

Liquidated Damages:

As actual damages for any delays in delivery of the vehicles/equipment which the bidder is required to perform as per this bid document are difficult to determine, the Bidder shall be liable for and shall pay to the Owner the sum of Fifty Dollars (\$50.00) as fixed, agreed and liquidated damages for each business day of delay per purchase order and not per unit from the number of days stipulated for delivery and for deficiency correction

In compliance with this Invitation for Bid and subject to all conditions thereof, the undersigned agrees, if this bid is accepted within 60 days from the date of the opening, to furnish all of the material/service upon which prices are quoted, delivered at the designated point(s) within the time specified.

- (A) Terms: NET
- (B) Delivery/Job completion within _____ days after notification.
- (C) Specification/Letter of explanation enclosed: YES () NO ()

Handwritten Signature of Authorized Representative

Name of Firm

Date

THIS FORM MUST BE SIGNED TO BE CONSIDERED COMPLETE

TERMS AND CONDITIONS

1. Bids must be submitted on this form only and bear the handwritten signature of an authorized representative of the firm to be considered valid. This is a request for quote and can be faxed to (423)224-2433. No telephone bid(s) will be accepted. Unless otherwise stated by the City, no bidder may withdraw his bid within a period of sixty (60) days after the date set for the reply date.
2. If prices are quoted FOB Kingsport, TN., delivery to City of Kingsport locations shall be without additional charge.
3. Failure to examine any drawings, specifications, and instructions will be a bidder's risk. If bidder is in doubt as to the true meaning of any part of the drawings, specifications and instructions or other documents, he should submit a written request for an interpretation to the Procurement Manager. An interpretation of the documents will be made only by addendum issued by the Procurement Manager to each firm to whom an invitation was forwarded. The City will not be responsible for explanation or interpretations of bid documents except as issued in accordance herewith.
4. Where a brand or trade name appears in the specifications, it is understood that the brand or trade name referred to, or its approved equivalent, shall be furnished. If no mention is made of any exceptions, it is assumed that he is bidding on the article mentioned and not an approved equivalent.
5. The bidder is requested to attach brochure-type information on the supplies furnished. All guaranteed and warranties should be clearly stated.
6. Taxes. The City is exempted from Federal excise taxes and state and local sales taxes and bidders must quote prices which do not include such taxes. An exemption certificate will be furnished upon request.
7. Bids and modifications or corrections thereof received after the closing time specified will not be considered. The City is not responsible for delays in delivery by mail, courier, etc.
8. Any exceptions to these terms and conditions or deviations from written specifications will be shown in writing and attached to the bid form.
9. Any alteration, erasure, addition to or omission of requested information, change of the specifications, or bidding schedule, is made at the risk of the bidder and may result in the rejection of the bid, unless such changes are authorized by the specifications.
10. In the event cash discounts are offered by the bidder, the discount date shall begin with the date of the invoice or the date of receipt of all material covered by the order/contract, whichever is the later date.
11. Charges for boxing or cartage will not be allowed unless previously agreed upon.
12. Default in promised delivery and failure to comply with specifications authorizes the City to purchase supplies elsewhere and charge the difference to defaulting Vendor.
13. Bidder agrees to defend and save City of Kingsport from and against all demands, claims, suits, costs, expenses, damages and judgments based upon infringement of any patents relating to goods specified in this order or the ordinary use or operation of such goods by City or use or operation of such goods in accordance with bidders direction.
14. In case of error or discrepancy in the mathematics of the bid price, the unit prices shall prevail.
15. By submission of a signed bid, the bidder certifies total compliance with Title VI and Title VII of the Civil Rights Act of 1964, as amended, and all regulations promulgated thereunder.
16. Contracts and purchases will be made or entered into with the lowest, responsible, compliant bidder meeting specifications for the particular grade or class of material, work or service desired in the best interest and advantage to the City of Kingsport. Responsible bidder is defined as a bidder whose reputation, past performance, and business and financial capabilities are such that he would be judged by the appropriate City authority to be capable of satisfying the City's needs for a specific contract or purchase order.
17. The City reserves the right to determine the low bidder either on the basis of the individual items or on the basis of all items included in its INVITATION TO BID, unless otherwise expressly provided in the INVITATION TO BID. The City reserves the right to accept any item or group of items of any kind and to modify or cancel in whole or in part, its INVITATION TO BID.
18. All contracts or purchase orders issued for this award will be governed by the laws of the State of Tennessee.
19. The City, in accordance with its governing directives, reserves the right to reject any and all bids, to waive any informality or irregularities in bids and unless otherwise specified by the bidder, to accept any item.
20. The contract will be awarded for a period of one (1) year with a renewal option on an annual basis in one (1) year increments providing all terms, conditions and cost are acceptable to both parties. The City reserves the right to rebid at the end of any contract period.
21. **CONFLICT OF INTEREST:**
 - a) No Board Member or officer of the City of Kingsport or other person whose duty it is to vote for, let out, overlook or in any manner superintend any of the work for the City of Kingsport has a direct interest in the award of the vendor providing goods or services.

- b) No employee, officer or agent of the grantee or sub-grantee will participate in selection, or in the award or administration of an award supported by Federal funds if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when the employee, officer or agent, any member of their immediate family, his or her partner, or an organization, which employs, or is about to employ, any of the above, has a financial or other interest in the firm selected for award.
 - c) The grantee's or sub-grantees officers, employees or agents will neither solicit nor accept gratuities, favors or anything of monetary value from vendors, potential vendors, or parties to sub-agreements.
 - d) By submission of this bid, the vendor is certifying that no conflicts of interest exist.
22. DRUG FREE WORKPLACE REQUIREMENTS:
- a) Private employers with five or more employees desiring to contract for construction services attest that they have a drug free workplace program in effect in accordance with TCA 50-9-112.
23. ELIGIBILITY:
- a) The vendor is eligible for employment on public contracts because no convictions or guilty pleas or pleas of nolo contendere to violations of the Sherman Anti-Trust Act, mail fraud or state criminal violations with an award from the State of Tennessee or any political subdivision thereof have occurred.
24. GENERAL:
- a) Vendor fully understands the preparation and contents of the attached offer and of all pertinent circumstances respecting such offer.
 - b) Such offer is genuine and is not a collusive or sham offer.
25. IRAN DIVESTMENT ACT:
- a) Concerning the Iran Divestment Act (TCA 12-12-101 et seq.), by submission of this bid/quote/proposal, each vendor and each person signing on behalf of any vendor certifies, and in the case of a joint bid/quote/proposal, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each vendor is not on the list created pursuant to § 12-12-106.
26. NON-COLLUSION:
- a) Neither the said vendor nor any of its officers, partners, owners, agents, representatives, employees or parties interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other responder, firm, or person to submit a collusive or sham offer in connection with the award or agreement for which the attached offer has been submitted or to refrain from making an offer in connection with such award or agreement, or collusion or communication or conference with any other firm, or, to fix any overhead, profit, or cost element of the offer price or the offer price of any other firm, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against the City of Kingsport or any person interested in the proposed award or agreement.
 - b) The price or prices quoted in the attached offer are fair, proper and not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the firm or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.
27. BACKGROUND CHECK REQUIREMENT FOR SCHOOL SYSTEM SUPPLIERS:
- a) In submitting this bid/quote/proposal, you are certifying that you are aware of the requirements imposed by TCA § 49-5-413 (d) to conduct criminal background checks through the Tennessee Bureau of Investigation and the Federal Bureau of Investigation on yourself and any of your employees who may come in direct contact with students or who may come on or about school property anytime students are present. You are further certifying that at no time will you ever permit any individual who has committed a sexual offense or who is a registered sex offender to come in direct contact with children or to come on or about school property while students are present.

GENERAL PROVISIONS

1. The unit and associated equipment shall be furnished complete and in readiness for use.
2. Special Awarding Criteria. While the purpose of the bid document is to indicate certain minimum requirements, its use is not intended to relieve the City of all responsibility in making a selection which is the most suitable for the City's service.

Although proposals may be received based on the minimum requirements indicated, it is not intended that this alone shall limit the award but other factors will be considered, including the experience of the City and others.
3. Unless the capabilities of the equipment, which the Vendor bids, is known to the City, bidder agrees to provide a model within reasonable distance of the City of Kingsport, for evaluation purposes at no expense to the City of Kingsport.
4. Trade-in. Vendors are requested to consider a trade-in allowance for the following: City Vehicle # 1961 – 2011 Mack LEU613 Automated Refuse Truck. Vendor is to contact Steve Hightower, Fleet Manager (423-224-2434) to arrange an appointment to inspect this vehicle. The City reserves the right to accept or reject any trade-in allowance.
5. OPTIONAL EQUIPMENT. Optional Equipment selection will be at the discretion of the City.
6. Specifications. SEE: Vehicle Specifications – 12 (twelve) pages.
7. Bidder is requested to fill out the Bid Form and attach a completed copy of the specifications (Pages 1-17) to the Bid Form.
8. Any additions, deletions, variations from attached specifications must be noted. Any items appearing in manufacturer's regular published specifications furnished by bidder are assumed to be included in the "Bidder's Proposal".
9. At time of delivery to the City of Kingsport, vehicle must meet or exceed all federal, state, and local health, safety, lighting and noise standards.
10. At time of delivery to the City of Kingsport, vehicle must meet or exceed all existing DOT regulations and US EPA emission standards that are applicable to this type vehicle.



EQUIPMENT SPECIFICATIONS
AUTOMATED REFUSE TRUCK
DUAL STEER, DIESEL POWERED

The unit(s) to be furnished under this proposal shall be a diesel powered, automatic transmission, tandem rear axle, cab and chassis with mounted automated, side loading, straight frame, refuse collection type body. This unit(s) is to be delivered complete and ready for municipal refuse collection services operation.

Compliance with each specification shall be so noted in the yes or no columns designated. Any addition, deletion, or variation from the following specifications shall be so stated in the space provided. These specifications shall be construed as minimum; however, all exceptions will be weighed carefully against the needs, experiences, and resources of the City of Kingsport. These specifications also require the bidder furnish descriptive literature, complete specifications, and all other technical data on the equipment as proposed by the perspective bidder. Failure to comply with these conditions will deem the bidder as non-responsive.

SPECIFICATIONS	Bidder Complies	YES	NO
1.0/ - GENERAL SPECIFICATIONS:			
1. Latest, current production model, diesel powered, dual steer conversion, "cab and chassis" with mounted automated, side loading, straight frame, refuse type body ; new and unused, with 31 yard refuse body, with all standard equipment as offered by the manufacturer.			
2. All parts, accessories, equipment, and safety features considered as standard by the equipment manufacturer; whether herein specified or not, shall be considered as required.			
3. This complete unit(s) shall be built and delivered complete and ready for use in full compliance with federal, state, and local requirements and regulations.			
4. This unit and all other related equipment incorporated into this unit shall be designed, built, manufactured, and constructed in accordance with all applicable safety codes, design, and manufacturing standards as outlined by SAE, ANSI, AWSI, FMVSS and related organizations or standards agencies.			
5. This unit(s) and attachments shall embody the highest quality materials and workmanship available.			
EXCEPTIONS:			
2.0 - G.V.W.R. : 66,000 Pounds or greater			
EXCEPTIONS:			
3.0/ - AXLES:			
6. Front: 20,000# (minimum) pound rating or greater with appropriate suspension to include heavy duty shock absorbers.			
7. Front axle shall be provided with oil bath type lubrication with viewable level hub cover.			
8. Tandem Rear: Single (1) speed 5.31:1 ratio minimum differentials, 46,000# (minimum) pound rating or greater with appropriate suspension.			
9. Front and rear axles shall be provided with synthetic oil lubricant.			
10. Unit shall be capable of having a top highway speed of approximately 59 MPH at 2,100 RPM.			
EXCEPTIONS:			
4.0 - WHEELBASE: A wheel base of 221" inch minimum with a C.A. of 206" inches minimum shall be provided.			
EXCEPTIONS:			

SPECIFICATIONS	Bidder Complies	YES	NO
<p>5.0/ - WHEELS AND TIRES:</p> <ol style="list-style-type: none"> Front: Ten (10) hole, steel disc type wheels with a 425/65Rx22.5 tubeless non-directional highway type tread tires (20 ply rating minimum). Mounted spare to match front tires shall be included. Spare tire to be of same brand and ply as chassis. Rear: Ten (10) hole, steel disc type wheels with 11Rx22.5 tubeless non-directional highway tread type tires (16 ply rating minimum). Front and rear tires shall be of the same brand and ply. Mud-flaps shall be provided at the rear of the front tires and at the front and rear of the rear tires. Rear mud-flaps shall be securely fastened with an anti-sail brackets to disallow mud-flaps from rubbing tires when the unit is in transport mode. 			
EXCEPTIONS:			
<p>6.0/ - STEERING:</p> <ol style="list-style-type: none"> Full power assist steering shall be provided. Left and right side of unit tilt column steering shall be provided. 			
EXCEPTIONS:			
<p>7.0/ - ENGINE:</p> <ol style="list-style-type: none"> Naturally aspirated or turbo-charged electronic diesel engine developing a minimum of 355 HP @ 1,500 RPM and 1,260 lb-ft torque @ 1,300 RPM shall be provided. The engine shall be equipped with a single element air cleaner with an air restriction gauge. Manufacturer's standard thermostatically controlled fuel heater and fuel cooler shall be provided. Engine shall be equipped with a "low oil", "high coolant temperature" engine alarm system. Manufacturer's optional expanded metal mesh trash guard shall be provided behind the engine to prevent debris from entering engine compartment from mounted collection body. Manufacturer's front mounted engine PTO option shall be provided. Manufacturer's standard engine brake shall be provided. <i>It shall be the responsibility of the awarded vendor to insure the engine ECM is of the proper design and calibration for use with body attachment and will support the fast idle function required by the attachment during operation.</i> 			
EXCEPTIONS:			
<p>8.0/ - COOLING SYSTEM:</p> <ol style="list-style-type: none"> Heavy duty cooling system with a heavy duty automatic on/off type fan clutch similar in design to the Horton Drive Master shall be provided. Cooling system shall be protected to a minimum of -30° Fahrenheit with an extended life type antifreeze. All coolant hoses shall be silicone or equivalent quality. All cooling system hose clamps shall be of the stainless, constant torque type regardless of hose , position, or manufacturer if 1/2" inside diameter or larger. Hoses with a 3/8" inside diameter and smaller shall have constant tension band hose clamps provided. A thermostatically controlled engine heater (1,000 watt minimum) shall be provided. A metal, weather proof, heater receptacle connection for the engine heater shall be provided and located in the front bumper on the right hand side. (Plastic receptacles not acceptable) 			
EXCEPTIONS:			
<p>9.0/ - EXHAUST:</p> <ol style="list-style-type: none"> The exhaust system shall be vertically mounted at the left rear of the cab using its own support system. The exhaust system bolted to the cab will not be acceptable. An exhaust diffuser turn out, to deflect exhaust gases outward, and shall be installed on the end of the vertically mounted exhaust pipe. 			
EXCEPTIONS:			

SPECIFICATIONS	Bidder Complies	YES	NO
<p>10.0/ - TRANSMISSION:</p> <ol style="list-style-type: none"> 1. A six (6) speed automatic transmission, similar in design and performance to the Allison 4500RDS, or better shall be provided. 2. Transmission shall be rated by the manufacturer for refuse vehicle operation. 3. A console mounted push button control panel shall be provided to accommodate a dual drive conversion and shall be easily accessible to left and right side driving positions. 4. Manufacturers standard heavy duty external transmission oil cooler and oil level sensor shall be provided. 5. Manufacturer's synthetic fluid shall be provided. 6. Manufacturer's solid state, reverse activated backup alarm shall be provided. 			
EXCEPTIONS:			
<p>11.0/ - BRAKES:</p> <ol style="list-style-type: none"> 1. Full air, ABS (four sensor), vented "H" type disc brakes, front and rear, with automatic slack adjusters shall be provided. 2. The rotors shall be no less than 430mm (17") in diameter. 3. Brake chambers shall have a minimum capacity of 24 square inches each. 4. Brake (pads) lining used shall be equivalent to the "Meritor TMD 7070", or better, and designed for heavy duty refuse use. 5. Air dryer (similar in design to the Bendix AD-9) shall be of the heated, serviceable desiccant type with an automatic purge valve. 6. Discharge valve and purge valve shall be readily replaceable from the exterior frame of the unit. 7. The air compressor shall be rated at 18.7 C.F.M., minimum. 8. Front and rear brake protective dust shields shall be provided. 9. All air reservoir tanks shall have cable type tank drain valves easily accessible from the outside of the frame rails by the operator for daily draining. 			
EXCEPTIONS:			
<p>12.0/ - ELECTRICAL:</p> <ol style="list-style-type: none"> 1. Alternator shall be rated at 160 AMPS, minimum. 2. Manufacturer's heavy duty 12 volt battery system shall be provided. 3. Battery system total shall be rated a minimum of 2,400 CCA. 4. A master disconnect (Boston Switch or equivalent) shall be provided to completely disable electrical feed to chassis and mounted near the battery storage tray. 5. Right side operators position self cancelling turn signal and headlight beam switch controls shall be provided. 6. Ignition switch shall be center console mounted. 7. Unit shall be equipped with a right hand instrument panel with gauges for MPH, dual air pressure, turn signals, high beam indicator, oil pressure, and charging voltage. 8. Battery terminals shall be protected with a corrosion resistant coating. 9. All wiring shall be color coded and numbered for ease of maintenance. 10. All circuits shall be circuit breaker or fuse protected. 11. Convenient access shall be provided for all electrical circuits, controls, and wiring. 12. All wiring shall conform to Society of Automotive Engineers (SAE) requirements and installation procedures. 13. <i>NOTE: "Scotchlocks" or other piercing type wire connectors on any connection (chassis or body) shall not be accepted.</i> 14. Twist lock and/ or twist wire nut type connectors shall not be accepted. 15. All external connectors shall be of a weather proof and corrosion resistant design in its manufacture and use. 16. All wiring shall be enclosed in a non-metallic loom and secured in place using positive lock type or vinyl coated steel clamps bolted into place. Cable ties do not qualify as a securement devices. 17. Any penetration of wiring through metal points or other materials shall have protective rubber grommets installed in such opening regardless of location. 18. Adhesive backed, cable tie type, plastic or nylon, retaining pads will not be accepted as a wire retaining method. 19. Exposed, un-loomed, or un-retained wiring on any location of the upper and rear cab exterior or body sides and roof will not be accepted. 20. Any additional grounds that are installed from the body or body components to the truck battery must have an appropriate size fuse or circuit breaker for protection. 21. Grounding through hinge or spring point are not allowed. 22. Any unused connector housings, plugs, or receptacles shall have a blank weather proof mating cap. 23. Any blunt cut wires shall have heat shrink tubing applied protecting their terminus point. 			
EXCEPTIONS:			

SPECIFICATIONS	Bidder Complies		YES	NO
13.0 - FRAME : Manufacturers heavy duty dual reinforced frame shall be provided and shall have a minimum RBM of 2,818,800 lb-in and guaranteed against cracking and deforming for a minimum of five (5) years.				
EXCEPTIONS:				
14.0 - TOW HOOKS : Tow hooks or tow pins, front frame mounted, shall be provided.				
EXCEPTIONS:				
15.0 - FRONT BUMPER - Painted front bumper shall be provided and shall have a minimum depth of eight (8") inches to protect the front mounted PTO hydraulic pump.				
EXCEPTIONS:				
16.0/ - INTERIOR: <ol style="list-style-type: none"> 1. Manufacturer's standard heavy duty air ride, vinyl covered, full foamed, fully adjustable seats, shall be provided. 2. Seating shall be so designed as to allow operator to sit in a normal viewing position on the right or left hand sides and without having to peer over the dash to view the road during transport. 3. Interior components shall be color keyed to dark blue or gray. 4. Heavy duty rubber or vinyl full floor covering shall be provided. 5. Left and right sun visors shall be provided. 6. Manufacturer's standard heating, defroster, and air conditioning system shall be provided. 7. Full instrumentation package (i.e. fuel, AMP, water temperature, oil pressure, etc.) including engine hour meter and tachometer shall be provided in both left and right hand operating positions. 8. Manufacturer's standard AM/FM radio with Bluetooth feature shall be provided. 9. Dual speed with intermittent feature, windshield wipers and washers shall be provided and shall be accessible from right or left hand seated operating positions. 10. FMVSS, DOT approved retractable restraint belts for both operator positions shall be provided. 11. Right side accelerator and brake pedals shall be provided and shall incorporate the appropriate controls to insure safe operation in a sit down position. 12. A three (3) camera viewing system shall be provided and include a seven inch (7") minimum LCD swivel monitor that also includes: Sound, Night Vision, 4 in 1 Display, and have Electromagnetic Noise Reduction, with Auto Switcher. (Reference SPECIFICATION 26.0/9) 13. The system shall be fully installed having one camera to be tailgate mounted rearward view for backing, and to have an auto trigger in reverse gear. 14. A second camera to be cab mounted viewing from the left side of the cab facing toward the rear and a third camera viewing into the hopper. 15. Interior, forward of cab and rearward of cab positions, mounted grab handles shall be provided to assist and allow operator easy cab access. 				
EXCEPTIONS:				
17.0/ - EXTERIOR: <ol style="list-style-type: none"> 1. Cab color shall be manufacturers standard white. 2. Automated refuse body shall match cab color and be of standard gloss white. 3. Chassis frame and bumpers shall be manufacturers standard gloss black. 4. Dual left and dual right full remote operated, heated, stainless steel, wide angle, flat glass, mirror systems shall be provided. 5. Eight (8") inch convex stainless steel mirrors shall be mirror frame mounted below the primary mirrors. 6. Cab doors shall be manufacturer's standard with power operated windows. 7. These doors shall incorporate an FMVSS approved stainless steel, lockable, paddle latch system. 8. The door hinges shall be manufactured of stainless steel or better. 9. There shall be an aluminum drip edge above each door. 10. Mud flaps shall be provided front and rear and front of forward rear axle.. 11. Rear mud flaps shall have an anti-sail devise. 12. Manufacturer's standard tinted widows shall be provided. 13. Manufacturer's standard air operated cab jack shall be provided. 				
EXCEPTIONS:				

SPECIFICATIONS	Bidder Complies	YES	NO
<p>18.0/ - FUEL SYSTEM:</p> <ol style="list-style-type: none"> 1. A seventy (70) gallon (minimum) steel fuel tank shall be provided. 2. Manufacturer's standard fuel/water separator shall be provided and shall include a cab mounted "water in fuel" warning device to notify the operator. 			
EXCEPTIONS:			
<p>19.0/ - LIGHTS:</p> <ol style="list-style-type: none"> 1. Light and reflector configuration for this unit(s) shall be in full compliance with Federal Motor Vehicle Safety Standards. 2. All lamps and lenses shall be of a make and model for which parts are readily available. 3. Headlights shall be equipped with an audible reminder warning if lights are left on after unit shut down. 4. Manufacturer shall provide two (2) four inch (4") diameter halogen type mid-body mounted back up lights. 5. Each back up light shall be mounted on lower body rub rail mid ship location. 6. All light wiring used shall be SXL 14 gauge copper strand or approved equal. 7. All lighting to include tail/ brake lights shall be shall be sealed type, shock mounted LED's where available. 8. Front cab mounted and rear tailgate mounted LED beacon lights shall be provided and shall incorporate metal guards to protect from tree limbs. 9. Two (2) rear tailgate mounted (left and right), high intensity, alternating, flashing LED lights shall be provided. 10. Tailgate high intensity flashing lights shall be mounted approximately center line or higher in the tailgate in height. 			
EXCEPTIONS:			
<p>20.0/ - BODY GENERAL SPECIFICATIONS: A current model automated-type refuse body, new and unused, with all standard equipment as offered by the manufacturer and is to be designed and constructed in accordance with the appropriate parts of the current ANSI 2245.1 and Federal Motor Vehicle Safety Standards.</p> <ol style="list-style-type: none"> 1. Regular current model automated type side loading refuse body, FULLY INSTALLED with all necessary hydraulic lines, pumps, reservoirs, suction and return hydraulic filters, controls, etc. 2. The body/tailgate shall have a minimum capacity of thirty one (31) cubic yards capacity with the approximate minimum dimensions of body being no more than one hundred and three (103") inches above the top of chassis frame in travel position, by two hundred and sixty one (261") inches long. 3. Body shall be mounted with a minimum of cab clearance. 4. Body is to be built in such a manner as to exhibit the highest quality in materials and workmanship. 5. Body hoist is to be a single post, hydraulically actuated system and be power up and power down. 6. Front engine mounted PTO shall be provided. 7. Cab interior to be equipped with indicator lights for body up, arm extended, tailgate open, and pump on/off. 8. A crusher panel "CLOSED" light shall be provided. 9. NOTE: Control nomenclature mounted "upside down" or "180° out" on any controls will not be accepted. 10. A mesh screen engine cover shall be provided between body and engine to prevent debris buildup around engine and exhaust system. 11. <i>It shall be the responsibility of the awarded vendor to insure fast idle functions required for successful body operation are compatible with the engine ECM.</i> 			
EXCEPTIONS:			

SPECIFICATIONS	Bidder Complies	YES	NO
<p>21.0/ - BODY CONSTRUCTION:</p> <ol style="list-style-type: none"> 1. Minimum body capacity shall be 31 cubic yards. 2. Tailgate capacity shall be a minimum of 4 cubic yards. 3. Hopper capacity shall be a minimum of 6.5 cubic yards. 4. Body floor material thickness shall be 10 gauge minimum with a minimum yield strength of 80,000 psi. 5. Hopper depth shall be a minimum of 70" high street side and 56" high curbside and approximately 66" x 69" in length and width. 6. Hopper floor shall be a minimum of ¼" thickness abrasion resistant steel with a minimum yield strength of 65,000 psi. 7. Hopper sump box shall have a minimum volume of 30 gallons. 8. Hopper shall be provided with an access door, approximately 32"x 44" in dimensions, to allow operator to access hopper area for maintenance purposes. 9. A bolt on 11 gauge steel hopper cover approximately 78" long x 64" wide shall be provided at top of hopper opening and be designed so as to limit wind blown spillage during the cart dumping process 10. A heavy duty steel cleaning tool shall be provided for cleaning and clearing hopper debris and shall be stored on the bedside exterior when not in use. 11. Hopper door shall be made of a minimum of 14 gauge A569 grade steel plate. 12. Floor reinforcing cross members shall be 4 11/16" x 4 7/8" x ¼" steel members tubing or channel, minimum. 13. Longitudinal beams shall be 8" x 2" x 3/8" rectangular tubing of HSS. 14. Body sidewalls shall be constructed of not less than 12 gauge thick steel meeting ASTM A-715 GR80F, with a minimum yield strength of 80,000 psi. 15. Body roof thickness shall be a minimum of 12 gauge thick steel meeting ASTM A-715 GR80F, with a minimum yield strength of 80,000 psi. 16. A front of body mounted heavy duty expanded metal mesh window shall be provided to indicate when the body is full. 17. All connected joints of the constructed body shall have the appropriate reinforcements to insure against joint failure or metal fatigue during the life of the unit. 18. All body hinges, cylinder rod ends, trunnions and pivot points shall be supplied with grease fittings. 			
<p>EXCEPTIONS:</p>			
<p>22.0/ - BODY PACKER AND CRUSHER PANEL :</p> <ol style="list-style-type: none"> 1. A minimum 24" high packer panel, with in cab controls, shall be provided within the body and shall produce a minimum of 66,000 lbs of packing force on the loaded refuse. 2. The packing system shall be capable of packing 900 pounds per cubic yard of dry household refuse/ recyclables. 3. The packer shall be of unitized design and integral with the body and be capable of the following actions: packing, retraction, emergency stop and include the manufactures "AUTO PACK" option. 4. A large red emergency stop button shall be provided to stop packer movement at ANY time. 5. Packer control buttons shall be of the heavy duty industrial grade with color coding and labeled as to function. 6. Packer shall ride on a minimum 2 rails incorporating replaceable heavy duty steel wear plates. 7. Manufacturer's optional crusher panel shall be provided to optimize material compaction. 8. Crusher panel shall be manufactured of a minimum 3/16" thick steel plate and operated hydraulically though the use of a single cylinder. 9. A hydraulic inhibitor device shall be incorporated into the crusher panel hydraulic system to prevent packing on top of the hydraulic ram. 			
<p>EXCEPTIONS:</p>			

SPECIFICATIONS	Bidder Complies	YES	NO
<p>23.0/ - HYDRAULIC SYSTEM:</p> <ol style="list-style-type: none"> 1. The hydraulic system shall be so designed to ensure simplistic maintenance where possible and consist of all the hydraulic components needed to ensure successful operation of the units installed body. 2. Hydraulic system shall be designed meet or exceed the Society of Automotive engineering standards or any other standards agencies with regards to hydraulic systems design to include but not limited to: pressure, capacity, bends, turns, filtration, corrosion prevention, etc. 3. Hydraulic system shall be so designed as to NOT require the need for external hydraulic cooling devices. 4. Hydraulic system shall be FULLY INSTALLED with all necessary hydraulic lines, pumps, reservoirs, suction and return hydraulic filters, etc. 5. Quick disconnect fittings shall be provided in all areas requiring trouble shooting of the system. 6. A set per unit, liquid filled gauges, of the appropriate type and pressure rating, shall be supplied with each unit for diagnostics purposes. 7. Hydraulic system shall be composed of two (2) vane pumps with common suction port. 8. One pump shall operate the body dump, with a minimum capacity of 18 GPM @ 700 RPM. 9. The second pump shall operate the body mechanized arm with a minimum capacity of 13 GPM @ 700 RPM. 10. A minimum 74 gallon capacity baffled hydraulic tank shall be provided and have a fluid level sight glass to indicate fluid level and fluid temperature. 11. The hydraulic tank shall be clearly marked with a weatherproof/water proof ENGRAVED label as to the fluid type required. 12. The hydraulic tank shall utilize stainless steel ball valves of the appropriate size in all ports of the hydraulic tank to include the tank drain, suction, and return lines to allow tank isolation and ease hydraulic system maintenance and flushing. 13. The hydraulic tank shall incorporate a suction filter/ screen with a flow capacity of 80 GPM. 14. The hydraulic tank shall be clearly marked with a weatherproof/water proof ENGRAVED label as to the fluid type required and shall be permanently affixed. 15. An easily replaceable, paper media, hydraulic system filter shall be provided and have a minimum flow rate of 53 GPM. 16. Hydraulic system shall incorporate double wire braided, nylon wrapped hydraulic hoses in all positions not requiring steel hydraulic tubing. 17. All steel hydraulic tubing utilized shall be of quality manufacture and zinc coated to prevent internal or external corrosion. 18. ALL hydraulic hoses or lines shall be clamped or bolted into place utilizing nylon or vinyl covered steel clamps and bolted into place in no greater than eighteen inch (18") increments, minimum, to prevent chaffing, abrasion or other environmental failures. 19. Hydraulic lines over five feet in length shall be of steel tubing unless required to flex for proper operation. 20. NOTE: Nylon cable ties are not considered to be secure retainers and "do not"/ "will not" qualify as a securement devices. 21. All hoses, lines, and cylinders shall have a three year minimum warranty against any type of failure. 			
EXCEPTIONS:			
<p>24.0/ - CART LIFTING SYSTEM SYSTEM:</p> <ol style="list-style-type: none"> 1. A rail mounted curbside mounted cart lifting system shall be provided. 2. The lifting system shall be able to be hydraulically activated to reach, grab, lift, dump, and return industry standard refuse carts ranging from 36 to 95 gallon in capacity. 3. Arm reach shall be a minimum of 144" with a 1,000 lbs capacity minimum. 4. Dump cycle time of the arm shall be no more than 10 seconds at minimum reach to no more than 20 seconds at maximum reach. 5. The arm grabber shall utilize two grab fingers coated with high friction rubber to maintain refuse cart grip and will be activated by two cylinders. One cylinder per grab finger. 6. Cylinders shall be a minimum of 1½" in diameter utilizing a 1" rod. 7. The grab fingers shall be designed to prevent demolition of the refuse cart during dump cycle. 8. Grab fingers shall be so designed to automatically close when dumping to prevent refuse cart slippage. 9. Refuse cart dump angle shall be a minimum of 47°. 10. The arm and fingers shall be operated utilizing an electric over hydraulic joystick control. 11. Holding valves shall be utilized in the arm/ grab system to prevent un-commanded movement. 12. The joystick control shall be mounted at the right hand operators position. 13. The joystick shall be labeled to indicate operational directions. 			
EXCEPTIONS:			

SPECIFICATIONS	Bidder Complies	YES	NO
<p>25.0/ - BODY DUMPING MECHANISM AND TAILGATE:</p> <ol style="list-style-type: none"> 1. Unit shall discharge all material from the rear of the body by means of a body raise dumping action. 2. Body raise cylinder shall be a minimum three-stage single acting telescopic heavy duty cylinder with a minimum bore diameter of 6½” and be capable of dumping the body to a minimum 45° angle. 3. This single body raise cylinder shall be mounted to front of body and directly to chassis frame. 4. Body shall be provided with a safety prop to support the body in a raised position during maintenance. 5. Tailgate shall be top hinged utilizing heavy duty steel pins 1¼” in diameter and hydraulically open, close, and latch. 6. Tailgate shall have a minimum capacity of 4 cubic yards. 7. Twin tailgate cylinders shall provided and the minimum dimensions to be 2½" bore x 39" stroke utilizing a 1¾” diameter rod. 8. Tailgate cylinders shall be provided with a restrictor or check valve to prevent falling, sudden closure, or decent of the tailgate should a hydraulic failure occur. 9. Tailgate shall be constructed of 12 gauge material with a minimum yield strength of 80,000 psi. and reinforced where applicable. 10. Tailgate shall be equipped with a safety prop, which will hold tailgate in a partially open position for body access during maintenance or cleanup. 11. Tailgate shall be held closed by an automatic hydraulic latching assemblies located on each side of tailgate. 12. There shall be a rear step and grab handle to provide easy interior body access. 13. Unit to be equipped with rear under ride protection meeting FMVSS requirements. 14. Tailgate shall be provided with a positively retained rubber seal to prevent liquid leakage during operation. 			
<p>EXCEPTIONS:</p>			

SPECIFICATIONS	Bidder Complies	YES	NO
<p>26.0/ - MISCELLANEOUS:</p> <ol style="list-style-type: none"> 1. A rear of body access step shall be provided. 2. A side of body, five (5) rung, minimum, folding (up and down) ladder system shall be provided to allow operator access to the hopper. 3. The hopper access ladder shall have an electronic safety system to prevent the cart lifting system and the packer system from functioning if the ladder is the down position. 4. The first rung of the ladder system shall not exceed (19") from ground level. 5. A single, continuous, vertical hand hold shall be provided above the fold down ladder system to allow operator safe, transition free access to the hopper area and shall match the City of Kingsport's current fleet. <ol style="list-style-type: none"> a. The hand hold is to be installed and welded to the curb side most forward corner of the body hopper area. b. The hand hold is to be constructed of one and one quarter inch (1¼") "OD" heavy wall tubing. c. The hand hold is to be fifty one inches (51") in height. d. The top of the hand hold is to be mitered and welded into a stanchion to be four inches (4") out from the body side, and attached at or near the top of the vertical corner post. e. The bottom of the hand hold is to be 10" out from the body side and welded directly to the body's front main horizontal cross sill. 6. A first aid kit and fire extinguisher shall be provided. 7. A decal shall be tailgate mounted stating; "THIS VEHICLE MAKES FREQUENT STOPS AND TURNS". 8. A Fall protection attachment boom shall be provided to match the current City of Kingsport fleet. (See Picture A : Page 12 for Example) <ol style="list-style-type: none"> a. The boom shall be installed and welded to the top, curb side, most forward corner, vertical post of the body just below the top hand hold mount. b. The boom shall be mounted at a 45 degree angle and be twelve inches (12") long constructed from two inch by two inch (2"x 2") heavy wall square tubing. c. A twelve inch (12") high stiffener plate made of two and one half inch by two and one half inch by three eighths of an inch (2½" x 2½" x ¾") angle shall be employed as a mounting base and welded to the corner post. d. An appropriate sized, angled gusset support, made from the same square tubing as the boom shall be incorporated into the assembly. e. A three quarter inch (¾") rod shall be formed into a U on a four inch (4") radius, installed length wise and welded at both ends through the boom tube with the outer most end to be within one inch (1") of the end of the boom. f. The boom shall have a welded cap plate to cover the open end. 9. A "BODY" three (3) camera viewing system shall be provided and include: <ol style="list-style-type: none"> a. 7" minimum LCD swivel monitor b. Sound c. Night Vision d. 4 in 1 Display e. Electromagnetic Noise Resistance f. Auto Switcher 10. The system shall be fully installed with the cameras mounted in the following locations: <ol style="list-style-type: none"> a. Tailgate mounted rearward view for backing, with an auto trigger in reverse gear. b. Cab mounted viewing from the left side of the cab facing toward the rear. c. Viewing into the hopper. 11. A separate forward facing digital camera/ recording system shall be provided and shall NOT include a viewing monitor. 12. The recording unit shall be provided with a minimum of 160 gigabyte of storage space. 13. The camera/recording system shall be provided with the appropriate software to download, save and view the recorded data. 			
<p>EXCEPTIONS:</p>			

SPECIFICATIONS	Bidder Complies	YES	NO
<p>27.0/ - WARRANTY:</p> <ol style="list-style-type: none"> 1. Manufacturer's full warranty shall be applicable to this unit(s) as equipped (12 month, 12,000 miles, Unlimited Hours, minimum). 2. Awarded vendor shall be required to reimburse any expenses incurred by the City covering transport labor cost or shipment charges on any unit component or attached component failure when the unit or component manufacturer requires an "Authorized dealer repair only" and when the authorized repair facility extends beyond a fifty (50) mile radius of the City of Kingsport city limits during the warranty period. 3. Towing and hauling service to a repair facility shall be provided at "no cost" to the City of Kingsport throughout the complete warranty period of the unit on any of the incorporated components or attachments on the unit. 4. The awarded vendor shall be required to reimburse the City of Kingsport for any and all unit warranty repair expenses, to include towing or hauling services, incurred by the City of Kingsport during the warranty period. 5. Reimbursement shall occur within a maximum of 30 days of notification of a reimbursement claim. 6. Awarded vendor shall agree to perform, or have performed, any and all warranty work on the unit, body, and any installed attachment(s) or unit component throughout the complete warranty period which will begin at the time the unit(s) are placed into active service. 7. <i>This specifications requires manufacturer's delayed warranty start.</i> 8. Chassis, components, all attachments and body shall have a minimum 100% full warranty (parts and labor) for a minimum period of one (1) year from the time of cab/chassis/body service activation within the City of Kingsport fleet regardless of manufacturer or installer. 9. Warranty claims of any unit, component, or attachment shall be addressed within a period 3 days from time of notification by the awarded vendor. 10. Awarded vendor shall insure successful completion of any warranty repair within 10 business days from time of notification. 11. Towing service shall be provided though the warranty period for warrantable breakdowns requiring tow. 12. This warranty specification shall be honored in conjunction with any manufacturer's standard warranty regardless of exclusions. 			
<p>EXCEPTIONS:</p>			
<p>28.0/ - MANUALS:</p> <ol style="list-style-type: none"> 1. One set of owner/operator manuals, parts books, wiring diagrams, lubrication charts, and all other technical repair data for this unit(s), as equipped, shall be provided upon delivery. 2. The manuals provided with the unit(s) shall cover the cab/chassis and the complete automated refuse body unit. 3. Unit (s) shall come with warranty information, parts book, and all known manufacturer information as to be able to repair and maintain the body and automated refuse unit(s) during its operational life and shall be specific to the automated refuse unit(s) purchased. 			
<p>EXCEPTIONS:</p>			

SPECIFICATIONS	Bidder Complies	YES	NO
<p>29.0/ - DELIVERY:</p> <ol style="list-style-type: none"> 1. Unit(s) shall be delivered complete with all provided options installed and a full tank of fuel. 2. The Diesel Exhaust Fluid (DEF) tank shall be full if applicable to the unit(s). 3. Unit(s) shall be delivered complete with NO dealer advertising logos affixed to the interior or exterior, to include mud-flaps, of the unit(s) prior to delivery. 4. Delivered unit(s) shall come with all required paperwork to complete the purchase and registration process and shall include at a minimum: <ol style="list-style-type: none"> a. Invoice b. Mileage Statement (if applicable) c. Manufacturer's Statement of Origin (MSO)(if applicable). 5. Delivery acceptance of unit(s) may be refused if any part of the awarded specifications are not maintained. 6. Delivery acceptance of unit(s) may be refused if any device, feature or system is deemed as unsafe to the operator and/or the general public as determined by the City of Kingsport's knowledge or experience. 7. Delivered unit(s) are required to complete an acceptance inspection (school buses will require the additional State of Tennessee inspection) and shall be inspected against awarded specifications as a total unit, irregardless of multiple manufacturer contributions to the completed elements of the unit(s), before acceptance is granted. 8. Bidder misunderstanding and/or misinterpretation which results in an unsatisfactory bid or final delivered product is not the responsibility of the City of Kingsport. 9. The City of Kingsport shall have the sole interpretation of the bid requirements and shall have final determination whether submitted bids and/or the final product delivered satisfy the requirements of the bid. 10. All awarded bids shall be subject to final inspection of the unit(s) ordered by the Fleet Manager, or designee, and must be compliant with all bid requirements prior to acceptance of the unit(s) and final payment. 11. Any non-compliant unit(s) must be made compliant at the expense of the awarded bidder and within a reasonable time frame, as determined by the City of Kingsport. 12. Misinterpretation of the specifications by the vendor or failure to supply the appropriately equipped unit(s) specified or intended, based on the City of Kingsport's interpretation, shall be corrected to the benefit of the City of Kingsport by the awarded bidder at the bidders expense. 13. In all cases the City of Kingsport's interpretation and definition of unit(s) specifications and requirements shall be the final determination of a successful final inspection and compliance with awarded specifications before unit acceptance will be granted. 14. Failure to provide the requested documentation upon delivery shall be considered as non-compliance to awarded specifications and allows the City of Kingsport the right to refuse acceptance. 15. All "Trade In" units offered by the City of Kingsport are to be considered "AS IS, WHERE IS". 16. Any trade terms offered or required by a bidder will allow the City of Kingsport to reject their bids. 			
THERE ARE NO EXCEPTIONS ALLOWED TO THIS SPECIFICATION			
<p>30.0/ - TRAINING:</p> <ol style="list-style-type: none"> 1. Successful bidder shall provide a minimum of 4 hours of technician service and operator training at the City's location 2. Training shall present the manufactures required maintenance, repair, and operating procedures and offer the technician and operator the full knowledge of the practices required for the successful, lifelong operation of the proposed vehicle and body. 3. Training shall be scheduled <u>after</u> unit is placed into active service. 4. Training shall be provided within one (1) week of service activation of the unit(s). 			
THERE ARE NO EXCEPTIONS ALLOWED TO THIS SPECIFICATION			

SPECIFICATIONS	Bidder Complies	YES	NO
<p>31.0/ - MISCELLANEOUS INFORMATION REQUIRED: Vendor shall supply the following information in the space provided on the unit (cab/chassis/body) proposed:</p> <ol style="list-style-type: none"> 1. Location (City, State) of Cab/ Chassis Manufacturer. 2. Location (City, State) of Cab/Chassis Dealership. 3. Percentage of Import/ Domestic Content of Cab/ Chassis. 4. Location (City, State) of Body Manufacturer. 5. Location (City, State) of Body Dealership. 6. Percentage Import/ Domestic Content of Body. 7. Anticipated Fuel Economy (MPG) of Unit when utilized during transport/ work environment. 			
<p>THERE ARE NO EXCEPTIONS ALLOWED TO THIS SPECIFICATION THIS INFORMATION IS REQUIRED FOR THE BOARD OF MAYOR AND ALDERMAN</p>			

Picture A
Example Image of Fall Protection System

