Item 1

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 MODOT the 2012 proposal for the Elgin Crosswind Regenerative Air Street Sweeper. Key Equipment and Supply Company is proud to provide the safest, most durable and dependable street sweepers on the market today.

Please review the following standard features:

STANDARD FEATURES

Alternator, 95 amp
Auto Shutdown, Aux. Engine
Backup Alarm, electric
Blower, 20,000 CFM rating with linatex lined housing
Brooms, hydraulic rotation
Brooms, Dual with side broom lights for night operation
Console, w/rocker switches for all sweep functions, including memory sweep with full gauge package including tachometer, engine hour meter, oil pressure indicator, coolant temperature, voltmeter and fuel lever indicator, water level gauge and warning lights for hopper "up", hopper rear door "open" and hopper "full", I with auxiliary engine, RPM control, side broom down pressure controls and manual reset circuit breakers
Doors, access fiberglass doors provide easy service and maintenance on auxiliary engine, hydraulic and electrical system
Electronic Throttle, sweep resume/sweep transport/reverse pick-up
Fuel Water Separator on Aux Engine
Hopper rear door, hydraulically opened/closed and locked/unlocked with external controls.
Hose, hydrant fill, 16'8" (5080 mm) with coupling
In-Cab Hopper Dump
LED Clearance Lights
Lights, rear clearance and rear identification
Manuals, operator and parts
Mirrors, West Coast type with 8" convex inserts, one each side
Pick-up head, hydraulically operated, 14" (355 mm) outside diameter pressure hose, 12-3/4" (324mm) inside diameter (11" on FSX) suction hose with quick disconnect on suction side
Spray nozzles, sixteen (16), seven (7) in the pick-up head, three (3) in the suction nozzle, three (3) at each side broom
SB Outer Position Stop
Transmission Oil Cooler
Vacuum enhancer, in-cab operated
Water tank, molded polyethylene, 240 gallons (907L)
Water pre-filter, hydrant fill hose

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

- Robert Shaw automatic lubrication system with individual pump for each zerk (sweeper only)
- Complete Grade 304 Stainless Steel hopper and screens
- Centerbroom in pick-up head with water spray nozzles
- Right hand SS hopper inspection door with grab handle and step
- Front and rear LED strobe lights with limb protectors
- Left and Right gutter broom tilt angle control from in cab
- Front spray bar for dust suppression
- AM/FM stereo weatherband with CD player and two speakers
- Cab painted yellow to match sweeper which is painted RAL 1037 yellow
- Heated remote controlled West Coast mirrors
- Alternating LED strobe lights flush mounted to rear of sweeper
- Service, parts and operators manuals to meet specifications
- Chassis hour meter, aux. engine hour meter and side broom hour meter
- (2) Bostrom 905 mid-back air suspension seats
- Auxiliary electric/hydraulic pump (allows dumping without impeller engaged)
- Turbo II air precleaner
- MODOT special arrowboard

Delivered Price per Unit $211,785.00
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 bid is for a 2012 Freightliner M2 Conventional Cab with dualization. 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

Part No.	Options for Dual Crosswind Red denoted items are included in 20012 MODOT Bid	Add/Delete
1068972	AUTO LUBE SWEEPER ONLY	$3,400.00
1090150	RED LOGO / CROSSWIND	$0.00
Special	STAINLESS STEEL HOPPER	$10,000.00
1071234	SS HOPPER SCREENS	$1,000.00
Special	RH SS HOPPER INSPECTION DOOR WITH STEP AND HANDLE	$700.00
702430	CROSSWIND SERVICE MANUAL	$100.00
1087729	LEFT HAND SIDE BROOM TILT	$750.00
1087730	RIGHT HAND SIDE BROOM TILT	$750.00
1086440	CENTERBROOM	$3,500.00
1078045	TURBO II PRECLEANER	$350.00
1066013	SPRAY NOZZLES FOR CENTERBROOM	$250.00
1095690	AM/FM/CD RADIO	$500.00
1099363	HEATED REMOTE MIRRORS	$1,000.00
1101651	(2) BOSTROM 905 VINYL MID-BACK	$1,200.00
1081747	AUXILIARY HYDRAULIC PUMP	$600.00
1081909	FRONT SPRAY BAR	$250.00
2203116	MODOT SPECIAL ARROWBOARD W/O WANDERING HOSE	$6,500.00
Special	FRONT AND REAR LED STROBE LIGHTS WITH PROTECTORS	$1,000.00
2203118	(2) FLUSH MOUNTED LED STROBES REAR	$850.00
Special	PAINT CHASSIS CAB RAL 1037 YELLOW	$1,850.00
Special	PAINT SWEEPER RAL 1037 YELLOW	$0.00
Special	**2012 FREIGHTLINER M2/106 CHASSIS**	**$70,000.00**
Special	2012 INTERNATIONAL 4300 CHASSIS	$77,000.00
Special	2012 AUTOCAR EXPERT CAB-OVER CHASSIS	$98,000.00
Special	2013 FREIGHTLINER M2/106 CHASSIS	$72,000.00
1048703	BACK UP ALARM, SMART	$360.00
1078904	DUAL POLY BROOMS	$205.00
109051	RED LOGO / CROSSWIND (FSX)	$0.00
1090153	WHITE LOGO / CROSSWIND	$0.00
1061886	HYDRAULIC OIL LEVEL GUAGE WITH THERMOMETER	$155.00
1078204	AIR FILTER RESTRICTION INDICATOR LIGHT IN CAB	$575.00
1085864	RIGHT HAND INSPECTION DOOR	$390.00
1085882	LEFT HAND INSPECTION DOOR	$390.00
1085883	RIGHT HAND INSPECTION DOOR & STEP	$645.00
1085884	LEFT HAND INSPECTION DOOR & STEP	$645.00
1085887	6" HOPPER DRAIN	$745.00
1102088	GLYCOL RECOVERY SYSTEM (GRS) W/ PUMPOFF	$13,530.00
1106146	GLYCOL RECOVERY SYSTEM (GRS) W/O PUMPOFF	$13,530.00
1089326	6" HOPPER DRAIN, SS DOOR	$1,640.00
1092227	LIFELINER HOPPER SYSTEM W/WARRANTY	$6,875.00
701425	CROSSWIND OPERATORS MANUAL	$65.00
702216	CROSSWIND PARTS BOOK	$120.00
702436	CROSSWIND-J+ T3 DIAGNOSTIC MANUAL	$80.00
704050	JOHN DEERE4045HF TIER 3 PARTS BOOK	$60.00
704051	JOHN DEERE 4045HF TIER 3 OPERATORS MANUAL	$45.00
704052	JOHN DEERE 4045HF TIER 3 TECH MANUAL	$180.00
1088213	WIRE/MOUNT REAR BEACON W/GUARD	$405.00
1088214	WIRE/MOUNT REAR STROBE W/GUARD	$435.00
1088219	(2) REAR STROBES W/GUARDS	$960.00
1088228	ARROWBOARD	$1,530.00
1088229	REAR LED ARROWBOARD	$2,295.00
1088230	WIRE/MOUNT - ARROWBOARD	$1,530.00
1088231	WIRE/MOUNT - LED ARROWBOARD	$2,365.00
1088233	REAR BEACON / ARROWBOARD	$1,785.00
1088234	REAR STROBE / ARROWBOARD	$1,785.00
1088235	REAR BEACON / LED ARROWBOARD	$2,500.00
1088246	REAR STROBE / LED ARROWBOARD	$2,500.00

1088335	DUAL REAR FLOOD LIGHTS	$330.00
1088336	SINGLE REAR FLOOD LIGHT	$175.00
1090157	(2) REAR BUMPER MOUNTED STROBES	$775.00
1090458	(2) ALTERNATING FLASHING REAR LIGHTS	$615.00
1090922	REAR BEACON / LED ARROWSTICK	$1,420.00
1090923	REAR STROBE / LED ARROWSTICK	$1,410.00
1095148	DUAL REAR LED FLOOD LIGHTS	$480.00
1095149	SINGLE REAR LED FLOOD LIGHT	$245.00
1095531	LED ARROWSTICK	$1,750.00
1096798	(2) REAR BEACONS / ARROWBOARD (USE W/WANDERING HOSE)	$1,690.00
1096799	(2) REAR BEACONS / ARROWBOARD (USE W/O WANDERING HOSE)	$1,690.00
1096800	(2) REAR BEACONS / LED ARROWBOARD (USE W/WANDERING HOSE)	$2,650.00
1096801	(2) REAR BEACONS / LED ARROWBOARD (USE W/O WANDERING HOSE)	$2,650.00
1096802	(2) REAR STROBES / ARROWBOARD (USE W/WANDERING HOSE)	$1,805.00
1096803	(2) REAR STROBES / ARROWBOARD (USE W/O WANDERING HOSE)	$1,805.00
1096804	(2) REAR STROBES / LED ARROWBOARD (USE W/WANDERING HOSE)	$2,640.00
1096805	(2) REAR STROBES / LED ARROWBOARD (USE W/O WANDERING HOSE)	$2,640.00
1087829	PM-10 WATER SYSTEM	$2,710.00
1087830	PM-10 WATER SYSTEM (USE W/CENTERBROOM)	$2,710.00
1087831	PM-10 WATER SYSTEM (FSX)	$2,040.00
1087832	PM-10 WATER SYSTEM (USE W/AIR BLAST)	$2,710.00
1087833	PM-10 WATER SYSTEM (USE W/CENTERBROOM & AIR BLAST)	$2,710.00
	2 1/2 LB. FIRE EXTINGUISHER	$1,765.00
1048643	SLOW MOVING VEHICLE SIGN	$2,585.00
1095548	LEFT HAND SIDE CAMERA	$470.00
5007219	HYDRAULIC JACK, 5 TON	$240.00
9306848	TRIANGLE REFLECTOR FLARES (3)	$65.00
1086456	VARIABLE SPEED SIDE BROOMS - DUAL	$3,145.00
1086458	VARIABLE SPEED SIDE BROOM - RIGHT HAND	$2,370.00
1068046	CASTERS FOR PICKUP HEAD	$2,490.00
1072966	AIR SUPPLY HOSE	$355.00
1088532	UTILITY COVER LIFTER	$2,295.00
1090971	LEFT HAND SINGLE AIR BLAST- ILO LEFT HAND SB - FOR STD J+	$5,270.00
1090604	FLOW BLOCKER	$1,595.00
1066340	BATTERY DISCONNECT SWITCH	$480.00
1086487	JD COLD WEATHER STARTAID	$380.00
1088982	1000 WATT BLOCK HEATER	$355.00
6063004	ADDITIONAL IGNITION KEY	$30.00
1036150	HYDRANT WRENCH	$75.00
1053426	TOOL KIT	$565.00
1057687	TOOL BOX W/TOOLS	$635.00
1086441	HYDRAULIC WANDERING HOSE	$3,625.00
1059263	4 FT. ALUMINUM WANDERING HOSE EXTENSION - REAR MOUNT	$715.00
1063656	(2) 4 FT. ALUMINUM WANDERING HOSE EXTENSION REAR MOUNT	$1,315.00
1065243	WANDERING HOSE LIGHT DUTY SPRING	$345.00
1065532	LIGHT DUTY LITTER HOSE	$2,040.00
1065867	WANDERING HOSE LIGHT DUTY SPRING (FSX)	$3,060.00

1086442	HYDRAULIC WANDERING HOSE (FSX)	$4,080.00
1086443	HYDRAULIC WANDERING HOSE (USE W/VARIABLE SPEED)	$3,640.00
1086444	HYDRAULIC WANDERING HOSE (USE W/VARIABLE SPEED) (FSX)	$4,030.00
1093078	SPRING BOOM WANDERING HOSE	$2,640.00
1032484	25' WATER FILL HOSE	$155.00
1040094	QUICK DISCONNECT WATER FILL	$455.00
1059209	HOPPER DELUGE	$890.00
1061652	ANTI SIPHON 2-1/2" AIR GAP	$170.00
1070059	AIR PURGE FOR WATER SYSTEM	$315.00
1071989	LOW PRESSURE WASH DOWN	$640.00
1079872	SPRAY NOZZLES FOR CENTERBROOM (USE W/PM10)	$325.00
1086588	HIGH PRESSURE WASHDOWN (USE W/CENTERBROOM)	$2,585.00
1086589	HIGH PRESSURE WASHDOWN	$4,060.00
1100507	AIR PURGE FOR WATER SYSTEM (USE W/PM10)	$315.00
1088212	WIRE/MOUNT REAR	$195.00
1088216	WIRE/MOUNT RIGHT & LEFT REAR (USE W/WANDERING HOSE)	$640.00
1088217	WIRE/MOUNT R&L REAR (USE W/OUT WANDERING HOSE)	$530.00
1088384	WIRE MOUNT R&L REAR BEACON (USE W/WANDERING HOSE)	$1,090.00
1088385	WIRE MOUNT R&L REAR BEACON (USE W/OUT WANDERING HOSE)	$870.00
1088386	WIRE MOUNT R&L REAR STROBE (USE W/WANDERING HOSE)	$1,020.00
1088387	WIRE MOUNT R&L REAR STROBE (USE W/OUT WANDERING HOSE)	$870.00
1095680	LED/STOP/TAIL/REAR TURN LIGHT	$550.00
1095688	PAINT TRUCK RIMS	$960.00
1095691	LEFT HAND FENDER MOUNTED MIRROR	$480.00
1096443	12" CONVEX MIRRORS -IL0 STD.	$255.00
1097811	EXTRA KEY	$30.00
1100792	(1) BOSTROM 905 VINYL MID-BACK	$810.00
0	(2) BOSTROM AIR 905 CLOTH HI-BACK	$1,750.00
1070639	BOSTROM AIR 905 CLOTH HI-BACK	$960.00
1075400	GOODYEAR SPARE TIRE & WHEEL , BALANCED	$870.00
1080756	SINGLE ARM REST - VINYL	$340.00
1080977	DUAL ARM REST - VINYL	$650.00
1081188	SINGLE ARM REST - CLOTH	$340.00
1081364	DUAL ARM REST - CLOTH	$650.00
1081746	AIR RESTRICTOR GUAGE	$895.00
1081748	WIRE/MOUNT CAB / REAR	$765.00
1081872	BEACON CAB / REAR W/WIRE MOUNT	$1,220.00
1081901	STROBES CAB / REAR W/WIRE MOUNT	$1,275.00
1081910	DUAL AIR HORN	$1,100.00
1081911	(2) 4 FT. ALUMINUM WANDERING HOSE EXTENSION - FRONT MOUNT	$1,270.00
1081912	WIRE/MOUNT - CAB/REAR (USE W/AIR HORN)	$1,090.00
0	BEACON CAB/REAR (USE W/AIR HORN)	$1,190.00
1082931	STROBE CAB/REAR (USE W/AIR HORN)	$1,405.00
1086486	2 1/2 LB. FIRE EXTINGUISHER	$165.00
1086489	5 LB. FIRE EXTINGUUISHER	$210.00
1086490	AUTO LUBE TRUCK/SWEEPER	$6,695.00
1086491	LED STROBE CAB/REAR	$1,490.00
1086602	LED STROBE CAB/REAR (USE W/AIR HORN)	$1,490.00
Special	PAINT AUTOCAR EXPERT CAB ANY RAL STD COLOR	$4,500.00

Four Wheel (Vacuum) or Regenerative Air Street Sweeper – Item #1

General

- The intent of this specification is to secure the latest model and design "Vacuum or Regenerative air street sweeper" with extension broom capable of removing litter, debris, etc. from street surfaces. 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 with shatterproof safety glass, tinted windshield and windows; Dual two-speed windshield wipers and washers with intermittent feature; 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" spot convex 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

Electrical System, 12 Volt

- Sealed multiple beam headlights with dimmer switch, combination stop, tail, backup and directional signals, hazard warning flashers, clearance lights, front side marker lights, inside cab dome light and instrument lights.
- (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 frame rail easily accessible.

Brakes

- Full air, service complete, cam type
- Parking brake to be spring set with air release

Steering

- Full power hydraulic

Sweeping/Cleaning Equipment

- Hopper, door and internal components shall be constructed of rust proof grade 304 Stainless Steel. All wear areas such as fan housing & pickup head shall be constructed of abrasion resistant steel with epoxy coating, replaceable liners, or other proven means to reduce wear.

Blower Fan & Exhaust

- Fan compartment shall be acoustically lined/sound suppressed and include replaceable wear liner. Fan speed independent of vehicle speed.
- Fan, fan compartment and all drive mechanism shall be housed in an enclosed compartment for safety and additional sound suppression.
- Fan housing shall incorporate an inspection/clean out door.

Side or Gutter Brooms

- Located each side, center of sweeper; hydraulically driven and hydraulic or pneumatic raised, lowered, suspended, adjusted, and tilted with inside cab controls.
- Power tilt gutter brooms on both sides controlled from inside cab.
- Broom contact pattern must remain constant with regards to vertical broom movement due to changes in pavement conditions.

Vacuum Nozzles/(Vacuum Sweepers Only)

- Minimum 11" inside diameter suction hoses; smooth inside bore hoses. Nozzles to be abrasion resistant (AR 400) steel; quick disconnect at pickup head for easy clean out.
- For safety nozzles must automatically raise when truck is placed in reverse.

Pick-Up Sweeping Head/ (Regenerative Air Sweepers Only)

- Minimum of 87" wide with abrasion resistant steel shoes/runners, heavy duty 3/8" thick wall rubber hoses attaching to hopper, quick disconnect on suction hose only, suspended from a minimum of 4 adjustable springs one (1) on each corner of pick-up head.
- For safety head must automatically raise when truck is placed in reverse.
- For performance, regenerative pick-up head must include a broom inside of the head.
- A quick disconnect shall be located near pickup head for easy clean out.

Water System

- Industrial grade polyethylene or stainless steel water tank to be standard of manufacturer with filler capacity, strainer and low level indicator. Minimum of four (4) spray nozzles on main broom, two (2) on each side broom, one (1) inside hopper to dampen debris being swept by suction nozzle, and a front spray bar, or additional nozzles for dusty areas being swept, all spray nozzles controlled separately on console inside cab.
- Inside cab 'low' water indicator required.
- Hydrant fill hose required, minimum 16 feet.
- A Stainless Steel mesh filter is required in the water system to prevent spray bars from clogging.

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 Tier 3 diesel; engine should have air-cleaner with pre-cleaner, full flow oil filter, variable RPM control, temperature and oil and coolant level shut-off, and emergency shut-off. Must meet minimum of Tier 3 emissions.
- Engine compartment to be easily accessible from left and right for service.
- 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.

Hopper

- Air Sweeper Hopper shall be a minimum of seven cubic yard capacity, constructed of grade 304 Stainless Steel including rear door, screens and dust separator.
- For safety, a hopper load indicator must be provided to warn Operator that chassis is loaded to capacity of chassis suspension.

- To reduce dust during transport and dumping, the hopper must be able to be unloaded without the fan engaged and moving air.

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 in cab between seats, centrally located for good vision from operator position(s).

Control Panel

- Shall include all sweeping and auxiliary engine controls. The control panel shall be mounted forward in the truck cab 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.***

Electrical

- All wiring shall be color coded and hot-stamped with function every few inches.
- Control console shall be backlit for nighttime sweeping operation.
- A floodlight shall be adjacent to each side and main broom for safety.

Accessories

- A LifeLiner Coating or equivalent epoxy coating complete with repair kit or bolt in replaceable wear liners shall be provided for additional protection of the entire interior surface in the hopper in lieu of grade 304 Stainless Steel.
- Pricing should include listing 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 and safety is heavily looked upon.*

Safety Systems

- Backup alarm when transmission is placed in reverse, all sweep functions shall stop rotating and raise-up.
- 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 of cab and sweeper 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.)