

The following Request for Quotation No. 150974 is a Sealed Bid and is due by Bid Opening: January 12, 2017 at 2:00 p.m., EST.

All submitted **bid prices are to be valid through 3/15/2017.**

Any additions, deletions, or variations from the attached specifications must be noted. Provide complete product description and specifications, including manufacturer, model number, etc. and provide necessary back-up literature if applicable.

Any questions MUST be submitted in writing to lmajeski@oakridgetn.gov. Deadline for questions is January 4, 2017 at 10:00 a.m., EST.

Bid Submittal Instructions

Each bid must be submitted in a sealed envelope, show request number and bid date on front of the envelope and marked and addressed as follows:

From:	Bidder's Name Bidder's Address	
To:	<u>In Person or By Overnight Delivery</u>	<u>Regular Mail</u>
	Attn: Lyn Majeski Finance Department City of Oak Ridge 100 Woodbury Lane Oak Ridge, TN 37830	Attn: Lyn Majeski Finance Department City of Oak Ridge P.O. Box 1 Oak Ridge, TN 37831-0001

If the bid is submitted by mail rather than hand-delivery, the sealed envelope containing the bid must be enclosed in another envelope addressed as stated above. Bids submitted by mail should indicate on the outside envelope, lower left corner, the following: "Sealed bid RFQ # 150974 – 1/12/17 at 2:00 p.m." to ensure it is delivered to the appropriate person at the City in a timely fashion.

All bids must be completed and submitted on the Bid Form provided. The bids shall be submitted on or before the time set for the opening of bids. Bids received after the time so set are late bids and will not be considered. Late bids, unmarked envelopes, and incorrectly marked envelopes will not be opened nor returned.

No Electronic (emailed), telephoned or faxed bids will be accepted.

The City of Oak Ridge reserves the right to reject all or any part of any quotation submitted.

**RFQ 150974
CITY OF OAK RIDGE**

**SPECIFICATIONS FOR A CLASS 4 TRUCK CHASSIS WITH MATERIAL BODY,
ELECTRIC WINCH AND HYDRAULIC LIFT GATE**

Truck furnished shall be new, basically manufacturer's current standard production model, complete with all standard equipment (except for special items described below), in full compliance with the Federal Motor Vehicle Safety Standards and ready for material body, electric winch and hydraulic lift gate installation.

Please make appropriate comments regarding specification items on these sheets to the right of the item to which the comment refers. Item without comment will be interpreted as accepted by the bidder.

SPECIFICATIONS FOR A CLASS FOUR (4) 4X4 REGULAR CAB AND CHASSIS

Model 4500 Dual Rear Wheel 4X4 Class 4

Regular Cab & chassis with the following equipment and options.

IN BIDDER COMMENTS COLUMN, STATE THE FOLLOWING: IF NOT AVAILABLE = NA, MEETS = M, EXCEPTION TO = EX, EXCEEDS = ED OR TYPE IN STATEMENT FOR CLARIFICATION

CODE and/or DESCRIPTION	BIDDER COMMENTS
<p>Model</p> <p>Model 4500 Dual Rear Wheel 4X4 Regular Cab and Chassis</p>	
<p>General Service Truck</p> <ul style="list-style-type: none"> • Veh. Des., Truck • Veh. Ser., on/off highway (one highway 95%/ off road 5%) • Veh. App., Utilities, Service Utility • Exp. Frt. Axle Load 5,000lbs • Exp. Rear Axle 11,500lbs • Exp. GVW Capacity 16,500lbs 	

<ul style="list-style-type: none"> • Medium truck warranty coverage 	
<p>Wheelbase WB = 168.5 inches CA = 84 inches</p>	
<p>Weight Total base curb weight Weight as bid _____ lbs.</p>	
<p>Engine Preferred 6.7L Cummins Turbo Charged Diesel I-6 325 HP @ 3300 rpm's 560 lb./ft. torque @ 2000 rpm's with electronic controls</p>	
<p>Engine Equipment</p> <ul style="list-style-type: none"> • Required – Electronically Controlled Exhaust Brake • Standard - Oil check and fill: engine mounted • Standard – Air cleaner, single stage dry type • Required – Alt. 220 Amp • Special – Two batteries 12 volt total CCA 1200 maintenance free type • Standard – Battery location mounted under hood • Standard – Single horiz muffler and horiz pipe • Required – Fan clutch, temp controlled • Standard – Fuel/water separator, engine mounted • Standard – Oil filter, one 1 qt. Full flow, spin-on • Standard – Radiator: 859 frontal sq. inch • Required – Coolant filter, fleetguard spin-on type • Required – Engine block heater, Phillips 120V 1000 Watt 	

<ul style="list-style-type: none"> • Required – Air intake warmer, electric 12 volt (cold starting aid) • Standard – Starter, 12 volt • Standard – Governor, electronic • Standard – Engine oil cooler, integral • Required – Full function Auxiliary Idle Control Kit 															
<p>Transmission</p> <ul style="list-style-type: none"> • Preferred – Aisin AS69RC heavy duty six (6) speed automatic for diesel with tow haul provision, electronic controls and hydraulic PTO provision <p>Gear Ratios</p> <table border="0"> <tr><td>1</td><td>3.23:1</td></tr> <tr><td>2</td><td>1:84:1</td></tr> <tr><td>3</td><td>1.41:1</td></tr> <tr><td>4</td><td>1.00:1</td></tr> <tr><td>5</td><td>0.82:1</td></tr> <tr><td>6</td><td>0.63:1</td></tr> <tr><td>R</td><td>3.54:1</td></tr> </table> <ul style="list-style-type: none"> • Required – Transmission mounted PTO provision • Required – Transmission oil cooler, external • Special – Transmission oil filter, external spin-on cartridge type • Required – Transmission mounted PTO to have electric “hot shift” with overspeed switch • Special – Geared speed at maximum rated engine RPM shall be 70 to 80 mph • Special – 95% on paved road/5% off road up to 8% grade • Required – Provide road-ability information with bid 	1	3.23:1	2	1:84:1	3	1.41:1	4	1.00:1	5	0.82:1	6	0.63:1	R	3.54:1	
1	3.23:1														
2	1:84:1														
3	1.41:1														
4	1.00:1														
5	0.82:1														
6	0.63:1														
R	3.54:1														
<p>Transfer Case</p>															

<p>Required – Part time 2 speed with electric shift low/high gear ratio 2.72:1/1.00:1</p> <p>Required – Transfer Case Skid Plate</p>	
<p>Front Axle and Suspension</p> <ul style="list-style-type: none"> • Required – 6,000 lb. 4X4 front axle with hydraulic disk brakes with automatic lockout hubs • Required – Stabilizer bar front • Standard – Front brakes hydraulic disk • Required – Front brakes non-asbestos pads • Required – Front disk brake rotors hydraulic brakes • Required – Power steering with steering damper • Required – Springs leaf 5,600 lb. capacity for 6,000 lb. FA • Required – Front shock absorbers heavy duty • Required – Drag link and tie rods, greaseable 	
<p>Rear Axle and Suspension</p> <ul style="list-style-type: none"> • Required – Rear axle 11,500 lb. Full floating 1 speed with hydraulic disk brakes and limited slip differential lock • Required – Stabilizer bar rear • Required – 4.44 rear axle ratio • Required – Rear brakes: hydraulic disk • Required – Rear brake linings non-asbestos • Required – Rear disk brake rotors hydraulic brakes • Standard – Parking brake, foot operated hand release • Required – Springs 11,500 lb. capacity flat-leaf 	

<ul style="list-style-type: none"> • Special – Maximum auxiliary springs for load stabilization as required by crane manufacturer • Required – Rear shock absorbers heavy duty 	
<p>Brakes System Equipment</p> <ul style="list-style-type: none"> • Standard – Power assist hydraulic hydro boost brakes • Standard - Anti-lock braking system: hydraulic • Required – Electric Trailer Brake Controller 	
<p>Frame and Wheelbase</p> <ul style="list-style-type: none"> • Required – 168.5" wheelbase • Required – Frame: ladder type 36,000 psi steel with 10.1 section modulus • Required – Rear Frame 50000 PSI • Special – Reinforcing as required • Required – Square end of frame 	
<p>Chassis Equipment</p> <ul style="list-style-type: none"> • Standard – Front bumper with provision for electric winch installation • Required – Tow hooks front frame mounted • Required – Tow hooks rear frame mounted • Special – Clean frame rails 	
<p>Fuel Tanks and Equipment</p> <ul style="list-style-type: none"> • Required – 22 Gal fuel tank 	
<p>Front Tires, Hubs and Wheels</p> <ul style="list-style-type: none"> • Required – Tubeless radial LT 225/70R-19.5F BSW x 12 ply all season tread steel belted Michelin • Required – Front hubs: 8 lug 	

<ul style="list-style-type: none"> • Required – Steel hub piloted disk wheels 19.5 x 6.75 8 lug 	
<p>Rear Drive Tires, Hubs and Wheels</p> <ul style="list-style-type: none"> • Required – Tubeless radial LT225/70R-19.5F x 12 ply traction mud and snow tread steel belted Michelin • Required – Rear hubs: 8 lug • Required – Steel hub piloted disk wheels 19.5 x 6.75 8 lug 	
<p>Cab Exterior Equipment</p> <ul style="list-style-type: none"> • Required – Stationary grille painted black • Required – Front mud flaps • Special – Sound deadening package for engine noise abatement • Standard – Horn, dual electric • Standard – Head lights, large rectangular halogen dual beam • Standard – Lights cab marker, (5 clearance lights) • Standard – Tail lights, two with integral stop, turn, backup and license plate light • Required - Turn signals fender mounted • Required – Mirrors painted dual west coast • Required – Door mounting of mirrors • Required – Maximum width mirrors 96 inches retracted • Required – Bright finish 6” convex mirrors mounted on west coast brackets • Special – Sliding rear window • Required – Door glass tinted LH and RH 	

<ul style="list-style-type: none"> • Standard – Windshield tinted laminated glass • Required – Windshield washer with reservoir • Standard – Running boards, black tubular w/flat top step type (cab steps) LH and RH • Required – RH and LH grab handles to assist in entering cab • Special – Spotlights dual halogen post mounted 	
<p>Cab Interior Equipment</p> <ul style="list-style-type: none"> • Standard – Interior trim med. Gray vinyl with vinyl floor covering (no carpet) • Required - Cigar lighter dash mounted • Special - Heater and defroster with factory installed manual air conditioning with recir. Air fan • Required – Air cond. Control with recir. Switch • Standard – Interior dome lamp with left hand door switch • Required – Full bench seat with folding back with fore/aft. Adjustment • Required – Seat belts lap and shoulder 3 pt. mounting; lap belt only for center passenger with bench seat • Required – Steering wheel 19 in. diameter • Required – Sun visors LH & RH padded vinyl • Required – RH & LH arm rests 	
<p>Instrument Panels and Controls</p> <ul style="list-style-type: none"> • Required – Gauge package in lieu of lights <ul style="list-style-type: none"> Oil Pressure Water temp 	

<p>Voltmeter</p> <p>Tachometer w/ engine hour meter</p> <p>Speedometer w/ odometer</p> <p>Fuel Level</p> <p>Transmission temp</p> <ul style="list-style-type: none"> • Required – Air cleaner restriction gauge, air cleaner mounted • Required – Air restriction indicator light dash • Required – Hand throttle locking Vernier – type for PTO Operation • Required – Radio Electronic AM/FM stereo w/ digital clock feature • Required – Dual control windshield wipers w/ delay 	
<ul style="list-style-type: none"> • Required – Marker lamp switch • Required – Roof clearance lights switch • Standard – Parking brake control floor mounted • Required – Turn signal switch, column mounted, self-cancelling • Required – Turn signal flasher HD Mechanical for trailer towing • Required – Power and ground studs (CB hot jacks) dash mounted, for aux electrical • Special – Pyrometer exhaust gas temperature gauge • Special – Turbo boost gauge 	
<p>Paint</p> <ul style="list-style-type: none"> • Standard – One color • Standard – Cab color pure white OEM • Standard – Chassis color, black • Standard – Front wheel color, white • Standard – Rear wheel color, white 	

Special Equipment

- Special – Truck chassis shall be suitable for the installation of an electric winch, hydraulic lift gate and material body
- Special – Trailer towing provisions for truck integral with lift gate with 7 way trailer electrical recp. At end of frame and an electric trailer brake controller installed in cab

Manufacturer Specifications

Bidder is to furnish with the bid a copy of the manufacturer chassis specification proposal with all Data Book Codes for the chassis cab to be supplied.

SPECIFICATIONS
FOR
Electric Winch, Material Body and Hydraulic Lift Gate

This specification is to set forth the specific requirements for an electric winch, hydraulic lift gate and material body mounted on an appropriate class 4 chassis/cab.

This unit is to be used as a service/ construction/ maintenance unit dispatched on pre-assigned service work, construction, scheduled maintenance work, substation crews and in response to emergency calls. The unit will be used on distribution lines and transmission lines to supply material, maintain substations and equipment.

If it is necessary to bid alternate equipment or to take exceptions to the specifications as set forth, this must be so stated in your bid. For each item place an "X" in the appropriate space (Yes ___ No ___) to signify whether or not you are in complete compliance with the specifications. Failure to follow the format or answer the specification will cause your bid to be disqualified. For each item marked "No X", please explain your variance using a separate sheet and identify each by specification number.

This specification covers the procurement of the installation, testing and certification of a material body, electric winch and hydraulic lift gate mounted on a truck cab and chassis furnished by the bidder.

HYDRAULIC POWER SYSTEM

	Yes	No
Standard hydraulic system operating pressure to be 2,750 PSI State system operating pressure _____		
Appropriate power take off to match chassis engine and transmission specified		
Lighted PTO on/off switch installed in cab		
PTO shall be electronically controlled solenoid shift (mechanical shift not acceptable) with hydraulic pump mounting flange and mounted on the trucks transmission. Installation shall include a support strap from the rear of the pump to the trucks transmission.		
PTO ratio shall be selected so that the hydraulic pump does not exceed its rated speed with the PTO engaged at 1750 engine RPM. PTO torque rating shall exceed the pump torque required at relief valve setting.		
Pump manufactures pressure rating shall exceed the relief valve setting.		
Provide hydraulic filter, return line type, including suction filter, strainer and micronic filter.		
Two (2) shut off valves installed in hydraulic system for servicing the system and filters.		
Fill with hydraulic oil and lubricate unit. Hydraulic oil to be ISO viscosity grade ____ anti-wear and water separating type.		
The hydraulic system reservoir (tank) shall be approximately 15-gal capacity with baffles, filters, magnetic suction separator, sight gauge and temperature gauge installed on tank.		
Material Body Construction		
Wood spacer (or filler) strips under body or equipment rails <u>shall not</u> be used. If a spacer strip is needed, use steel strap. Each part of spacer shall be secured to prevent it from falling out of place if mounting bolts loosen in service.		
Attachment to the truck frame shall be by shear plates welded to body rails and bolted to the truck frame web and shall be in compliance with the Code of Federal Regulations 49-393.201.		
Frame attachment bolts shall be Grade 8, UNC, with flanged head on bolt and nut (or bolt heads and nuts without flanges may be installed with hard flat washers). Nuts shall be all-steel prevailing-torque type.		
All other fasteners to be Grade 5 or better. All nuts to be all-steel prevailing torque self-locking nuts. Lock washers <u>shall not</u> be used.		
Hard flat washers shall be used under nuts and under cap screw heads, or flanged bolt heads and nuts shall be used, wherever practical.		

U-bolt mounts (or similar frame clamping mounts) may be used if a steel spacer is secured between the frame flanges (to avoid frame flange distortion), and at least one shear plate is installed on each side.

--	--

1. Material Body and Accessories

1.1 All body and shelving material to be fabricated from A60 grade 100% zinc-alloy coated steel and to meet the following minimum gauge thickness:

- Body sides: 16 gauge
- Body top panel: 16 gauge
- Body end panels: 14 gauge
- Door inner panel: 20 gauge
- Door outer panel: 20 gauge
- Shelving: 18 gauge
- Wheel panels: 14 gauge
- Floor sheeting: 12 gauge, formed checker plate(not galvanized)

1.2 Compartment tops to be covered with 12 gauge galvanized grip-strut.

1.3 Wheel fender panels to be equipped with rolled neoprene fender crowns.

2. Body Dimensions

- Body length: 132 inches
- Body width: 94 inches
- Front of body height: 40 inches
- Rear of body height: 40 inches
- Compartment depth: 20 inches
- Deck width: 54 inches

3. Compartments – Curb side (Note: Shelves have dividers that are spaced on a non-standard pattern)

3.1 First vertical compartment

- 34 inches wide
- Two (2) adjustable shelves with removable dividers on 3 inch centers

3.2 Second vertical compartment

- 20 inches wide
- Two (2) adjustable shelves with removable dividers on 3 inch centers

3.3 First horizontal compartment

- Above wheel well to rear of body
- 78 inches wide
- One (1) adjustable shelf with removable dividers on 3 inch centers

3.4 Third vertical compartment

- Behind wheel well
- 20 inches wide
- No shelves

4. Compartments – Street side

4.1 First vertical compartment

- 34 inches wide
 - Two(2) adjustable shelves with removable dividers on 3 inch centers
- 4.2 Second vertical compartment
- 20 inches wide
 - Two (2) adjustable shelves with removable dividers on 3 inch centers
- 4.3 First horizontal compartment
- 56 inches wide
 - One (1) plain fixed shelf
- 4.4 Third vertical compartment
- 20 inches wide
 - Two (2) adjustable shelves with removable dividers on 3 inch centers
5. Doors
- 5.1 All doors are full double-paneled, self-sealed with built in drainage for maximum weather tightness.
- Chain stops on all doors.
- 5.2 Doors are to have zinc-plated, cold-rolled, steel hinge rods extending full length of door.
- 5.3 Door hinges are to be stainless steel or zinc-alloy material.
- 5.4 Doors are to have cadmium plated flush type, single point, paddle type, recessed handles with two stage strikers, locks keyed alike.
- 5.5 Door handles to be riveted to outer door panel. Back panel to provide opening to back of handle.
- 5.6 Doors to be equipped with automotive type non-porous door seals mechanically locked to inside door panel. Self-adhesive or glued door seal not acceptable (except rear access door to hotstick compartment).
- 5.7 Master locking system with full length locking rod each side of body.
6. Other Requirements
- 6.1 All shelving to have 2 ¼ inch lips (through shelf to have 1 inch lip).
- 6.2 Edges either rolled or folded for strength and safety.
- 6.3 Door header drop rail to be provided at top of body for weather protection.
- 6.4 Body and wheel wells to be undercoated with automotive under seal.
- 6.5 Four (4) wheel chock holders to accommodate rubber "V" type wheel chocks, 10 inches long X 5 ½ inches high and 8 inches at base – chock holders to be provided two each side in front and rear portions of wheel panel, include four chocks with chains.
- 6.6 24" platform extension (tailshelf), with treadplate top. (Note: No storage boxes under tailshelf). Tailshelf to have 2 inch strap edge mounted with ½ inch open space above treadplate floor on three sides to retain material on cargo floor.

Cargo tiedown rail full length on both sides of cargo area attached near top of compartments with six sliding material hooks street side.

Structural underframe in body base.

- 6.7 Two (2) cable steps are to be installed, one each side of tailshelf for access to body floor from side to tailshelf. (Note: Lift gate will prevent rear steps from being installed).
- 6.8 Two (2) grab handles or rails are to be installed, one each side at rear integral with lift gate framing.
- 6.9 Complete installation of unit over rear axle, and all necessary items on chassis.

State installation made by _____.

Body and associated components installation may be made by a third party.

Installation shall be on the specified commercial truck chassis. Truck chassis will be supplied by bidder.

- 6.10 Lights and reflectors in accordance with FMVSS #108 lighting package are to be installed.

All truck chassis OEM lights are acceptable.

Marker, identification and clearance (unless combined with turn signals) lights shall be 2 ½ inch round, sealed, grommet-mounted lamps.

Stop, turn, tail and backup lights shall be 4 inch oval LED sealed, grommet-mounted lamps, integral with lift gate.

Stop and turn lights should be mounted in rear of compartments as high as possible.

- 6.11 One set splash aprons is to be installed behind rear wheels.

Tow hooks rear mounted to frame, integral with lift gate.

- 6.12 Emergency warning lamps – two amber strobe lights with high and low beam and removable wire mesh brush guards shall be installed above roof line of cab, mounted on plates welded to square tube frame at front of cargo area, with control switches mounted in cab. Strobes are to be visible from the front and the rear of the vehicle.

- 6.13 Install one (87 to 112dB) back up alarm with automatic volume adjustment to background noise.

- 6.14 2 inch receiver hitch, 5 ton with chassis frame reinforcement and two (2) safety chain rings to be installed 22 to 28 inches above ground at rear center of truck, integral with lift gate. Hitch to be available with lift gate in stowed position.

- 6.15 Seven-way RV electrical trailer connector, to be installed at rear near receiver hitch.

- 6.16 Paint body, tailshelf, compartments and cargo deck white, matching the truck cab. Paint under body black, matching truck chassis. Paint shall be urethane type Dupont Imron or equal, applied according to the paint manufacturer's recommendations.

All fabricated bare metal parts shall be treated with rust inhibitor, primed with rust preventive primer, and painted with urethane type Dupont Imron or equal to match truck cab.

All painted areas to be primer painted before finish painted.

6.17 Coat cargo areas, platform extension (tailshelf) and steps, with non-skid coating paint.

Top of compartments shall be suitable for a person to stand on for access or for carrying light material.

Front of cargo area framed with box tubing (headache rack) with expanded metal insert to protect rear cab window. Tube frame to extend three (3) inches above cab roof line and to outside edge of material compartments. Install pipe tiedown rail across front. Install mounting plates on top of headache rack for 2 strobe lights, cargo light, Starrbeam light and radio antenna.

Provide and install two (2) sequential traffic indicator arrow boards mounted on top of headache rack with two (2) controllers in cab. Mount one board to be visible from the rear and one board to be visible from the front. (Note: Normally the rear board is mounted under tailshelf but this unit has a lift gate mounted behind tailshelf).

Fabricate four (4) storage brackets, two (2) on each side of material bins on inside of bins in bed behind wheel wells toward tailshelf for storage of four (4) tanks of compressed gas (N) cylinders. Each storage area to be able to hold an upright compressed gas cylinder 10 inches in diameter, overall height of 58 inches with cap on cylinder and weighing 200 pounds. Fabricate metal or fiber straps or chains with mechanism to secure cylinders securely in place with the vehicle moving and having a lip at floor to prevent bottom of cylinder from sliding out of position.

6.18 Rectangular halogen cargo light to be installed at rear of cab, with lighted control switch in cab.

Two (2) Unity brand lights model # AG-R-4007 to be installed on top of compartments near front and accessible from ground on both street side and curbside with switch in cab.

6.19 Provide and install a Superwinch Brand **Model Talon 14.0** universal bumper winch package.

- 14,000 lbs. Electric planetary winch installed in a universal front bumper adapter assembly designed for a class 4 cab/chassis. Performance will be 14,000 lbs. @ 75 amps and 12 VDC on bare drum
- Heavy-duty four way fairlead rollers made of steel with bronze bearings.
- Bumper winch adapter bracket to have 2 two eyes (shackles) mounted to front.
- Cable guards to be mounted at top and bottom of winch drum.
- Forward and reverse winch controls in cab.
- Provide Control Cable for attachment to winch for remote operation
- All necessary electrical connections and misc. parts to operate winch from unit's electric system.
- Provide RH & LH front bumper corner-marker staff mounted to bumper with amber light visible from driver's seat.
- Provide RH & LH traffic flag holder brackets recessed in front corners of bumper mounted at 45 degree vertical angle with flags to side of truck.
- Provide RH and LH traffic safety cone storage brackets installed on front bumper of truck, location to be determined.

- 6.20 Compartment lights with individual automatic on/off switch to come on when door is opened and lighted master switch in cab to be installed. Install light on door frame on horizontal compartments, install light on ceiling of vertical compartments.
- 6.21 Plumbed hydraulic tool power outlet is **required** under the rear of body with dual non-conductive hoses on spring loaded retractable reel mounted under tailshelf. Reel must include hose-stop and couplers. Mounting must contain rollers to guide hoses on/off reel. Prefer reel to be installed under tailshelf on street side with reel facing to side. If this is not possible location to be determined

7. Additional Installed Equipment

7.1 Grounding Reel

Furnish and install Hastings model number 21365 grounding reel with 40 ft. of 2/0 yellow ground cable factory installed with 21307 bronze clamp factory installed on one end. Reel to include 6 ft. length of 2/0 ground cable to connect reel to frame of truck and includes A30205 4-way bronze tee connector to connect cable to ground stud on reel. Prefer reel to be installed under tailshelf on curb side with reel facing to side. If this is not possible location to be determined.

7.2 Inverter

Furnish and install Xantrex Xpower model number 813-3000 UL 3000 watt 120 volt AC inverter in first bin on street side of material body.

7.3 Backup Camera

Furnish and install a Rear View Safety Model # RVS-770613-112 rearview camera system with one 7 inch TFT LCD monitor mounted in cab with one ¼" sharp color CCD camera mounted on rear of tailshelf (integral with lift gate) with sensors mounted on rear of vehicle with switch mounted in cab to turn camera on when needed by-passing sensors. Position camera so that it may be used to monitor trailer hookups as well as objects directly behind vehicle. RVS system includes multiplexer that allows for two additional cameras to be installed in the future.

7.4 Power and Grounding Source for Existing VON HI-POT Machine

Furnish and install cable and connectors to provide power connection and grounding connection for existing HI-POT machine. Install two copper flexible 2/0 cables (welding lead type cables) connected to negative and positive 12 VDC battery terminals on trucks battery and run cables to rear bin on curb side of material body with four feet of cable available at bin with one Anderson Power Products Model SB175A-600V two prong connector. Install two copper #6 cables (welding lead type cables) with both cables connected to negative (ground) 12 VDC battery terminal on trucks battery and run cables to rear bin on curb side of material body with four feet of cable available at bin with one Anderson Power Products Model SB50- 600V two prong connector. This cable is to provide a grounding source for the HI-POT machine.

8. Lift Gate Specifications for Dock Friendly Lift Gate Unit for Service Material Body Truck

TOMMYGATE Model A89-16 RF 45-12 aluminum frame and aluminum platform lift gate with ability to accommodate 2 inch receiver hitch and lift gate to be lowered or raised with lift gate remaining in vertical position. (Dock friendly)

Platform Detail: Aluminum two piece extruded aluminum with 45" loading depth (10" flipper) = 12" taper (35" base height).

Drive System: ANSI #50 roller chain and hydraulic cylinders.

Hydraulic System: Enclosed unit in main frame of gate with pressure relief valve.

Electrical System: Moisture resistant toggle switch and on/off button. Circuit breaker: 140 amp 30 VDC with #4 cables with curbside control.

Lift Gate Options:

- Fixed and timed toggle control
- Power cable full length
- 150 amp circuit breaker
- Recessed oval LED light kit (two red, one white, each side)
- Safety trip bar

8.1 Rubber dock bumpers installed on right and left sides of frame at rear integral with lift gate.

8.2 Warranty on components supplied by successful bidder shall be one (1) year on parts and labor.

8.3 Structural integrity of the following major components are to be warranted: lift gate assembly.

State length of structural warranty _____

Provide copy of manufacturer's warranty with bid.

8.4 Paint on body, tailshelf and all parts to be warranted against peeling or rusting for five years.

8.5 Does bidder offer on road service at customer's location? _____

8.6 Successful bidder will provide complete set of drawings within 30 days of receipt of order.

8.7 Two (2) sets of operator and maintenance manuals are to be provided.

8.8 Travel height of truck is to be low as possible and is not to exceed 13 feet 0 inches with equipment installed.

9. All wiring shall be Adequately Secured under the Vehicle, Protected from Abrasion.

Minimum acceptable wire size is 16 gauge.

All splices and termination shall be made with crimp-on plated copper sleeve type connectors specifically designed for the number and size of conductors being joined.

Blade type splice connectors are not acceptable.

All splices and terminal wire barrels shall be covered and sealed with sealant lined heat-shrink tubing.

All wire to splice and wire to terminal connections shall be capable of withstanding a 50 lbs. pullout force.

Maximum allowable unsupported length of wire or harness is 24 inches.

10. Maintenance Requirements

10.1 The intended use of the winch, lift gate and body unit is for a minimum of ten (10) year service life. To allow proper evaluation of the total life cycle cost (purchase price, operation expense and maintenance costs) bidder must supply the following information:

- Daily preventive maintenance requirements
- Weekly preventive maintenance requirements
- Monthly preventive maintenance requirements
- Preventive maintenance requirements during the time between monthly requirements and annual requirements.
- Annual preventive maintenance requirements
- Time requirements for general overhaul (those items which require periodic disassembly of components for inspection and determination of wear)
- If any special tools or equipment are required to perform preventive maintenance bidder must define such tools under "optional equipment" and provide prices for purchasing such tools

11. General Safety Requirements

11.1 There shall be adequate protective coverings for the electrical and hydraulic controls on winch and lift gate to guard against accidental actuation of a control level by any means.

Proper placards shall be supplied at each control station to identify control functions and to remind operators of operational methods.

All welding of critical metal components shall be inspected by magnetic particle method and certified to be sound and proper.

12. Specifications for Certification, Testing and Operational Training

Design criteria shall be in accordance with current industry and engineering standards applicable and accepted for structural and hydraulic design safety factors. The design criteria shall consider the effects of fatigue from dynamic loading and field proven past designs. Designs shall be verified with state of the art test equipment, including non-destructive and destructive load testing, plus life cycle and field operational tests.

The body, winch and lift gate shall be installed on chassis and associated components filled with hydraulic oil and lubricated.

Truck frame modifications and attachments shall be in compliance with federal motor carrier safety regulations 49cfr 393.201.

Hydraulic schematic, using ISO fluid power symbols, of the entire unit with accessories shall be provided and submitted with the completed unit.

Installation drawing showing component outlines and dimensions, and estimated axle weights shall be supplied for approval of COR before start of installation work. COR reserves the option to inspect the completed installation before the unit is painted.

The vendor is to submit shop drawings and specifications for review and approval of COR before the unit is built. A factory acceptance trip may be required.

Final testing, certification and inspection of completed unit including function testing and stability testing per unit and chassis manufacturer's requirements and all applicable standards.

Vendor is to furnish a copy of certifications and testing to owner with the delivery of unit.

Deliver unit to City of Oak Ridge, Central Services Complex at 100 Woodbury Lane, Oak Ridge, TN 37830.

Vendor to include at least one day (eight hours) of onsite training and instruction of owners personnel in the proper operation and maintenance of the chassis, winch and lift gate.

Two operator's manuals, two maintenance manuals and two parts manuals (parts manuals may be supplied on CD-ROM format) shall be supplied. Parts manual shall include component suppliers' part numbers or industry standard designations for all standard vendor supplied parts and components.

Unless otherwise stated, the use of manufacturer's name and product numbers are for descriptive purposes and establishing general quality levels only. They are not intended to be restrictive. Bidders are required to state exactly what they intend to furnish, otherwise, it is fully understood that they shall furnish all items stated.

Your proposal must be accompanied by descriptive literature (marked), indicating the exact items to be furnished. The term "as specified" will not be acceptable.

Bidder is to state the time of delivery in calendar weeks after issue of purchase order.

Any equipment that vendor recommends in addition to the above specifications is to be listed separately and the price clearly stated as an addendum to the price of the unit.

13. Statement of Intent

It is emphasized that these specifications are intended to describe the minimum performance criteria of the winch, body, lift gate and related equipment. The responsibility for design is solely the responsibility of the device manufacturer and the vendor installing the device and related equipment on the chassis, and, if in their opinions, certain exceptions to these specifications must be taken to allow the device manufacturer and the installation vendor to properly discharge that responsibility, such exceptions must be clearly identified and submitted with the bid for consideration.

14. Owner Installed Equipment

The owner intends to mount or attach the following existing equipment to the unit after delivery:

- Ladder rack
- 5kw 10hp 120/240 volt generator
- Starrbeam remote controlled work light
- Two way radio and antenna
- Ten pound fire extinguisher

BID

Cost of electric winch with installation	\$ _____
Cost of material body with installation	\$ _____
Cost of lift gate with installation	\$ _____
Cost of class 4 cab/chassis as bid	\$ _____
Cost of FET if any	\$ _____
 Total Price Delivered to 100 Woodbury Lane	 \$ _____

Delivery time in calendar weeks ARO _____ Weeks

State equipment weight as delivered:

Front axle _____
 Rear axle _____
 Total pounds _____

I, _____, as a duly authorized representative of _____ have fully read, understood, and recognize the requirements of this bid. I have enclosed completed copies of this specification, having been filled out in good faith, and to the best of my knowledge for the item(s) bid.

 Signature Date

Company: _____
 Physical Address: _____

 Rep Name: _____
 Phone: _____ Fax: _____
 E-mail: _____
 Tax ID Number: _____

This City reserves the right to select all, any or none of the options truck chassis, crane, crane body, winch and related equipment as detailed in the following specifications. Return your bid and information in a sealed package by January 12, 2017 at 2:00 p.m. EST.