

CITY OF GREENSBORO

Purchasing Division

Cab and Chassis with Rear-loading Refuse Body, Options

GENERAL: It is the intent of these specifications to describe a *low entry crew cab* COE cab and chassis, equipped with a twenty-five (25) cubic yard high compaction rear-loading refuse collection body. The bidder shall be required to deliver unit(s) ready for operational use. The unit(s) described shall be new, and be of the manufacturer's latest design and model, and shall meet or exceed all Federal, State and City requirements governing motor vehicles. A Federal DOT or NC Inspection shall be provided.

Vendor Performance

The performance of each vendor will be monitored and recorded with respect to satisfactory fulfillment of all contractual obligations. Such performance may include, but is not limited to; delivery, condition of delivered goods, specification compliance of delivered goods, prompt and appropriate resolution of warranty claims, adequate servicing of equipment in any and all aspects which the contract may call for and prompt complete and satisfactory resolution of any discrepancies other than those resulting from acts of God.

The record of such performance will be considered in the evaluation of future bids. Any bidder whose record identifies inadequate performance on a prior purchase with the City of Greensboro, and who has not subsequently demonstrated to the City of Greensboro's complete and sole satisfaction that the causes of such inadequate performance have been removed, may be rejected on that basis.

Evaluation and Selection of Bids

The evaluation of vendor bids shall center on the match between the stated specification requirements in the final bid request and the vendor's proposed equipment including selection of the lowest responsible bidder, with consideration of past performance, service record, and reliability. The statutory provisions controlling purchasing by local governments in N. C. (GS-143) includes selection standards for use in making of awards. The provision reads, "All contracts shall be awarded to the lowest responsible bidder, taking into consideration quality, performance, and the time specified in the bids for the performance of the contract".

NOTE: The successful bidder shall be responsible for the following: Any and all modifications to the specified vehicle over and above the OEM rating shall be included in the overall GVWR that is printed on the Certificate of Origin, Title and door sticker of unit.

Detailed Specifications Part 1: LOW ENTRY COE CREW CAB & CHASSIS

DEMONSTRATION: The City of Greensboro reserves the right to require bidder(s) within ten (10) business days of notification to provide a demonstration piece of equipment as described within this text. The demonstration shall provide a minimum forty (40) hour time span to allow evaluation by the using department and Equipment Services. The equipment demonstration shall be made under actual working conditions using City personnel as operator(s).

NOTE: These specifications are for reference only. All yes or no compliance responses for these specifications shall be documented in the electronic bidding area.

The City requires that the following described vehicle shall be COE *low entry crew cab*, tandem axle with a GVWR of minimum 66,000 pounds. The vehicle shall be suitable for mounting of body described in the detailed specifications.

Vehicle Manufacturer's Name, Model & GVWR _____

AXLE FEATURES

Axle (Front): 20,000 lbs. capacity or greater.

Axle (Rear): *Tandem*. 46,000. lbs. capacity or greater. Power divider driver/cab operated with indicator light.

Frame: Single frame shall exceed specifications for GVWR of vehicle. RBM shall meet or exceed requirements of truck and body manufacturer...

Suspension (Front): Minimum 20,000 lbs. capacity springs.

Suspension (Rear): Minimum 46,000 lbs capacity; Hendrickson HMX-460 or equal.

Tires (Front): Highway tread, 20,000 lb. pair rating, 315/80 R 22.5 tubeless steel radials, 20 ply. Tires shall be speed rated at minimum 65 MPH.

Tires (Rear): Highway tread, 11R 22.5 tubeless steel radials, 16 ply.

Wheels and Rims (Front): Front wheels shall be Accuride hub-piloted disc-type steel for tubeless tires. Size shall be 22.5 x 9.00 HD. Each wheel shall be rated at 10,000 lbs. each. Each wheel shall have 5 hand holes.

Wheels and Rims (Rear): Rear wheels to be Accuride brand hub-piloted disc-type steel for tubeless tires, size to be 22.5 x 8.25. Each wheel shall have 5 hand holes.

Comply with all axle features above? yes/no

BRAKE FEATURES

Brakes (Front): Shall be equipped with 16.5" x 7" QP refuse brakes with dust shields. Brakes shall be rated at GAWR of minimum 23,000 lbs. capacity for proposed application.

Brakes (Rear): Shall be equipped with 16.5" x 8.6" QP refuse brakes with dust shields. Brakes rated at minimum 23,000 lbs with ES-600 or R-301 linings or approved equal. Brake rating shall be maximum capacity for proposed application.

Brake System: ABS system shall be provided. The air compressor shall be rated minimum eighteen (18) cubic feet per minute. Adequate sized air reservoir tank(s) with air reservoir drain and central manifold petcocks. System shall be equipped with a spin on Bendix AD-IP air dryer, heated, automatic moisture ejector.

Comply with all brake features above? Yes/No

CAB FEATURES

Air Conditioning, Heater and Defroster: Cab shall be climate controlled. Air conditioning shall be integral with heater and defroster. Defroster shall have dual outlets. Dual outlets shall be provided. Maximum BTU's available.

Bumper: Shall be heavy-duty steel design. Two (2) frame mounted/reinforced pins or eyelet type tow hook(s) shall be provided. Pins or tow eyes shall be capable of lifting front of truck. *Bumper shall be painted gloss black.*

Cab: Crew cab shall include the following features:

- **Low entry type, both sides.** Steel construction. Inside passage way from side to side of cab shall be provided. Flat floor height shall be 18-19 inches from ground to the floor board on both sides of cab. No step up to seat. Floor shall be non-slip steel/aluminum grate, removable.
- **Vertical doors on both sides shall be steel, hinged bi-fold with glass windows.**
- Cab tilt control shall be hydraulic tilt, air or electric motor assist.
- *Cab shall be extra large for operator comfort and convenience with maximum width and depth available for application.*
- Dual sunvisors shall be provided.
- All glass shall be tinted.
- Dual cab fans mounted in direction of driver and passenger. Separated minimum 18" apart.
- AM/FM radio with auto-shut off in reverse.
- **Four (4) complete sets of ignition/door keys per unit shall be provided upon delivery and "all vehicle keys shall be keyed alike to interchange with all vehicles on order."** (I.E. "one key fits all")
- **Both doors shall have external locks with keys.**
- Interior entry grab handles: lh/rh mounted to inside of A-pillar.

Instrumentation: Shall include the following dash mounted features:

- electronic tach with hour meter
- electronic engine oil pressure gauge
- electronic engine coolant temperature gauge
- restriction indicator on air cleaner
- transmission oil temperature gauge
- differential lockout controls with dash mounted warning light
- electronic fuel level gauge
- electronic speedometer with odometer
- air pressure gauge
- low air warning device, audible and visual
- park brake indicator light
- electronic voltmeter/ammeter gauge

Lights and Turn Signals: Day-time running lights. **LED** front turn signals.

Camera: LCD screen with rear mounted camera & audio. Selectable reverse operation feature. Dash mounted.

Paint: Cab shall be **white**. Chassis shall be black acrylic. Paint chips shall be provided for City approval.

Safety Items: Equipped with both electric, and air operated horns. Vehicle shall be equipped with West Coast heated mirrors with 8" convex. Backup alarm shall be provided. Vehicle shall include any other standard safety items not specifically mentioned.

Seats: Full size adjustable driver and passenger seats shall be National mid-back **air ride** or equal. Vinyl, gray. Seat belts shall be included. Passenger seat shall be pedestal mounted and even with driver's seat. A single non-suspension middle seat shall be installed near the passenger seat.

Steering (Left side only): Power steering. Maximum curb to curb turning diameter 70'. Curb to curb turning radius shall be minimum 180 degrees. Tilt/telescoping wheel.

Strobe Lights: Two (2) surface mount clear LED strobe lights, spaced evenly, surface mounted on front of cab, 48" from ground. Whelen #RSC03ZCR. Labeled switch in cab.

Windshield Wipers and Washers: Intermittent type dual electric or air with windshield washers.

Comply with all cab features above? yes/no

ENGINE/TRANSMISSION FEATURES

Electrical:

- Twelve (12) volt system equipped with hi amp capacity battery(s), minimum 2250

cca.

- Alternator shall be minimum 145 amps, belt driven, and setup for low speed charging.
- OEM standard starter shall be provided.
- Circuit protection.
- Battery disconnect switch with lockout feature. **Top left & right corner cab clearance lights shall remain burning to alert operator to disconnect battery.**
- Emergency jumper studs with cover conveniently located.

Engine:

- Shall comply with specified Performance requirements.
- Minimum clutch engagement torque shall be 550 lb.-ft.
- Minimum 8.9 liter, 345 hp diesel, 1150 lb ft torque at 2100 RPM.
- Unit must comply with January 1, 2010 U.S. Emission Standards.
- Shall be provided with provisions for front crankshaft driven hydraulic pump.
- 15" 1-stage EPG air cleaner.

Exhaust System: Standard.

Auxiliary Fuel Filter: Fleetguard FS1003 with water separator, heat probe and dash mounted indicator light. **Primary and secondary fuel filters shall be remotely mounted for serviceability.**

Fuel Tank: Seventy-five (75) gallons minimum capacity with filler screen in neck preferred and chained fuel cap. Left hand side mount.

Performance: Upon delivery, complete refuse unit shall be capable of road speed of 70 MPH on flat ground. Unit shall be capable of 60 MPH cruise speed @ 1780 RPM. with maximum payload at 0% grade with **all** engine accessories on/operating (i.e. clutch fan, a/c, alternator etc.).

Radiator: Shall be large capacity cooling. Extended Life antifreeze protection to ten (10) degrees below zero.

Transmission: Allison Model 4500RDS automatic equipped with pushbutton controls. **Allison SCAAN** shall be included with bid package and used by all bidders to determine and meet performance requirements. Adequate auxiliary remote mounted cooler and filter(s) shall be provided. **NOTE: Shall include all features and components including OEM 100% Factory Fill TranSynd transmission fluid as required by the City of Greensboro.**

- Shall include the Allison oil life monitor and filter life monitor.
- Full five (5) year *transmission warranty* shall be provided.

Comply with all engine/transmission features above? yes/no

GENERAL FEATURES

Manuals: Total order shall include: Two (2) CD-ROM's/DVD's cab & chassis technical service/shop, two (2) CD-ROM's/DVD's engine/repair manuals, one (1) CD-ROM/DVD cab & chassis parts . One (1) **paper** operator manual per vehicle delivered. A detailed electrical circuit diagram and air schematics shall be provided with each vehicle.

Warranty: . OEM cab/chassis and engine warranty shall be included with bid package.

Comply with all general features above? yes/no

Detailed Specifications Part 2: REAR-LOADING REFUSE BODY

DEMONSTRATION: The City of Greensboro reserves the right to require bidder(s) within ten (10) business days of notification to provide a demonstration piece of equipment as described within this text. The demonstration shall provide a minimum forty (40) hour time span to allow evaluation by the using department and Equipment Services. The equipment demonstration shall be made under actual working conditions using City personnel as operator(s).

NOTE: These specifications are for reference only. All yes or no compliance responses for these specifications shall be documented in the electronic bidding area.

BODY FEATURES

Body: Conventional rear loading refuse packer type.

Body Capacity: Shall have twenty-five (25) cubic yard capacity excluding loading hopper. Shall be designed for high compaction and capable of producing a minimum of nine hundred (900) pounds per cubic yard.

Body Materials: The body shall be braced at all points to withstand repeated maximum pressures without distortion, or failure of members. All exterior welds shall be continuous for strength. The body floor shall be water tight to help prevent liquid spillage on roadways. **The front body panel shall be minimum 15" from floor to top of panel to prevent liquid spillage or an adequate floor sump shall be provided.**

Body Opening(s): The body shall be equipped with either a sliding or a hinged door if necessary, for accessibility for interior cleaning and maintenance. **An interlock shall be provided that disables the engine and/or pump when side door is opened.** Assist or grab handles shall be provided at both the top and opening side of door frame, along with a stirrup or step near body sill, to aid operator when entering body. The street side access door shall allow for entrance and exit by operator. Operator shall have three (3) points of contact when entering/exiting body.

Cart Tipper Plumbing: Plumbing & auxiliary hydraulic circuit control to operate the

optional cart tipper shall be installed at the OEM refuse body facility, completely routed and capable of connecting to tipper. **Shall be an integral component of the rear packer control valve.**

Clean Out Tools: Shall include one (1): street broom, shovel & two (2) 5-prong pitch forks mounted curb side/front of body facing cab mounted on tool brackets.

Controls: Any and all cab mounted refuse body controls shall be located to the immediate right of the operator. **Hopper and ejection controls on dash shall have a guard to prevent accidental activation.** Controls shall not interfere with the cab passageway.

Ejection Panel: The ejection panel hydraulic cylinder shall be double acting. The panel shall traverse the full length of the body and be equal in area to the cross-section dimension of the body. **Clearance around the entire ejection panel shall be approximately 1".** The panel shall be capable of being retracted or extended from any position between full extension and full retract. The panel shall be designed to act as a bulkhead against which refuse is compacted by the packing panel or blade. The panel shall be designed as to permit refuse material to completely fill the entire body. The ejection panel controls shall be located convenient to operator in cab; electric or air operated. Or approved equal on items above.

Electrical Wiring: All electrical wiring shall be color-coded or numbered. All wires, wiring harness, terminals or connectors subject to dirt, moisture, etc. shall be adequately protected. All wiring when subject to chafing, abrasion, or cutting shall be provided with conduit, adequate clamps, with rubber grommets at bulkheads or partitions. Electrical circuits shall be provided with circuit protection.

Hopper Capacity: Minimum three (3) cubic yards without added extension.

Hopper Clearance (Road): The underside of lowest point of loading hopper, to have a minimum road clearance of fifteen (15) inches to prevent damage when entering or exiting driveways.

Hopper Materials: The hopper floor to be fabricated from a minimum of one quarter (1/4) inches hi-tensile steel. Due to the type of materials to be hauled, the City shall require that the loading hopper sill be heavily reinforced to prevent damage. The vendor shall be required to state the type and gauge of materials to be used. Or approved equal on items above.

Lights: **All red and amber electrical lights (including truck chassis tail lights) on refuse body shall be Grote or Truck-Lite LED.** All clearance lights, tail lights, reflectors, license plate bracket with light, to provided and installed in accordance with Federal Regulations. **The upper body panel above the hopper area to be equipped with six (6) lights. The outboard lights shall be used for stop and turn signal, the center lights shall be two (2) 5" diameter alternating amber, the inboard lights shall be for the 4-way flashers. The lower panel below the hopper sill shall be equipped the same as the upper panel. . NOTE: Brake lights must remain functional even when the 4-way flashers continue flashing.**

Paint: Refuse body shall be **white** acrylic urethane or approved equal. Paint chips

shall be provided for City approval.

Safety Items: Any and all equipment furnished by the successful bidders shall conform to current A.N.S.I Safety Standard Z245.1. A warning buzzer or alarm system to be provided in vehicle cab, and on side of packer body rear, to alert driver, and of oncoming traffic or danger. One (1) **ECCO 6970A** strobe light, ignition controlled, mounted on upper center position of tailgate, vertically mounted, easily visible to motorists. Audible tailgate alarm plus cab mounted red light and alarm indicating open tailgate.

Tailgate: Approved equal shall apply to the following. The tailgate shall be hinged at top of packer body and shall be provided with two (2) hydraulic cylinders, one (1) on each side, adequate to lift tailgate when fully loaded to permit unloading. Two (2) hydraulic lift cylinders shall be provided. The tailgate hopper sill shall be heavily reinforced with additional material to help prevent damage when compacting bulky items or approved equal. One (1) tailgate hopper drain plug to be provided. A watertight seal between the tailgate and packer body shall be provided. The tailgate shall be secured by two (2) locks, one (1) on each side, hydraulically operated. The tailgate lift controls shall be located in the cab convenient to operator, electric or air. **NOTE: The tailgate and body mating surfaces shall be designed to prevent liquid seepage and any small debris such as leaves, grass clippings etc. from being forced out of body during packing operation.**

Toolbox: Frame mounted. 24" x 24" x 24" aluminum diamond tread plated, lockable, water tight seals. Right hand hinge with door opening towards front of truck.

- 20 lb. ABC fire extinguisher with metal bracket mounted outside on toolbox, right side.
- Rubber chock block with holder mounted outside of toolbox.
- DOT safety triangles provided inside of toolbox.
- First Aid Kit provided inside of toolbox.

Training (Operator): The vendor shall be required to train the Solid Waste Mgt. personnel on the operation of the vehicles, at time of delivery. The vendor shall furnish qualified instructors for both cab and chassis and body portions of vehicles. Three (3) hours of training shall be provided.

Comply with all body features above? yes/no

HYDRAULIC FEATURES

Hydraulic System: **The hydraulic system to be supplied through use of truck engine equipped front mounted direct drive hydraulic pump.** Vane pump or gear type hydraulic pump with hydraulic over-speed flow control. *(Dry valve control not acceptable.)*

Hydraulic Tank, Filters, and Hoses:

- The hydraulic tank or reservoir shall be large capacity to insure adequate oil cooling.
- Maximum hydraulic filtration shall be provided.
- Hydraulic supply lines shall have cut off valves.

- All hoses and fittings shall be industry standard. In areas where not applicable, the minimum grade shall be S. A. E. 100R2.
- All tubing shall be provided with protective sleeves, springs, conduit, etc., and adequately secured to prevent damage.

Packing System: Shall be designed to accept and be able to compact large or bulky items such as furniture, small appliances, tree limbs, etc.

Packing System Controls: Shall be provided with automatic engine throttle advance if required when packing system is activated. Designed to automatically stop packing blade at pinch point, and shall require manual reactivation to complete packing cycle. Shall be capable of starting, stopping and changing directions of packing cycle at any phase of cycle. The controls shall be located on curbside at rear of body. Note: the packing system controls shall not permit operation and include throttle advance, while transmission is in gear. System shall meet or exceed current ANSI Safety Standards.

Packing System Panel/Blade and Cylinder: The packing panel shall be fabricated from minimum one-quarter (1/4) inch hi-tensile steel. The packing panel hydraulic cylinders shall be double acting. The upper panel hydraulic cylinders shall be double acting. Free floating pins on hydraulic cylinders are not acceptable. Or approved equal to all items above.

Comply with all hydraulic features above? yes/no

GENERAL FEATURES

Warranty/Service Refuse Body, Cab and Chassis:

Full two (2) year warranty on refuse body, hydraulic components including cylinders, tipper components; electrical.

The City of Greensboro reserves the right to perform in house warranty repairs if desired. Refuse body OEM shall agree to reimburse the City of Greensboro at \$60/hour labor and 100 percent parts. All bidders shall provide a written statement describing their warranty for the entire refuse unit and components. Refuse body OEM or Distributor shall be required to cover all warranty item costs for parts, labor and freight to and from the City of Greensboro during the warranty period. If warranty work cannot be performed in Greensboro, pick up/return of unit, all travel, transportation, labor and mileage costs to and from the City of Greensboro for warranty work during the warranty period shall be covered by the refuse body OEM or Distributor.

Technical Support Service (Refuse Body System): OEM Technical Support Service shall be available to the City of Greensboro, 24 hours/day, Mon – Fri.

OEM standard cab and chassis warranty shall be included with bid package.

Detailed OEM cab and chassis and refuse body specifications used to develop bid shall be included with bid package.

A certified axle load rating capacity chart per axle based on *specified payload requirements* shall be included with bid package.

Manuals (Refuse Body): **Total order** shall include: Two (2) CD-ROM's/DVD's complete refuse body repair/service. One (1) CD-ROM/DVD complete refuse body parts. One (1) **paper** operator's manual **per vehicle** for refuse body. *Two (2) detailed electrical and air schematics shall be provided. CD-ROM's/DVD's preferred.*

Comply with all general features above? yes/no

OPTIONS QUOTED SEPARATELY

1. Replace all refuse related limit switches with proximity switches.
2. Hydraulic high temperature gauge, dash mounted.
3. CART TIPPER: Installed/operational. **Barker #BU18041**(1-800-349-3149). 400 lb lift capacity. 16" minimum, 23" maximum ground clearance. Shall include tap in kit. Centered at rear of refuse body. One (1) parts manual and one (1) repair manual.

Comply with all options above? yes/no

SPECIFICATION REFERENCE NUMBER: Solid Waste Management
SWRearloader2011
1/25/11

**CITY OF GREENSBORO/EQUIPMENT SERVICES
EQUIPMENT DATA SHEET
(Class 6-8 Trucks)**

This data is **required** by the City of Greensboro Equipment Services and shall be completed in full by the successful bidder upon delivery for **each unit** of specified equipment.

VENDOR _____ **EVENT/ITEM #** _____

Cab/Chassis Year _____

Cab/Chassis VIN # _____

Cab/Chassis Make	_____
Cab/Chassis Model	_____
Body Make	_____
Body Model #	_____
Body Serial #	_____
GVWR	_____
Odometer Reading	_____
Hour Meter Reading	_____
NC/Fed Inspection Date	_____
Exterior Color	_____
Primary Engine Make	_____
Primary Engine Model #	_____
Primary Engine Serial #	_____
Primary Engine Warranty	_____
Fuel Type	_____
Fuel Tank Capacity	_____
Transmission Make	_____
Transmission Model #	_____
Transmission Serial #	_____
Transmission Warranty	_____
PTO/Hyd PUMP Make	_____
PTO/Hyd Pump Model #	_____
PTO/Hyd Pump Serial #	_____
Tire Size Front	_____
Tire Size Rear	_____
Tire size (Aux.)	_____

Aux. Axle Installer	_____
Aux. Axle Make	_____
Aux. Axle Model	_____
Aux. Axle Serial #	_____
Aux. Engine Make	_____
Aux. Engine Model #	_____
Aux. Engine Serial #	_____
Aux. Engine Hour Meter	_____
Aux. Engine Warranty	_____

Comments: _____