMOVE REAR CAMERA | $0.00 |
| | **MANUALS** | |
| 0702224 | EAGLE WATERLESS PARTS BOOK | $115.00 |
| 0701485 | EAGLE WATERLESS OPERATORS MANUAL | $60.00 |
| 0702125 | EAGLE WATERLESS SERVICE MANUAL | $115.00 |
| 0704052 | JOHN DEERE POWERTECH SERVICE MANUAL | $175.00 |
| 0704051 | JOHN DEERE 4045 TR-2 OPERATOR MANUL | $40.00 |
| 0704050 | JOHN DEERE 4045 TR-2 PARTS BOOK | $55.00 |
| | **SWEEP COMPONENTS** | |
| 1042725 | HYDRAULIC TANK MAGNET | $170.00 |
| 1044103 | HEAVY DUTY LOWER CONVEYOR ROLLER | $720.00 |

MODOT Eagle Options

| | | |
|---|---|---|
| 1061886 | HYDRAULIC OIL LEVEL GAUGE W/THERMOMETER | $150.00 |
| 1084065 | ELECTRIC HYDRAULIC LIFT HOPPER | $1,500.00 |
| 1085075 | MAIN BROOM INTERLOCK | $90.00 |
| 1085416 | VERTICAL WALL SWEEP CURTIAN MODS | $420.00 |
| 1086158 | EXTENDED HOPPER DOOR | $700.00 |
| 1087300 | FAN SOUND DEFLECTOR | $785.00 |
| 1091586 | 2-PLY CONVYOR BELT | $185.00 |
| 1092237 | CHEVRON CONVEYOR BELT | $400.00 |
| | **——TOOLS——** | |
| 1053426 | TOOL KIT | $550.00 |
| 1057687 | TOOL BOX W/TOOLS | $620.00 |
| 1036150 | HYDRANT WRENCH | $70.00 |
| | **——WATER——** | |
| 1032484 | 25' WATER FILL HOSE | $150.00 |
| 1081950 | WATER FILL GAUGE | $530.00 |
| | **——M2 CHASSIS OPTIONS——** | |
| 1070639 | LED/STOP/TAIL/REAR TURN LIGHT | $535.00 |
| 1071626 | PAINT TRUCK RIMS | $940.00 |
| 1080756 | LEFT HAND FENDER MOUNTED MIRROR | $470.00 |
| 1080977 | 12" CONVEX MIRRORS -IL0 STD. 8" | $250.00 |
| 1081188 | EXTRA KEY | $25.00 |
| 1081745 | (2) BOSTROM 905 VINYL MID-BACK | $3,375.00 |
| 1081746 | (1) BOSTROM 905 VINYL MID-BACK | $1,750.00 |
| 1081748 | BOSTROM AIR 905 CLOTH HI-BACK | $940.00 |

NOTE: AUTOCAR IS EQUIPPED STD WITH AIR SEATS AND REMOTE MIRRORS

## 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 there of. 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 current emission and motor vehicle standards

### Auxiliary Engine

- Turbocharged diesel; minimum 4 cylinder minimum Tier 4 emission, 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 100 amp alternator and min. dual 900 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**

- 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 Transportations Operations Division. ***If any questions, please call the District or General Services.***

**Accessories**

- A LifeLiner Coating or equivalent epoxy shall be provided to cover the entire interior surface in the hopper in lieu of grade 304 Stainless Steel.

- Pricing shall be listed for a cab jack as an option on the Bid Sheet. Cab jack will assist in raising the cab to prevent bodily damage (e.g. Back strain). Ease of operability will be heavily looked upon.

**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.)