

Procurement Services Division City of Kansas City, Missouri 1st Floor, Room 102 W, City Hall 414 East 12th Street Kansas City, Missouri 64106-2793

ADDENDUM NO. 1

NUMBER: <u>EV1495</u>

DESCRIPTION: STREET SWEEPERS POWERED BY COMPRESSED NATURAL GAS

(CNG) CMAQ-3301

DATE DUE: <u>09-11-2012, 2:00 PM</u>

TO ALL PROSPECTIVE BIDDERS:

This Addendum addresses the following:

1. CHASSIS

Wheelbase not more than 164"

Wheelbase not more than 91" Delete

Three (3), 3600 PSI CNG fuel tanks shall be shared by both engines and shall be easily filled without raising or shifting of any components

A fuel gauge, in cab, shall be supplied to allow an Operator to monitor level of CNG

2. CHASSIS ENGINE

Type: Natural Gas Engine

Dedicated CNG, electronic in line six (6) cylinder turbocharged and water-cooled.

Engine output: 500 lb/ft. @ 1600 rpm

Governed Speed 2800 RPM

Cooling system: heavy duty, increased capacity with permanent anti-freeze installed and tested to protect to 34 degrees below 0 f.

Radiator fan shall be viscous drive type

3. TRANSMISSION

Heavy Duty five (5) speed automatic transmission

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Heavy duty transmission oil cooler

External spin on transmission oil filter

2-Speed rear axle with ratio of 5.86/8.17:1 for proper sweeping speeds.

4. FRONT AXLE

12,000 lb front axle with 12,000 lb springs and shock absorbers

5. REAR AXLE

21,000 lb rear axle with airspring system having a minimum capacity of 21,000 lbs. <u>Rigid suspension or rubber suspension will not be acceptable, must be air-ride rear suspension</u>

Control of the airspring rear suspension shall be by a single transport/sweep switch on the control console Airspring suspension shall automatically deflate in "sweep" position and "dumping" position

Air spring suspension shall inflate while transporting for less shock to chassis components and operator comfort

For maintenance reasons, front and rear tires/wheels shall be interchangeable for quick repairs

Tires shall be tubeless radial tires, 14 ply 11R22.5 with "G" load rating

Rear axle shall include dual tires for load capacity while sweeping and stability when dumping/unloading

Total of six wheels and tires

Rims shall be 10 hole steel hub piloted 22.5 x 8.25

Brakes shall be full air brakes with an 18.7 CFM capacity compressor and automatic slack adjusters

Air system shall include heated air dryer with automatic moisture ejector

Parking brake shall be spring applied rear wheel drum and shoe. Brake control shall be mounted in a central location for easy application from either driving position

6. Cab (ADD)

Maximum visibility, forward line of sight from the chassis front bumper to the point on the ground visible to the operator shall not exceed 8 feet for a SAE 98th percentile size operator

Steering shall be full power with left and right side operator controls

Seats shall be air-ride suspension with arm rest on each side

Two (2) outside west coast type mirrors with lower 8 inch convex lens for easy viewing of the side broom during sweeping

Fender mounted mirror shall be installed forward of front wheels on streetside and curbside of the machine for safety

All sweeper and cab control switches shall be illuminated for night time sweeping

Factory installed air-conditioner with fresh air heater/ventilator/defroster

Side windows shall have defogger

Two-speed window wiper control on both driving positions with intermittent feature

Cab shall be insulated for lower operating noise

All glass shall be tinted safety glass meeting FMVSS

Sun visor at each operator location

12 volt power outlet for auxiliary devices shall be mounted centrally in cab

AM/FM Stereo with auxiliary plug in for audio instructional downloads

Air horn (single trumpet) controlled from either driving position

7. UINSTRMENTS (ADD)

There shall be two operator driving locations. ALL instruments shall be provided by OEM chassis manufacturer and shall match left side and right side. NO AFTERMARKET conversions will be acceptable for dual steering, instruments and controls. All instruments must be mounted in a normal position, easily viewable from the drivers position without looking up or to the side

Left and right side operator OEM instruments will include:

- Tachometer
- Odometer
- Trip odometer
- Water temp gauge
- · Air pressure gauge
- Volt gauge
- Warning light and chime for low coolant
- Warning light and chime for high temp coolant

Left and right side driver position control that automatically

turns off the blinker and other controls for unused driver position

8. ELECTRICAL

Chassis electrical system shall be totally separate from sweeper electrical system (for ease of maintenance and diagnosis)

9. SWEEPER ENGINE AND TANKS

Sweeper shall be a two engine design for a total combined horsepower, chassis and auxiliary engine of 297 TOTAL HORSEPOWER. Single engine designed sweeper will not be acceptable

3 composite 3600 PSI CNG tanks mounted directly behind the chassis cab and enclosed in a safety cabinet style enclosure

Chassis engine regulated at 150 PSI

Auxiliary engine regulated at 27 PSI

Tank to include pressure relief and shut-off safety valves

Stainless Steel fuel line system including shut off valve, high pressure regulator, gauge, filter, vacuum shut-off valve, low pressure regulator

Auxiliary engine shall be equipped with a high/low engine safety shutdown system that protects the engine in low oil pressure and high coolant temperature conditions

Auxiliary engine shall mounted towards the rear of the machine to reduce noise levels for the operator and to allow easy access to daily fluid checks and cleaning

Daily checks of oil level antifreeze levels shall be accomplished without need to climb onto the machine, from ground level

Auxiliary engine shall be completely enclosed to reduce noise levels and reduce debris from building up around engine and other sweeper components

Auxiliary engine compartment shall be equipped with a non-skid walkway to allow easy access for maintenance and cleaning around engine and other sweeper components

Auxiliary engine compartment shall have two non-skid steps and a safety handle for easy and safe access to rear compartment

There shall be a minimum of four access doors and two fold-backs top doors to gain access to the auxiliary engine

Four access doors shall be able to be locked with a key for safety

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and security

The top fold-back doors shall have lock-downs that can only be unlocked through one of the lower lockable doors for safety and security

The two top fold-back doors shall be manufactured from aluminum to reduce weight and have large handles for lifting open

A remote oil drain, plumbed to the street side rear of the machine shall be supplied to prevent the need for climbing under the machine for oil drainage

Remote drain shall have a protective bolt-on cover that prevents accidental drainage of engine oil. Drain shall be clearly labeled with a decal on the cover panel.

10. SWEEPER ELECTRICAL SYSTEM

Sweeper electrical system shall be independent from the chassis electrical system

Heavy-duty 12-volt system with a minimum 120 amp alternator

Sweeper wiring harnesses shall be color coded and hot stamped with appropriate word designation labeled every four inches minimum. (I.E. "Ignition", "Side Broom" on each color coded wire)

Complete wiring harness and connections shall be weather proof to eliminate water and dust from connections

One (1) 12 volt, 925 CCA battery mounted in rear engine compartment with easy access from walkway

One (1) LED work light shall be located at each gutter broom and at the rear of the machine to illuminate the main broom area

Sweeper shall have an electronic back-up alarm for additional warning and safety when sweeper is placed in reverse gear

Sweeper warning lights shall include hydraulic filter restriction, air filter restriction, low spray water, hopper up, hopper full load and low voltage

For safety and to avoid damage to the main broom, side broom and conveyor system, all sweeper components shall <u>automatically</u> raise when transmission is shifted into reverse gear

There shall be a minimum of two main electrical main harness weatherproof master connections. (1) One for cab mounted control box and one (1) for body/chassis

11. HYDRAULIC SYSTEM

All rotation and hopper lift functions on the sweeper shall be accomplished by hydraulics. Side brooms and main broom rotation, side brooms in/out, hopper up/down, hopper slide in/out and hopper tilt/retract

Sweeper hydraulic system shall be driven directly from the auxiliary engine crankshaft via a rubber drive coupling to reduce vibrations

Hydraulic system shall be held under a 3 PSI constantly to reduce contamination. Reservoir cap shall have a depressurized push-button cap to drain pressure prior to filling

Reservoir shall have a sight gauge that is viewable from ground level at the rear of the machine

Main hydraulic filter shall be a cartridge type that is housed in a aluminum housing on top of the hydraulic manifold. Cartridge is replaced by removing six (6) bolts that retain the aluminum top and o-ring seal

The bottom of the hydraulic reservoir shall be equipped with a oil diffuser/strainer to prevent bubbling of oil during transportation

To prevent contamination when adding hydraulic fluid, all oil added <u>must</u> pass through a 10 micron filter located within the fill spout

Because the volume of oil that leaves the reservoir when the hopper is raised and the dusty environment a sweeper works in, the reservoir vent shall be a spin-on, replaceable 10-micron filter

Each section of the drive pump shall incorporate a quick-disconnect test port for easy diagnoses of the pump drive pressures

All hydraulic manifolds shall be manufactured from aluminum to reduce corrosion and have a quick-disconnect test port incorporated at every manifold

A remote oil drain, plumbed to the streetside rear of the machine shall be supplied to prevent climbing under the machine for oil drainage

Remote drain shall have a protective bolt-on cover that prevents accidental drainage of hydraulic fluid. Drain shall be clearly labeled with a decal located near the drain

Rigid hydraulic lines shall be manufactured from Stainless Steel to prevent corrosion

All hydraulic cylinders shall be powder coated, wet paint process will not be accepted, to prevent corrosion

All hydraulic cylinders shall be heavy-duty design and rebuildable

Hydraulic drive motors shall be specifically designed for street sweepers to with heavy-duty shaft seals to prevent damage from fishing line, construction string, etc. found while sweeping

12. RIGHTSIDE AND LEFTSIDE GUTTER BROOMS

Pneumatically controlled, trailing arm design for maximum productivity, reliability, broom wear and visibility of Operator

One (1) 42-inch diameter heavy-duty gutter broom shall be mounted on each side of the sweeper and be capable of protruding a minimum 13 inch from the chassis tire

Full sweeping path of a minimum 120 inches with both gutter brooms in working position

To hold gutter broom pattern, regardless of up and down motion through pneumatics, up/down arm suspension design shall be a parallelogram type

In/out motion of gutter brooms shall be trailing arm design to allow gutter brooms to follow the contour of the curbline without damage

Trailing arm design is required to prevent broom from getting stuck in larger storm drain inlets.

Forward facing digger type arm assembly designs will not be acceptable

Gutter broom shall be moved in and out from the sweep to transport position hydraulically with a spring assisted hydraulic cylinder. Spring will allow broom to move in/out without damaging the cylinder when stationary objects are encountered

Gutter brooms shall be raised and lowered pneumatically to allow side broom to raise/lower while sweeping different obstacles and surfaces. Hydraulically raised and lowered gutter brooms will not be acceptable, they must be pneumatic to allow flexibility of and reduce broom wear while sweeping different curb/street levels

Gutter broom down pressure shall be adjustable by the Operator pneumatically from inside the cab while moving or stationary

Each gutter broom shall consist of five (5) plastic

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segments, filled with 26 inch long oil-tempered steel wire

Gutter broom side plates shall be heavy-duty and a minimum of 1/2" think and a 3/4" drive hub to prevent damage

Gutter broom speed shall be variable, 90 RPM to 160 RPM, by the Operator from the cab while moving

Gutter broom rotation control from cab, forward or reverse, shall be selectable without leaving cab from one three-position toggle switch. Gutter broom must be able to be reversed to allow moving larger object from the sweep path to prevent damage and without Operator leaving the cab for safety

Gutter broom RPM shall be variable determined by speed of the auxiliary sweeper engine. Side brooms RPM shall be totally independent of chassis engine RPM or road speed.

Gutter brooms must be capable of engagement or disengagement at any engine or sweeper speed movement in six directions (up, down, back, forward, in, out) singly or in combination and automatically recover to initial sweeping position

Right side gutter broom shall be equipped with a tilt function that allows the Operator to change the angle of the side broom for different depths of curblines. This function shall be accomplished by a electric actuator cylinder controlled from the cab by the operator, independent of sweeper speed

Each gutter broom shall have an LED light for night operation, illuminating the work area around the broom

Gutter broom rotation shall stop and raise automatically when chassis transmission is placed in reverse and return back to the previous sweep position when transmission is placed back in the drive position

13. MAIN BROOM

Main broom shall be positioned/mounted at the rear of the machine, behind the rear wheels of the chassis

Main broom shall be pneumatically raised and lower by two (2) heavy-duty air bags. Hydraulically raised and lowered main brooms will not be acceptable. Our experience shows pneumatic main broom suspension allows the broom to float up/down through dips and other varying ground level conditions without damage or fatigue

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Pneumatic main broom air bags shall be mounted under the machine, in a location to reduce damage from obstacles while sweeping

A heavy-duty 4" x 4" main broom tubular arm shall be mounted on each side of the main broom to raise and lower broom. Each main broom arm shall pivot on a greaseless heavy-duty phenolic bearing

Each 4"x4" tubular arm shall have a movable 10 lb weight in each arm to allow fine adjustments to reduce broom coning

Each 4"x4" tubular arm shall have a heavy duty shock to reduce broom bouncing and for more even wear of broom

Each 4"x4" broom arm shall be equipped with a "up" position safety pin to be used when parking machine for long periods of time to reduce broom from drifting down

Main broom shall be driven hydraulically by a direct driven/mounted hydraulic motor. Chains, sprockets or belt driven brooms will not be acceptable because of increased maintenance

Hydraulic motor shall mount to the broom drive shaft by a heavy-duty split coupling and ½" collars. Coupling shall be designed to use a spring pin for safety

Hydraulic motor shall be equipped with an anti-torque rod to reduce leverage when broom is turned on/off that could cause premature wear on hydraulic motor and/or broom coning

A heavy-duty steel protective cover shall bolt-on around motor to prevent damage to motor around high curbs, etc.

Each end of the main broom shall rotate on pillow block Seal Master bearing that is specifically designed for a street sweeper with extra seals for dusty conditions

To provide flexibility for varying sweeping conditions, broom speed shall be variable, 80 RPM to 140 RPM, by the operator from cab while moving by adjusting the auxiliary engine RPM

Total sweeping path with both gutter brooms and main broom shall be 120"

Main broom shall be equipped with an LED work light to illuminate the work area around the main broom while sweeping at night

A anti-carry over main broom hood shall be supplied on the machine. Hood shall be manufactured from heavy-

duty steel and have a protective wear coating applied to the inside for extra life. Hood shall be adjustable for changing height as the broom wears. Complete hood shall fold open for easy access while changing the broom. A latch shall be supplied that holds the hood in the open position for cleaning and broom inspection

Main broom shall be a strip v-broom design for easy replacement and better sweeping performance

A heavy-duty broom core shall be supplied with expandable 2" rubber biscuits that locks the broom mandrel in heavy sweeping conditions

Mandrel shall be manufactured from 8.625"x0.065"x60" steel with 2.75" 16 gauge CRCQ channel steel for broom strips

A total of 18 strip channels shall be supplied for maximum ground broom bristle coverage

123 lbs total refill polypropylene filament weight, 60" x 36" total size on mandrel. Oval filament Shape, 0.085" x 0.120"

A 3/16" wear plate shall be mounted on each end of the main broom to help prevent broom end flailing

A main broom flexible rubber cover shall be supplied between the top of the main broom and bottom of the auxiliary engine to reduce dust plugging radiator

Independent/floating dirt shoes shall used on each end of the mainbroom. Dirt shoes shall be built to allow them to independently follow the contour of ground while keeping a tight fit around the main broom to prevent streaking. Each dirt shoe shall be equipped with three (3) grease zerks and a small adjustment spring for tuning/wear adjustments

Dirt shoes shall be equipped with heavy-duty v-pattern Wearmax mining grade carbide drag shoes. A minimum of 3" wide footprint on ground for maximum support and minimum wear.

Wear shoes shall come standard with a 3-year warranty with a no-hour restriction

14. BELT CONVEYOR SYSTEM

A true belted conveyor must be supplied, Chevron type belt that shifts dirt to center to minimize trailing fall-off is required

Belt shall be single ply polynylon with polyester nylon

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fill and .06 rubber cover. Chevron groove cleat design

Total belt width and length shall be 48" wide x 216" long

Conveyor speed shall be fully variable from inside cab by adjusting auxiliary sweeper engine RPM.

To provide proper clearance, the lower portion of the conveyor shall be capable of raising 9 inches while sweeping for any type of material without any operator input or control. Conveyor shall float over debris by raising and lowering automatically

Conveyor belt shall be capable of effectively sweeping debris of varying sizes (from large bulky trash 9" in height to fine sand) without the need to make any adjustments to the conveyor system or requires the Operator to get out of the cab

Conveyor shall utilize four (4) pivot brackets to allow conveyor structure to swing into the sweep position and swing up during transportation and dumping. Each pivot bracket shall use phenolic greaseless bearings, total of eight (8)

Conveyor shall be raised and lowered pneumatically by one heavy duty 20" airbag allowing the conveyor to float over debris. <u>Hydraulically raised/lowered</u> conveyor systems will not be acceptable

For safety, conveyor and structure shall automatically stop and raise when the truck transmission is placed in reverse and return to the sweep position when chassis transmission is place back into drive

Conveyor shall rotate on a upper and lower heavy duty steel roller with four (4) Seal Master bearings. Upper roller shall be built with a belt tracking grooves to help the belt stay centered in heavy sweeping

The conveyor structure shall be equipped with a belt scraper to reduce build up of debris on the back of the belt. Scraper shall be constructed from steel with a 3/4" heavy-duty rubber edge

Conveyor rotation, forward or reverse, shall be selectable in the cab by operator

Conveyor shall be equipped with a two-part flush system to help clean the front and backside of the belt, as well as the conveyor scraper. Lower roller flush system shall be able to use onboard water or hydrant water while filling

The lower side of the conveyor shall have a rubber skirt that runs around the front of the conveyor to help contain

dust but is slotted to allow larger/lighter debris under

15 HOPPER

For safety, the hopper shall be right side dumping, allowing Operator to observe the dump target and surrounding the area at all times from the cab, without the use of mirrors or cameras

Hopper floor shall be constructed of 7 gage steel

Hopper door, sides and top shall be constructed of 11 gage steel

Hopper volumetric capacity shall be not less than 4.5 cubic yards

A hopper inspection/loading door shall be supplied on the streetside of the hopper. A safety step and large handle shall be mounted to safely look into the door

Hopper shall dump at varying heights ranging from 38 inches through a height of 10 feet as measured at the lowest point under the open hopper chute. Fixed height dump systems are not acceptable

Hopper shall be able to tilt (dump) to an angle no less than 50 degree to ensure complete removal of all debris

Life mechanism shall be double stage, scissors lift system utilizing two hydraulic cylinders with a bore of not less than 3.5 inches and a stroke of not less than 33.5 inches. Total lifting capacity of 11,000 lbs minimum

Scissor lift system shall use heavy-duty rollers that are made from hardened abrasion resistant steel

Hopper must be equipped with a hydraulic side shift system that moves the entire hopper receptacle over 11 inches for safer and more productive dumping into dump trucks. This feature allows the sweeper to not get as close to the dump truck when dumping and reduces damage to mirrors and other equipment on both vehicles. Non-side shifting hopper designs that use larger doors will not be acceptable, hopper must side shift and use a smaller door

Hopper lower dumping door shall be no longer than 18 1/2 inches in total length and be hydraulically opened and shut

During high wind conditions, long dump doors that restrict full dumping angle of 50 degrees will not be acceptable. We have found that longer doors are much more open to damage because of the length and weight of debris collected.

The hopper dump/tilt and hopper door shall be equipped with a safety sequence valve that prevents the hopper from raising if the door is not opened first

Hopper load shall be visible at all times from the cab through a front facing hopper window viewable from the cab of the chassis

Top of hopper shall be equipped with a large skylight that allows daylight into the hopper for better visibility

To prevent over-loading beyond the chassis manufacturer's GVW rating, cab shall have a full load warning indicator light activated by hopper weight. No exceptions

To extend wear life, all scissors lift joints shall be equipped with self-lubricating bronze bearings

Hopper and lifting apparatus shall be equipped with safety props that allow safe entry to chassis components

For safety, the lifting and dumping apparatus shall have a interlock to prevent dumping hopper without engaging the parking brake

For safety, cab shall have an "UNLEVEL GRADE" indicator And a interlock that prevent dumping on unlevel ground

For safety, the lifting and dumping apparatus shall have a interlock that prevents dumping if conveyor is not in the raised position or chassis rear suspension is not deflated

For safety, sweeper chassis shall be equipped with rear air bag suspension system that deflates to allow a ridged suspension for stability when dumping hopper

The inside of the hopper shall be coated with an antiabrasion polyurethane coating/liner. Stainless Steel or regular mild steel is not acceptable as a alternative to the coating. Coating shall act as a wear resistant barrier and be slippery smooth to allow for easier dumping

Hopper shall come with a lifetime warranty against corrosion rust through or internal wear

16. DUST SURPRESSION SPRAY SYSTEM

Two 140-gallon plastic water tanks each mounted directly above the rear tandem wheels for maximum weight distribution

80 PSI water pump shall be centrifugal type capable of running dry indefinitely without damage. Drive bearing housing shall be equipped with a grease fitting and purge plug to remove old grease

Water pump shall be belt driven from the auxiliary engine. Pump shall be mounted to allow easy adjustment of the drive belt

Water pump shall have a pressure switch install that turns on a light mounted on control console when low on water/pressure

Three (3) spray nozzles on each gutter broom

Three (3) spray nozzles on rear spray bar in front of main broom.

A lower spray roller spray bar shall be supplied on the machine and mounted permanently above lower conveyor roller. Operator shall be able to turn on this function using on board water or while filling at the fire hydrant

Water to each gutter broom and rear spray bar shall be individually controlled from inside the cab.

Water volume to complete spray system shall be controlled from inside the cab. Low/High

Sweeper shall be equipped with an automatic internal hopper/conveyor flush and wash down system. System shall include a manual bypass valve to divert hydrant water flow into flush system.

Flush system shall clean hopper, topside of conveyor belt and backside of conveyor belt

Water system shall be equipped with a heavy-duty wash down hose and nozzle for cleaning of radiator and other sweeper components out in the field

An in-line water filter shall be provided with the fill hose to prevent contaminants. Canister shall be equipped with a heavy duty o-ring to eliminate using sealants to seal canister to housing. Filter housing shall be constructed from plastic and a 50 mesh Stainless Steel screen shall be used

To prevent the contamination of the city water supply, tank shall be equipped with an anti-siphon air gap or device compliant with ANSA

Fill hose shall be 2.5 inch diameter, 16 feet long with hydrant coupling matching City of Kansas City Missouri fire hydrants and must have air gap or mechanical backflow preventer permanently installed, on the vehicle to comply with federal, state and local codes

To prevent freezing, the water system shall be equipped

with a blow down device that will purge 100% of the water from lines, valves and nozzles

17. PNEUMATIC SYSTEM

The sweeper pneumatic system will lift and lower both gutter brooms through pneumatic cylinders, inflate/deflate main broom air bags and inflate/deflate conveyor air bag

A separate sweeper air supply tank shall be installed, in addition to the chassis air tanks, for storage of air for use for the sweeper pneumatics

Air tank shall be mounted in the rear engine compartment near walkway for easy draining

A safety PR4 valve shall be installed between the sweeper air tank and chassis tanks to prevent air loss below 90 psi for chassis

All pneumatic cylinders on the machine shall be interchangeable

All pneumatic cylinders must be rated to 150 PSI and have a separate rod seal and wiper to prevent contamination entering the cylinder

Main broom air bags and conveyor air bag shall be heavy-duty type with thick side walls to prevent damage of failure

All pneumatic system fittings, hose, etc. shall use DOT approved hardware only

Pneumatic system shall have a auxiliary fill port for use during maintenance to raise brooms without starting the chassis engine or to release brakes

18. OPERATOR CONTROL PANEL

A centrally located sweeper control panel shall be installed between LH/RH operator seats

Control panel shall be a minimum size of 20" x 26" and be built for maximum Operator ergonomics

The following controls, gauges and lights must be installed for complete/safe operation Chassis keyed ignition

- Sweeper engine keyed ignition
- Chassis transmission shifter
- Parking brake control
- LH/RH Steering position
- Sweeper engine throttle

- Sweeper engine voltage meter
- Sweeper engine oil pressure gauge
- Sweeper engine temperature gauge
- Sweeper engine tachometer
- Sweeper hour meter
- Main broom airbag gauge
- LH gutter broom in/out switch
- RH gutter broom in/out switch
- LH gutter broom up/down reverse/forward switch
- RH gutter broom up/down reverse/forward switch
- LH dust suppression water control switch
- RH dust suppression water control switch
- Water volume high/low control switch
- RH side broom tilt in/out
- Sweep/Transportation switch
- Conveyor up/down switch
- Conveyor forward/reverse switch
- Main broom rotate/up/down switch
- Hopper up/down switch
- Hopper slide in/out hopper switch
- Hopper tilt/lower switch
- Strobe light on/off switch
- RH gutter broom light on/off switch
- LH gutter broom light on/off switch
- Rear work light on/off switch
- Engine running green indicator light
- Machine unlevel indicator light
- Hydraulic filter restriction indicator light
- · Hopper up indicator light
- Air filter restriction indicator light
- Sweeper overweight indicator light
- Low water indicator light

Sweeper shall be equipped with sweep resume feature that allows Operator to leave controls set and quickly turn everything on/off with sweep resume switch

19. EXTERIOR COLOR:

Cab and sweeper to be bright white color with a flat black hood surface.

Sweeper body white powdercoat. Two-part powdercoat process that bakes on a zink-rich primer and then bakes on a tough, high gloss polyester topcoat

Sweep components gray powdercoat. Two-part powdercoat process that bakes on a zink-rich primer and then bakes on a tough, high gloss polyester topcoat

DOT reflective tape down each side and across the back

The entire machine and every part shall be painted

prior to assembly to assure 100% of all parts are protected on all sides to prevent corrosion

Electrical lines, water lines, hydraulic lines, pneumatic lines and fittings shall be mounted after paint and assembly to prevent overspray. Masking off of these sweeper components will NOT be acceptable

NOTE: Unless otherwise stated, all other requirements of the IFB are still in effect.

Name: Thomas Kelly

Date: 08-03-12

I acknowledge receipt of this Addendum No. $\underline{1}$, information, instructions, and stipulations set forth he	
Name:	Title:
Company:	Telephone:
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Signature:

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