AGENDA REPORT

Meeting Date: April 21, 2011

Item Number: G-12

To: Honorable Mayor & City Council

From: Shana Epstein, Environmental Utilities Manager
Rene Biadoma, Fleet Manager

Subject: APPROPRIATION OF FUNDS IN THE AMOUNT OF $216,669.00 FROM FUND 83 RESERVES INTO THE VEHICLE REPLACEMENT PROGRAM FUND 49 TO COMPLETE THE FUNDING FOR REPLACEMENT OF TWO COMPRESSED-NATURAL-GAS-POWERED (CNG) SOLID-WASTE-COLLECTION TRUCKS; AND

APPROVAL OF A PURCHASE ORDER TO LOS ANGELES TRUCK CENTER, LLC FOR A TOTAL NOT-TO-EXCEED AMOUNT OF $672,897.00 FOR PURCHASE OF TWO CNG SOLID-WASTE-COLLECTION TRUCKS.

Attachment: 1. Bid Proposal for Bid 11-24 from Los Angeles Truck Center, LLC

RECOMMENDATION

Staff recommends that the City Council move to: 1) appropriate funds in the amount of $216,669.00 as follows:

From		To	
$216,669.00	Fund 83 Reserve	$216,669.00	35498502 – Vehicle Replacement Program

2) approve a purchase order in the not-to-exceed amount of $672,897.00 to Los Angeles Truck Center, LLC for purchase of two (2) subject trucks.

INTRODUCTION

This report constitutes a request for City Council approval to appropriate an additional $216,669.00 and for the issuance of a purchase order in the amount of $672,897.00 to Los Angeles Truck Center, LLC for the purchase of two (2) CNG-powered solid-waste-collection vehicles to replace two (2) diesel-powered solid-waste-collection vehicles that have either reached or exceeded their economical life cycle. This purchase also

facilitates the achievement of goals spelled out in the "Beverly Hills Sustainable City Plan" and compliance with requirements stipulated in the grant contract between the City and the South Coast Air Quality Management District (SCAQMD) which will provide grant assistance of $25,000.00 per vehicle. In so doing, the City will also comply with the mandates of AQMD Rule 1193, the alternative fuels requirement for all heavy duty, on-road refuse trucks.

DISCUSSION

The City owns and operates a fleet of twelve heavy-duty trucks for its residential solid-waste-collection program. Eight of these trucks are 2005 Sterling Condors with "Heil Rapid Rail" automated side-loader bodies. This group of vehicles has been used exclusively for the collection and hauling of residential refuse from the City of Beverly Hills to the Crown Disposal facility. This operation has taken its toll on the vehicles' mechanical systems including the power train and loading components. Despite the concerted effort of the Fleet Services' technicians and truck operators to keep these vehicles in service, the overall cost of maintaining these machines warrants their replacement at this time. Following an annual evaluation of the City's solid-waste collection program, staffs from the Fleet Services and the Solid Waste Divisions have determined that the current fleet of Sterling Condor trucks needs to be cycled out from service as soon as each vehicle becomes eligible for replacement.

In order to sustain the collection program's demanding operation, Solid Waste staff also recommended, with Fleet Services' concurrence, that replacement of two solid-waste-collection trucks be initiated during the Fiscal Year 2011. This early procurement processing is predicated by the vehicle's long build time and delivery. This schedule will also facilitate the City's timely compliance with the MSRC grant contract between the City of Beverly Hills and the SCAQMD. This grant contract stipulates procurement of ten (10) alternative-fueled heavy-duty trucks, including four (4) solid-waste trucks, to replace an equal number of in-use diesel-powered vehicles.

After a more detailed review of the solid-waste fleet's maintenance history, staff recommended the following vehicles for replacement:

ID #	YEAR/MAKE/MODEL	PROGRAM NO. / DESCRIPTION
257	2005 Sterling Condor / Heil Body	8305201 / Solid Waste Residential
259	2005 Sterling Condor / Heil Body	8305201 / Solid Waste Residential

Relative to the City's unique residential environment, staff has determined that only two trash-collection systems could be effectively employed in and around the residential areas. These are the "Heil Rapid Rail" and the "Wayne Curbtender" systems. Staff is extremely familiar with the Heil system since it has been in City service for the past fifteen years. To prequalify the "Wayne Curbtender," staff arranged for a product demonstration to ensure the equipment's viability for City use. After a week-long demonstration, staff incorporated the feedback provided by the operators into "Bid 11-24." This bid garnered two proposals from the same local truck dealership offering the "Heil Rapid Rail" and the "Wayne Curbtender" systems. No other bids were received despite public noticing and industry outreach. Summary of these proposals is as follows:

Vendor Name	Chassis / Body System	Unit Base Price
Los Angeles Truck Center, LLC dba Los Angeles Freightliner	Autocar ACX64R / Heil Rapid Rail	$293,203.00

Los Angeles Truck Center, LLC dba Los Angeles Freightliner	Autocar ACX64R / Wayne Curbtender	$298,159.00

After a thorough deliberation, all members of the selection committee unanimously agreed that, despite being higher by $4,956.00, the "Wayne Curbtender" system is a superior machine in many respect. To justify their recommendation, members of the committee have highlighted the following major advantages:

- **Packer system**. The Wayne Curbtender packer system is a platen-type design made of abrasion-resistant steel. With this design a flat-plate panel pushes directly on waste debris enabling trash to be compacted uniformly throughout the entire volume of the body. With the Heil's paddle system, compaction is achieved by the alternating (left and right) movement of a paddle, much like a rudder on a ship. Operators, who have operated both types of machines, have found that the platen-type system is far more efficient than the paddle system. Maintenance records also showed that the Heil paddle components on the City's trucks required replacement about every three years at a cost of roughly $5,000.00. Current users of the Wayne Curbtender have indicated that the platen-type design has lasted up to seven years before needing any major repairs.
- **Loader Assembly**. The Wayne Curbtender loading arm is composed of an outer arm and an inner arm. Only the lighter inner arm, which rides on rollers, slides within the stationary outer arm; whereas, on the Heil Rapid Rail, the entire mass of the loading-arm assembly, which also rides on rollers, moves on the rail. Records have also shown that the Heil's rail and carriage assembly had to be completely refurbished after two years of service at a cost of roughly $5,500.00
- **Hopper Assembly**. The Wayne hopper assembly is constructed of abrasion-resistant alloy steel, unlike the Heil's hopper, which is fabricated out of regular carbon steel.

The above advantages, along with many other superior technology and engineering features, underscore the Wayne Curbtender's superiority over the Heil's. The committee firmly believes that, in the long run, the vehicle with the Wayne Curbtender body will have far better reliability and will also be cheaper to own.

FISCAL IMPACT

Details of this purchase are shown in Attachment (1) and summarized below:

One (1) Truck, CNG-powered, Autocar ACX64X, mounted with Wayne Curbtender solid-waste collection body, as more specifically specified in Bid 11-24.	$298,159.00
Optional warranties	
Cummins CNG Engine – 5 Years / 200,000 Miles	$4,150.00
Transmission (5 years/Unlimited mileage)	$450.00
Loading Equipment (2 years)	$3,800.00
Subtotal:	**$306,559.00**
Tax (9.75%):	$29889.50
Per-unit Price:	**$336,448.50**

Total Cost (2X) $672,897.00

Anticipating the higher cost of replacing existing diesel-powered trucks with trucks that are powered with cleaner and sustainable fuels, staff had factored the added replacement cost of these vehicles in the rate-increase adjustment previously approved by the Council.

As shown in the appropriation request, funding for this purchase will be appropriated from the following sources:

- $216,669.00 Fund 83 – Solid Waste Fund Balance
- $456,228.00 Fund 49 – 35498502 Vehicle Replacement Program, Account 85050, Council-approved budget for the current Fiscal Year 2011

Per the grant contract with the SCAQMD, the City will be reimbursed a total of $50,000.00 as subvention for the purchase of the two CNG-fueled vehicles. Once received, this reimbursement amount will then be returned into Fund 83 fund balance.

Scott G. Miller
Finance Approval

David D. Gustavson
Approved By

Attachment 1

WAYNE ATTACHMENT (1)

COPY

BID PACKAGE

CITY OF BEVERLY HILLS
OFFICE OF THE CITY CLERK
455 NORTH REXFORD DRIVE
BEVERLY HILLS, CALIFORNIA
90210 (310) 285-2440

LEGAL NOTICE - BIDS WANTED

Sealed proposals are requested on the list of materials, supplies, equipment or services set forth herein, subject to all conditions outlined in the Proposal Document, including:

SECTION I: REQUEST FOR BIDS
SECTION II: GENERAL INFORMATION AND INSTRUCTION
SECTION III: DETAIL SPECIFICATIONS
SECTION IV: BID FORM

(IF YOU CHOOSE NOT TO SUBMIT A BID, PLEASE COMPLETE PAGE)

Sealed proposals will be received only at the **Office of the City Clerk**, 455 North Rexford Drive, Beverly Hills, until 2:00 p.m. local time, on the dates hereinafter stated at which time they will be opened and publicly read for furnishing the materials, supplies, equipment or services or for supplying the materials, and/or providing labor for the repair, construction or improvement as the case may be, as indicated by the items hereunder listed and in accordance with the applicable specifications.

SECTION I – REQUEST FOR BIDS

Date of Request: **FEBRUARY 10, 2011**

Bid Number: **11- 24**

Item Description: **TRUCK, REFUSE 27CY AUTOMATED SIDE LOADER**

Bid Opening: **MARCH 03, 2011 @ 2:00 PM**

All bids must be delivered by the specified opening time of the bid. Bids arriving after the specified hour will not be accepted. Mailed bids, which are delivered after the specified hour will not be considered regardless of postmarked time on the envelope. All bids must be in writing and must contain an original signature by an authorized officer of the firm - Electronic bids (telephone, FAX, etc.) are **NOT** acceptable.

BID DEPOSIT - NONE REQUIRED WITH THIS BID
PERFORMANCE BOND AND PAYMENT BOND - NONE REQUIRED WITH THIS BID.
THE CITY RETAINS THE RIGHT TO REJECT ANY AND ALL BIDS WITHOUT CAUSE AND/OR ELECT NOT TO AWARD A BID.

CITY OF BEVERLY HILLS
SECTION II - GENERAL INFORMATION AND INSTRUCTION

1. Bid deposits of unsuccessful bidders will be returned after the bid has been awarded. A successful bidder's bid deposit will be returned after he has entered into a written contract, or after a performance bond, if required, has been executed and accepted by the City.

2. The vendor's proposal may be withdrawn at any time prior to the bid opening. No proposal may be withdrawn after the bid opening. Violation of this policy may cause forfeiture of the bid deposit and removal from qualified Bidder's List.

3. Bidders are advised to become familiar with all conditions, instructions and specifications governing this bid. Once the award has been made, a failure to have read all the conditions, instructions and specifications of this contract shall not be cause to alter the original contract or for vendor to request additional compensation.

4. Bidders agree to defend and save the City from and against all demands, claims, suits, costs, expenses, damages and adjustments based on any infringement of any patent relating to goods specified in this contract.

5. Successful bidder shall not assign the contract, or subcontract the whole or any part of the contract without written consent of the City. Such consent shall neither relieve the bidder from his obligation nor change the terms of the contract.

6. The City shall have the right to inspect any material specified herein. Equipment, supplies or services that fail to comply with the specifications herein regarding design, material or workmanship are subject to rejection at the option of the City. Any materials rejected shall be removed from the premises of the City at the expense of the vendor.

7. Bidder shall state the nature and period of any warranty or guarantee. Manufacturer's specifications shall be submitted with the bid and shall be considered a part of this contract where such specifications meet the minimum of the City specifications.

8. Each bidder shall submit in full this completed original BID DOCUMENT and all necessary catalogues, descriptive literature, etc., needed to fully describe the materials or work he proposes to furnish.

9. Bidders shall state the delivery date for commodities in terms of calendar days after notification of award. Where the contract calls for performance of labor, the bidder shall also state the number of calendar days required for completion after notification of award.

10. Cash discounts shall be considered in the evaluation of the bids, except that payment periods of less than thirty (30) days will not be considered in award of this bid. Where cash discounts are offered, the discount date shall begin with the invoice date or delivery date to the City, whichever is later.

11. Upon the award of the bid to the successful bidder, **if** insurance is required by the terms of this bid, the City will require evidence of such coverage be furnished within fourteen (14) days of notification of bid award. The amounts and types of coverage will be specified in Section IV of this bid. **All insurance forms must be in a format acceptable to the City**.

12. The Contractor agrees to indemnify, defend and hold harmless the City, City Council and each member thereof, and every officer, and employee of the City, from any liability or financial loss including, without limitation, attorneys fees and costs, arising in any manner whatsoever from any intentional, reckless, negligent, or otherwise wrongful acts, errors or omissions of Contractor, or any person employed by Contractor, including agents and independent contractors, in the performance of this agreement.

13. Every supplier of materials and services and all contractors doing business with the City shall be an "Equal Opportunity Employer" as defined by Section 2000 (E) of Chapter 21, Title 42 of the United States Code Annotated and Federal Executive Orders #11375, and as such shall not discriminate against any other person by reason of race, creed, color, religion, age, sex or physical or mental handicaps with respect to the hiring, application for employment, tenure, terms or conditions or employment of any person.

14. Prices quoted herein must be firm for a period of not less than ninety (90) days after date of bid opening.

15. Bids calling for other than a "lump sum" total bid may be awarded by single item, by groups of items, or as a whole, as the City deems to be in the best interest of the City.

16. The City will be the sole and exclusive judge of quality, compliance with bid specifications or any other matter pertaining to this bid. The City reserves the exclusive right to award this bid in any manner it deems to be in the best interest of the City.

17. Quantities specified in Section III are approximate only, the City reserves the right, within the period for delivery to increase or decrease the quantity ordered and upon mutual agreement after the period specified for delivery, order additional quantities of items bid.

18. "Contractor shall cooperate with the City in all matters relating to taxation and the collection of taxes. It is the policy of the City to self-accrue use tax associated with its own purchases. The City requests that its contractors self-accrue their use tax, **when applicable**, and report the use tax to the State Board of Equalization with a City-assigned permit number. The City's own use tax which is self-accrued by the City will be remitted to the State of California pursuant to the City's permit with the State Board of Equalization."

19. For any questions regarding this bid, please contact Rene Biadoma at (310) 285-2484 or Craig Crowder at (310) 285-2490.

SECTION III – DETAILED SPECIFICATIONS

SUBSECTION A - TECHNICAL NOTES

IN EVENT OF CONFLICT, THE FOLLOWING SPECIFICATIONS SHALL PREVAIL OVER GENERAL INSTRUCTIONS CONTAINED ELSEWHERE IN THIS BID.

IMPORTANT NOTICE - THIS SECTION III, SUBSECTION A, COMPLETED WITH REQUIRED INFORMATION AND/OR BIDDER'S EXCEPTIONS MUST BE ATTACHED TO AND RETURNED WITH SECTION IV - BID FORM.

BIDDER MUST EXPLAIN IN DETAIL ALL ITEMS OFFERED WHICH DO NOT CONFORM TO SPECIFICATIONS CONTAINED HEREIN. IF NO EXCEPTIONS ARE LISTED, IT WILL BE ASSUMED BIDDER IS BIDDING "AS SPECIFIED."

SPECIFICATIONS FOR NEW MECHANIZED SIDE-LOADING REFUSE-COLLECTION TRUCK	**BIDDERS EXCEPTIONS**
PART A: TRUCK, TILT CAB & CHASSIS, RIGHT-HAND DRIVE	
I. GENERAL	
a) It is the CITY's goal to standardize its fleet in order to maximize operational and maintenance efficiency. Specific make or model listed herein is specifically intended to attain that goal.	AS SPECIFIED
b) Chassis furnished to the City of Beverly Hills shall be right-hand drive only. The truck chassis are to be used in residential curbside, one-man refuse-collection service, and will have a 27 cubic yard minimum capacity, mechanized side-loading packer bodies installed on it. This truck will be required to operate under varied and extreme conditions. Ambient temperatures may reach 110 degrees Fahrenheit.	AS SPECIFIED
c) Chassis shall be an Autocar ACX low-cab-forward design or approved equal. Specify:	AS SPECIFIED
MANUFACTURER: AUTOCAR	
MODEL: ACX64R	
II. ADDITIONAL VEHICLES	
a) The City reserves the right to order one (1) or more additional vehicles under the same terms, conditions and specifications of the bid, not to exceed a total of four (4) units. Any such orders shall be placed under separate Purchase Order within in twelve (12) months of award of this bid.	AS SPECIFIED

		BIDDER'S EXCEPTION
	Unit pricing of any and all additional vehicles ordered under this provision shall not exceed the awarded total unit bid price plus any documented price increases from the vehicle or body manufacturers.	AS SPECIFIED
III.	**DIMENSIONS**	
a)	Expected Front Axle Load: 20,000 LBS	AS SPECIFIED
b)	Expected Rear Axle Load: 40,000 LBS	AS SPECIFIED
c)	Expected GVW Capacity: 60,000 LBS	AS SPECIFIED
d)	Expected Gradeability to be a maximum of 8%.	
e)	Wheelbase and CA dimensions shall be determined by body manufacturer, and shall be as compact as possible. State (inches): Wheelbase: 203" CA: EFFECTIVE CT = 180"	AS SPECIFIED
f)	Bottom of windshield shall be kept as low as possible to promote optimum visibility.	*ACX HAS UP TO 324.5 DEGREES OF VISIBILITY
IV.	**ENGINE**	
a)	Shall be Cummins Westport ISL "G" compressed natural gas (CNG) engine with the following minimum requirements (No Exception):	AS SPECIFIED
b)	Displacement: 8.9L	AS SPECIFIED
c)	Horsepower: 320 @ 2200 RPM	AS SPECIFIED
c)	Torque rating: 1000 LBS/FT @ 1300 RPM	AS SPECIFIED
d)	Shall have all manufacturers' standard and specified components.	AS SPECIFIED
e)	Engine shall comply with applicable Federal and State of California emission standards for 2010, and be certified for use by a Municipal Fleet within the South Coast Air Quality Management District.	AS SPECIFIED
f)	CNG engine must be compliant to ATA and/or J1939 data communications link to ensure dashboard and other peripheral compatibility.	AS SPECIFIED
g)	CNG engine must be serviced locally during warranty and post warranty. Specify location of nearest service center for engine: Name: AGILITY FUEL SYSTEMS Address: 10007 ELM AVE. FONTANA, CA. 92335	AS SPECIFIED

		BIDDER'S EXCEPTION
h)	CNG engine ECU must be accessible to the City of Beverly Hills technicians to access engine diagnostic codes for trouble shooting.	AS SPECIFIED

V. ENGINE ACCESSORIES

a)	Cooling system conditioner, PERRY model 340 spin-on type. Filter shall be mounted to provide easy access and shall have a grounding wire to engine block.	AS SPECIFIED
b)	Engine protective shut down devices for high coolant temperature, low oil pressure, low coolant level and high transmission temperature, with automatic override and audible warning before shutdown. KYSOR 9031 4-way or approved equal.	AS SPECIFIED
c)	The engine shall be furnished with a limiting multiple variable speed (MVS) governor to accommodate the RPM variations above idle, required for driving the hydraulic power system for the refuse compactor body. The governor shall limit engine torque to a maximum of 430 ft./lbs. @ 1700 RPM.	AS SPECIFIED
d)	The engine shall be equipped with a 2-quart (minimum) capacity full-flow oil filter with replaceable cartridge.	AS SPECIFIED
e)	The engine shall be equipped with the manufacturer's standard oil cooler.	AS SPECIFIED
f)	The engine shall be equipped with a Donaldson single-stage high capacity dry air filtration system with a stationary vertical air intake snorkel or approved equal. Connection between the air filter and engine shall be of metal with an acceptable flex joint.	AS SPECIFIED
g)	A DONALDSON, or approved equal, pre-air cleaner shall be installed.	AS SPECIFIED
h)	Engine shall have a one piece valve cover.	AS SPECIFIED
i)	Air cleaner shall be fitted with an air restriction gauge, LUBER-FINER #4O84, or approved equal.	AS SPECIFIED
j)	Engine and engine accessories must be accessible for service and maintenance. Engine oil pan shall include a magnetic drain plug.	AS SPECIFIED
k)	One diagnostic software kit for all vehicles in the bid package, complete with all applicable adapters and interfaces for Cummins ISL G engine, on CD for PC shall be furnished.	AS SPECIFIED

		BIDDER'S EXCEPTION
l)	Provisions shall be made to allow engine oil level checking and filling without raising cab.	AS SPECIFIED
VI.	**CNG FUEL TANK**	
a)	A roof-mounted 60 Diesel Gallon Equivalent (DGE) 4-Cylinder Type-3 "Neck-Mounted" 3600-psi service pressure CNG fuel system shall be installed. State: Actual DGE: 60 dge	AS SPECIFIED
b)	Cylinders shall be rated for a 20-year-life cycle. System sub-frame and cover to be made of aluminum. Cover and frame shall be powder-coated.	AS SPECIFIED
c)	Fuel lines and PRD lines shall be made of Stainless Steel. PRD lines shall be routed to vent outside of fuel tank enclosure and away from vehicle.	AS SPECIFIED
d)	Fuel Management Panel to include the following: High pressure gauge before pressure regulator. Low pressure gauge after pressure regulator.	AS SPECIFIED
e)	NGV1 3600 psi receptacle with dust cap. Back-up pressure relief valve plumbed downstream of pressure regulator.	AS SPECIFIED
f)	System to include Pressure transducer / Dash mounted electric fuel gauge, secondary check valve and manual shut-off gauge.	AS SPECIFIED
g)	System shall include a front bumper mounted fill receptacle as well as a right side fill receptacle, both with starter lock-out system.	AS SPECIFIED
h)	System must include fuel transfer / defueling capability.	AS SPECIFIED
i)	System shall be designed by a Professional Engineer and shall be manufactured to NFPA-52 requirements.	AS SPECIFIED
VII.	**ENGINE COOLING**	
a)	The engine cooling system shall be comprised of extra heavy duty, severe service components with a minimum 1,300 SQ. IN. aluminum radiator.	AS SPECIFIED
b)	The system shall be adequate for the GVWR pulling a 6% grade at full throttle for a distance of one mile in an ambient temperature of +100 degrees F' without exceeding a cooling system temperature, as measured in the engine block, of +200 degrees F. Bid shall include documentation from the OEM that requirement is made. Failure to	AS SPECIFIED

BIDDER'S EXCEPTION

	submit documentation with bid shall deem bid non-responsive.	
c)	The cooling system shall include a deaeration system conforming to engine manufacturer's recommendation, a spin on coolant filter rated for system capacity, and a metal remote coolant recovery tank.	AS SPECIFIED
d)	The unit shall be delivered with the engine manufacturer's standard antifreeze and rust inhibitor solution in the cooling system, with protection to -34 degrees F	AS SPECIFIED
e)	Silicone hoses with steel tubing shall be used throughout the cooling/heating system with constant torque hose clamps installed on hoses.	AS SPECIFIED
f)	The cooling system shall be firmly mounted in a way to properly absorb the stresses of refuse truck application. The radiator shall be mounted, braced and insulated to protect against vibration, frame twist and rack.	AS SPECIFIED
g)	The top and bottom radiator tanks shall be of bolt-on design.	AS SPECIFIED
h)	Provisions shall be made to allow coolant level checking and filling without raising cab.	AS SPECIFIED

VIII. EXHAUST SYSTEM

a)	Aluminized exhaust pipes shall be so located that starter and oil filter can be serviced or removed without disturbing the exhaust system.	AS SPECIFIED
b)	Exhaust pipe and muffler shall be vertically mounted on the right side of truck, complete with stainless shield and rain cap or chrome elbow.	AS SPECIFIED
c)	A turbo shield shall be mounted directly over the turbocharger with a 1" minimum air gap, to deflect debris away from exhaust.	AS SPECIFIED
d)	An exhaust blanket shall be installed on exhaust pipe between turbo and muffler and other areas that could likely come in contact with refuse debris and could potentially cause a fire.	AS SPECIFIED
e)	Allowable backpressure shall not exceed engine manufacturer's recommendation.	AS SPECIFIED
f)	Exhaust piping shall contain stainless flex tubing where needed and the exhaust stack shall be a maximum of 11feet 8" from the ground.	AS SPECIFIED

		BIDDER'S EXCEPTION
IX.	**TRANSMISSION**	
a)	Transmission shall be an ALLISON 3000 RDS automatic transmission with PTO provision.	AS SPECIFIED
b)	Transmission shift control shall be push button electronic, with drive train protection devices including RPM sensor; capability to shift transmission to neutral/park automatically. Control shall be mounted so that driver may shift control gears without excessive reaching. Control electrical harness shall be routed so it will have a minimum number of bends and be protected from engine heat and mechanical injury. Electrical control box shall be mounted or shielded to prevent damage or moisture penetration.	AS SPECIFIED
b)	PTO shall be engine-driven, transmission-mounted, electronically controlled with internal clutch (hot-shift style).	AS SPECIFIED
c)	PTO to provide direct mounting for hydraulic pump which will operate the Refuse body hydraulic system. PTO to be engaged only when body hydraulic system is in use.	AS SPECIFIED
e)	An Allison hydraulic brake retarder to match the vehicle and its operating conditions shall be furnished. Retarder application shall be automatic in consonance with service brake application. A separate retarder switch shall be furnished on the dash in reach of the operator.	INCL. IN BID KLAM MODEL #CFK-360-52 DRIVELINE RETARDER. FOR ALLISON HYD. BRAKE RETARDER, REFER TO BID SUPPLEMENT OPTION SHEET
f)	Transmission cooler shall be STEWART WARNER model A-1233, or approved equal, water to oil type. All hoses shall be flexible, Teflon-lined, and temperature-resistant. Transmission cooler shall be sized appropriately to account for the brake retarder.	AS SPECIFIED
e)	Transmission temperature gauge and filters, as recommended by manufacturer.	AS SPECIFIED
f)	Transmission protective device to shut down engine for high transmission temperature, with automatic override and audible warning before shutdown. KYSOR Series 9031, or approved equal.	AS SPECIFIED
g)	A vented transmission fill tube, with MOELLER plug, and dipstick shall be located to permit the transmission fluid level to be checked and filled from curbside without raising the cab and with a minimum of effort. Tube shall be permanently	AS SPECIFIED

		BIDDER'S EXCEPTION
	labeled. Drain pan shall include a magnetic drain plug.	
h)	One diagnostic software kit for all vehicles in the bid package, complete with all applicable adapters and interfaces for ALLISON 3000 RDS transmission, on CD for PC shall be furnished with equipment.	AS SPECIFIED
i)	Transmission shall have a minimum warranty of 4 years and unlimited miles.	AS SPECIFIED
X.	**PROPELLER SHAFTS**	
f)	Main shaft shall be of two-piece design with intermediate support bearing and torque capacity rated for specified engine/transmission.	AS SPECIFIED
g)	U-joints shall be DANA SPICER 1710 heavy-duty series.	AS SPECIFIED
XI.	**AXLES**	
a)	Front steering axle shall be an ARVIN MERITOR, and suited to the vehicle's GVWR. Specify: Manufacturer & model: MERITOR MFS-20 Weight rating: 20,000 LBS.	AS SPECIFIED
b)	A viewing window shall be provided on each side of front axle for checking oil level (STEMCO-type seals). Inner oil seals shall also be provided.	AS SPECIFIED
c)	Drive axle shall be an ARVIN MERITOR, and suited to the vehicle's GVWR. Manufacturer & model: MERITOR RT40-145 Weight rating: 40,000 LBS.	AS SPECIFIED
d)	Inner oil seals shall be provided on rear axles.	AS SPECIFIED
e)	Drive axle ratio shall be selected to provide a top speed of at least 65-MPH and a grade storability of at least 25%.	AS SPECIFIED
XII.	**SUSPENSION**	
a)	Front suspension shall be Flat-leaf and appropriate to vehicle's GVWR.	AS SPECIFIED
b)	Front suspension shall have heavy-duty telescoping shock absorbers installed	AS SPECIFIED
c)	Rear-drive axle suspension shall be a Hendrickson HMX-400 spring suspension with a capacity appropriate to the vehicles GVWR.	AS SPECIFIED
d)	Rear suspension shall have heavy-duty telescoping shock absorbers installed.	AS SPECIFIED

		BIDDER'S EXCEPTION
e)	SI Route Master on-board scale system calibrated to match the vehicle's load parameters shall be installed to include a LCD digital gauge on the dash.	AS SPECIFIED - REFER TO ATTACHED BID SUPPLEMENT OPTION SHEET PROVIDED

XIII. FRAME

a)	Chassis frame shall accommodate a mechanized side loading refuse body and packer (as specified elsewhere in this bid).	AS SPECIFIED
b)	Chassis frame shall be constructed of high tensile steel alloy with a minimum frame rail yield strength of 120,000 PSI, a minimum resisting bending movement (rbm) of 3,529,000 LBS and a section modules of 29.41 without inner frame insert with bolted-on crossmembers. Grade 8 bolts or Huck fasteners shall be used. Bidder to specify. PSI: 120,000 Sec.Mod.: 29.41 Fasteners: HUCK	AS SPECIFIED
c)	Chassis frame shall be supplied by truck manufacturer as original equipment and may be altered by body manufacturer with bolted on steel plate for mounting accessories. Chassis frame alteration shall be in compliance with existing Federal Motor Vehicle Safety Standards (FMVSS). Welding of truck frame is prohibited.	AS SPECIFIED
d)	Frame shall have sufficient number of crossmembers to provide torsion rigidity, and to support the frame rails where fuel tank and suspension assemblies will be mounted. A crossmember shall be provided and installed at the extreme rear end of frame.	AS SPECIFIED

XIV. STEERING

a)	Steering shall be hydraulic power operated TRW TAS-65, with an RCS-65 auxiliary gear or approved equal. System shall have adequate mechanical advantage to allow the vehicle to be steered if power should fail, and adequate power to permit the front wheels to be turned lock to lock with the vehicle standing still, engine at idle speed, and body loaded to maximum legal axle capacity. Power steering cooler shall be engine mounted oil to water type.	AS SPECIFIED
b)	The steering column shall be capable of tilting.	AS SPECIFIED

BIDDER'S EXCEPTION

c)	Turning radius, in both directions, shall be as short as possible. Cramp angle shall be a minimum of 50 degrees in both directions. Bidder to specify: Radius Left: 34.20 ft. Cramp Angle Left: 50 degrees Radius Right: 34.20 ft. Cramp Angle Right: 50 degrees	AS SPECIFIED

XV. BRAKES

a)	The service brake system shall be a full air type by ARVIN MERITOR.	AS SPECIFIED
b)	The front brakes shall be 16.5"x7" S-CAM drum type with HALDEX automatic slack adjusters, or approved equal.	AS SPECIFIED
c)	The rear brakes shall be 16.5"x8.62" S-CAM drum type with HALDEX automatic slack adjusters, or approved equal.	AS SPECIFIED
d)	Air brake system shall fully comply with YWJSS 121 requirements.	AS SPECIFIED
e)	A BENDIX-AD-IP air dryer with an automatic heated moisture ejector shall be installed.	AS SPECIFIED
f)	A BENDIX SR-1 valve, in conjunction with a double check valve system, which will provide an automatic spring brake application below 60 psi, shall be installed.	AS SPECIFIED
g)	The air system shall include an engine mounted, water cooled, engine oil lubricated air compressor rated at not less than 18.7 CFM. Bidder to specify.	AS SPECIFIED
h)	The air inlet for the air compressor shall be filtered through the engine air cleaner.	AS SPECIFIED
i)	A one-way check valve shall be installed between the air compressor and the wet tank.	AS SPECIFIED
j)	Emergency spring brakes shall automatically actuate upon loss of reservoir pressure. Shall be double diaphragm type MGM, or approved equal, installed on drive axle. Shall have a reservoir of sufficient capacity to provide a minimum of three complete releases of the spring brakes, controlled by factory dash mounted push-pull BENDIX #281946 PP-5 control valve.	AS SPECIFIED
k)	An emergency spring brake release system, air operated, shall be furnished to allow towing of vehicle in event of failure.	AS SPECIFIED

		BIDDER'S EXCEPTION
l)	Low air pressure warning signal shall include a buzzer and dash mounted red light. Red light shall have a permanent label.	AS SPECIFIED
m)	A Meritor WABCO ABS with Automatic Traction Control shall be installed. One diagnostic software kit for all vehicles in the bid package, complete with all applicable adapters and interfaces for WABCO ABS on CD for PC shall be furnished with equipment.	AS SPECIFIED
n)	Air Reservoir Drain System shall be centrally located whereby operator can drain all air tanks by pulling lanyards of spring-loaded petcocks while standing on the side of the vehicle.	AS SPECIFIED
o)	Accessory: A quick-disconnect valve, with shut-off valve, shall be installed for connecting air line (check with customer for location).	AS SPECIFIED
XVI.	**WHEELS**	
a)	Front: Shall be 10 hole, hub piloted, and sized for front axle GVWR. 22.5"x9.0"	AS SPECIFIED
b)	Rear: Shall be 10 hole hub piloted, and sized for rear axle GVWR. 22.5"x8.25".	AS SPECIFIED
c)	Wheels shall be painted black in color.	AS SPECIFIED
XVII.	**TIRES**	
a)	Front: and rear tires shall be Goodyear radials or equal and suitable for the GVWR of the vehicle.	AS SPECIFIED
b)	Each truck shall be delivered with one spare tire and wheel for each size tire and wheel on the vehicle.	AS SPECIFIED
XVIII.	**LUBRICATION**	
a)	An automatic lubrication system (LUBRIQUIP GREASE JOCKEY or approved equal) designed to keep all chassis suspension and steering component wear points properly lubricated is required. This system shall not be connected to the packer lubrication points or the S camshafts. Attach description and specifications of the system offered to Section IV Bid Form.	AS SPECIFIED MIDWEST LUBE INC. XGS AUTOMATIC LUBE SYSTEM
XIX.	**ELECTRICAL**	
a)	Shall be a 12-volt negative ground system, and shall include at least the following minimum requirements:	AS SPECIFIED

		BIDDER'S EXCEPTION
b)	Alternator: LEECE-NEVILLE 200 AMP #4940 Pad mounted, or approved equal	AS SPECIFIED
c)	Starter: Shall be DELCO REMY 39-MT Series, or approved equal, heavy duty cranking motor, incorporating a built-in protection against overcrank and heat build-up.	AS SPECIFIED
d)	Batteries: Minimum of three 12-volt, GRP 31 stud type, maintenance free, high cycle, with at least 2250 CCA @ 0 degrees Fahrenheit each, manufacturer's rated capacity. Cranking capacity shall meet engine manufacturer's recommended minimum requirements.	AS SPECIFIED
e)	Battery box: A suitable battery box shall be provided and installed on the left side of the truck frame, with appropriate hold downs and a master battery disconnect to disconnect the batteries from the electrical system.	AS SPECIFIED
f)	Wiring: All chassis wiring shall be of adequate size to carry designed electrical load without excessive voltage drop. Routing shall be the same on all units ordered. A frame mounted Body Builders Junction Box shall be provided to aid installation of body wiring.	AS SPECIFIED
g)	Wiring shall be routed and secured outside frame rail under cab to prevent damage from abrasion and heat. All wiring, which passes through partitions or bulkheads, shall be rubber grommets to prevent chafing. There shall be no splices between the junction boxes and components.	AS SPECIFIED
h)	Wiring shall be color coded continuous throughout each individual circuit from beginning to end, and be contained in a body wiring loom.	AS SPECIFIED
i)	Circuit protection: All main circuits shall be protected by circuit breakers. Fusible links are not acceptable.	AS SPECIFIED
j)	Lights: Cab/chassis shall be equipped with all lights required by FMVSS and/or the California Motor Vehicle Code.	AS SPECIFIED
k)	Tail, Stop, Directional, Clearance and Side Marker lights, shall be LED.	AS SPECIFIED
l)	All warning lights on the cab, chassis and body shall be LED.	AS SPECIFIED

XX. TILT CAB

a)	Cab shall be low front entry, high visibility type, with factory installed right hand set down drive only. A	AS SPECIFIED

		BIDDER'S EXCEPTION
	minimum of 5076 Sq. Inches of glass for maximum visibility for residential refuse collection application.	AS SPECIFIED
b)	Cab shall have hydraulic power-actuated lift mechanism, and be supported by a safety bar link.	AS SPECIFIED
c)	Cab shall be constructed of 2-sided galvanized steel. Interior of cab, including ceiling walls and floor, shall be covered with a high density, sound absorbing material.	AS SPECIFIED
d)	Cab access steps shall not exceed 18" from ground. Bidder to specify: Step height above ground: 18" In	AS SPECIFIED
e)	All steps and/or climbing surfaces on any part of cab shall be safety grip-strut.	AS SPECIFIED
f)	Cab shall be provided with adequate seals and drain channels. Adequate ventilation ports shall be provided.	AS SPECIFIED
g)	Cab doors shall be electric powered roll-up type windows, with State and Federal approved safety latches, and a large view safety window installed in outer door skin, and provided with a device to hold doors open when the vehicle is on grades of up to 5%.	AS SPECIFIED
h)	Door panels, stops, hinges and mirror brackets shall be adequately braced and supported to withstand any shock loads sustained. Adequate grab handles shall be installed on left and right sides.	AS SPECIFIED
i)	Provisions shall be made to allow checking and filling of all fluids in the engine, transmission and cooling system without raising cab. Tubes shall be mounted curbside behind cab for easy access.	AS SPECIFIED

XXI. CAB ACCESSORIES

a.)	Foot throttle shall be electronic and be compatible with engine and chassis systems.	AS SPECIFIED
b)	Right side seat shall be a NATIONAL 2000 series mid-back air suspension seat with active air lumbar support, or approved equal, with heavy duty black denier nylon or other approved anti-wear material, without armrest, and shall have not less than 4" fore and aft adjustment.	AS SPECIFIED
c)	Seat belts, which comply, with FMVSS shall be provided and installed for both seating positions. Clip end of belts shall withdraw into protective receptacles.	AS SPECIFIED

		BIDDER'S EXCEPTION
c)	Dual electric windshield wipers with park position and washers shall be provided.	AS SPECIFIED
d)	A fresh air heater with integral defroster shall be mounted in an easily accessible area. Air shall be ducted to both sides of cab. Each windshield shall have its own defroster duct. System shall include factory-installed air conditioning.	AS SPECIFIED
e)	Dual sun visors shall be provided.	AS SPECIFIED
f)	Interior dome light with dual map light feature shall be provided.	AS SPECIFIED
g)	Dual air horns shall be installed.	AS SPECIFIED
h)	All air, electric or hydraulic lines, connectors, or junctions exposed within the cab floor area shall be protected from damage and debris.	AS SPECIFIED
i)	Front fender well extensions with spray suppressant liners shall be installed on fenders.	AS SPECIFIED
j)	Cab shall be equipped with AM-FM radio.	AS SPECIFIED
k)	An Intec 3-camera video system shall be installed to include the following features:	AS SPECIFIED
	1. 6.4" Color flat-panel display with integrated active radar function.	
	2. Hopper-vision camera to be primary view except in reverse and left turn.	
	3. Left-side-view camera activated automatically by activation of the left-turn-signal control or manually selected by the operator.	
	4. Rear-vision camera activated automatically when transmission is placed in REVERSE or manually by the operator.	
	5. Cameras shall be mounted in	AS SPECIFIED
l)	Two (2) 12V power port.	AS SPECIFIED
m)	SI Route Master load monitor (Refer XII, (e))	AS SPECIFIED
XXII	**MIRRORS**	
a)	Left and right mirrors shall be heavy duty West Coast type, with integral convex wide-eye view, mounted as close to Cab as possible. Mirrors shall extend to a maximum of 10" from cab.	AS SPECIFIED
XXIII.	**FRONT BUMPER**	
a)	An adequate swept back, steel front bumper with recessed steps and adequate grab handles to	

	BIDDER'S EXCEPTION
allow cleaning of windshield shall be provided and installed.	AS SPECIFIED
XXIV. BACK-UP ALARM	
a) An audible warning alarm indicating when the vehicle is moving in reverse, GROTE #73030 or approved equal, shall be installed.	AS SPECIFIED
b) A back-up camera shall be installed on the center rear of vehicle (Refer to XXI, k), Item 2).	AS SPECIFIED
XXV. EMERGENCY ROAD TRIANGLE KIT	
a) Bi-directional emergency triangles, GROTE #71422, or approved equal shall be provided.	AS SPECIFIED
XXVI. FIRE EXTINGUISHER	
a) A 5-pound pressurized dry chemical extinguisher for type A, B and C fires shall be provided and installed. Location to be determined at a time prior to delivery.	AS SPECIFIED
XXVII. INSTRUMENTS AND CONTROLS (RIGHT SIDE)	
a) Shall be equipped with all instruments and controls listed as standard in factory data books. If not listed as standard, the following shall be furnished and installed:	AS SPECIFIED
(1) Voltmeter.	
(2) Engine oil pressure gauge.	
(3) Engine coolant temperature gauge.	
(4) Transmission temperature gauge.	
(5) Fuel level gauge.	
(6) Factory-installed turn signal switch, heavy duty SIGNAL STAT series 900, or approved equal, with green pilot lamps mounted on dash panel, to indicate right or left turns. Shall have an audible turn signal indicator.	
(7) Tachometer, electric.	
(8) Speedometer, electric and calibrated to match axle ratio and tires.	
b) All instruments shall be of the analog, direct-reading, illuminated type, and placed at an easy viewing angle.	AS SPECIFIED
XXVIII. PAINT	
a) All unwelded seams shall be sealed flush, with automotive body caulking compound. All metal work shall be thoroughly cleaned of welding flux, rust, mill scale, dirt and grease and then washed	AS SPECIFIED

		BIDDER'S EXCEPTION
	with a metal preparation to provide a good etched surface for paint adherence.	AS SPECIFIED
b)	At least one coat of primer shall be applied throughout, spot puttied where required, and sanded to a smooth surface.	AS SPECIFIED
c)	Finish coats shall be applied in accordance with paint manufacturer's recommendations, free of runs. All paintwork shall be sprayed.	AS SPECIFIED
d)	The entire vehicle (cab, hood, fenders, frame and all grillwork not chromed) to be finished in accordance with the manufacturer's standard practices. Finish coat to be a 2-step base coat/clear coat DUPONT IMRON polyurethane enamel, or approved equal. (Bidder to specify brand). BRAND: _____	AS SPECIFIED
e)	COLOR:	
	1) Cab: WHITE	AS SPECIFIED
	2) Frame, bumper and wheels: BLACK	AS SPECIFIED
	3) Body: WHITE with two (2) 5-inch stripes (colored YELLOW and BLACK) running parallel around body (call for detail).	AS SPECIFIED

XXVIV. SPECIAL REQUIREMENTS

a)	Operator exposure noise: Shall comply with the Occupational Safety and Health Act (OSHA) sound level (dba) requirement in effect at time of award of this bid, for an 8-hour maximum operator exposure time, measured at operator's ear with engine at governed RPM.	AS SPECIFIED
b)	Exterior noise: Shall not exceed 75 dba at a distance of 50 feet in conformity with test procedure SAE Standard J88 and SAE Recommended Practice J184.	AS SPECIFIED
c)	Exhaust smoke: Shall meet South Coast Air Quality District (SCAQMD) rules 401 and 402, and / or other applicable rules or regulations in effect on date of award off this bid.	AS SPECIFIED
d)	Four (4) key sets shall be furnished with each unit.	AS SPECIFIED
e)	One lockable tool box appropriately sized to store one grease gun, reflectors, and one set of wheel chocks. Painted black and mounted at curbside.	AS SPECIFIED

BIDDER'S EXCEPTION

XXX. MANUALS

a) Successful Bidder shall furnish maintenance, repair, and parts manuals, for a total of three (3) sets for the complete bid package. One set to be on CD for PC, if applicable. All publications to be delivered with first vehicle ordered. AS SPECIFIED

b) If not included in the above publication requirements, the following publications shall also be provided: AS SPECIFIED

(1) Illustrated engine and transmission, service and parts manuals, listing all parts and only those parts pertaining directly to the model chassis furnished. There shall be three (3) sets of each total, with one set on CD for PC, if applicable. AS SPECIFIED

(2) Training CD's, if available.

(3) For each unit delivered there shall be one line setting ticket or invoice, and one certified weight ticket with front axle, rear axle and tire weight. AS SPECIFIED

(4) Two operator manuals shall be furnished with each truck. AS SPECIFIED

XXXI. SERVICE AND PARTS

a) The bidder shall state below, the representatives responsible for assisting the distribution center, which shall furnish a complete supply of parts and components for the repair and maintenance of the cab/chassis units to be supplied. The bidder shall also state below, or by separate attachment, its policy on transportation charges for parts other than those covered by warranty.

b) Location of nearest Technical Service Representative:

Address: LOS ANGELES TRUCK CENTER WHITTIER, CA

Telephone: 562-447-1200

c) Location of nearest Distribution Center:

Name: LOS ANGELES TRUCK CENTER

Address: 2429 S. PECK ROAD WHITTIER CA. 90601

Telephone: 562-447-1200

d) Policy for delivery of parts and components to be purchased for service and maintenance:

Regular method of shipment: UPS OR PARTS TRUCK DELIVERY

BIDDER'S EXCEPTION

Cost to City: NO CHARGE

XXXII. LOADING EQUIPMENT

a) The loading equipment shall be installed on the truck chassis and shall be integrated in design and construction to work effectively with the hopper and body.

AS SPECIFIED

b) Prior to acceptance by the City, each truck shall be operated to demonstrate that the equipment will collect and compact waste from containers at a rate no less than 350/90-gallon containers per hour in regular and normal use.

c) The equipment shall be capable of safe, simple and convenient operation from the right hand driving position of the operator.

d) It shall be capable of engaging, raising, emptying, and setting down containers with a gross weight of 2000 pounds in 8 seconds.

b) Collection rate to be demonstrated at: 180 containers per hour.

c) The equipment shall be positioned for travel between containers and to and from the landfill or yard in such a way that the truck will be neither over-width nor over-height and shall comply with the California Vehicle Code.

d) Arms shall stow within normal vehicle width.

e) The loader shall be constructed utilizing an inner and outer arm assembly. The inner and outer assembly shall be fabricated rectangular box constructed of ASTM-A-500 Grade B. The inner arm shall glide on an AR400 roller bearing track using five 4" diameter steel roller bearings. Arm pivot pins shall be 2' C1045 heat treated and polished pins with 2" self aligning spherical bearings. Roller bearings shall rotate on adjustable eccentric shafts to compensate for wear.

f) The equipment shall engage the City's plastic containers with padded spring steel arms which flex as they close around the container. The leading end of the arms shall be equipped with UHMW rollers to guide the arms around the container. The engaging arms shall stow out of the way during transportation between containers by rotating in a horizontal plane away from the container toward the side of the truck. No swinging, arching or kick out of the lift arm is acceptable.

AS SPECIFIED

BIDDER'S EXCEPTION

XXXIII. TYPE OF ARMS

a) Arms shall be of the single spring loaded pin type and shall incorporate receiver pockets for easy interchangeably. The newer heavier arms are not acceptable.

AS SPECIFIED

b) An electronic proportional control system shall be provided that will allow the operator to feather the lifting mechanism. The automated lifting mechanism shall be controlled by an electronic operated hydraulic directional control valve. The valve shall respond to proportional outputs from the controller. A color display will be provided in the cab and will feature a function key driven menu system to access system functions

c) The system shall consist of multiple electrical components multiplexed together using a SAE J1939 Canbus to provide a complete and expandable system with a separate Canbus to communicate with the engine and transmission. A sealed vehicle electrical center shall be used to power high current components and will include fuses and relays for each output.

d) A multi-function joystick shall include three axis for extending and retracting the lift, raising and lowering the lift and closing and retracting the grippers. The joystick will also include 4 momentary switches for running the functions of pack start, container shake, work lights and grip pressure.

e) A bank of rocker switches shall be mounted on the right side door sill conveniently located to operate the lift mechanism.

e) The container shall follow the shortest possible path from its position at rest on the ground to the dumping position over the hopper. During that travel, no portion of the containers shall normally extend more than 13 feet above the ground, for 90 gallon containers, and 14'-6" for 300 gallon containers.

f) Maximum Container height:

13' Feet for 90's

14.5' Feet for 300's

g) No fixed portion of the loading equipment shall extend below the bottom neither of the truck frame nor outside the 8' legal width when stowed for travel.

AS SPECIFIED

BIDDER'S EXCEPTION

h) The arm shall be able to travel at least 72" out from the withdrawn position to grasp containers. It shall be configured to reach 90-gallon containers whose nearest side is at least 84" out from the side of the truck. AS SPECIFIED

i) The equipment shall be designed to handle 90 or 300-gallon containers separately, or both container sizes interchangeably. The two (2) sets of arms thus required (one for 90's, one for 90/300's), shall be interchangeable without the use of tools in less than two minutes by a skilled operator. AS SPECIFIED

j) Arm shall incorporate a mechanism to secure arm tightly in place to prevent arm movement while in transit. Operator shall be able to control locking/unlocking function in cab. AS SPECIFIED

XXXIV. COMPACTOR

a) The packer shall be a platen type design integral with the body. The packing panel top thickness shall be 1/4" AR400 and the panel face plate shall be 3/8" AR400. AS SPECIFIED

b) The compactor shall be operated by electric over air over hydraulic controls mounted in the cab.

c) The operator shall have selectable packing options consisting of five functions; manual packing, automatic packing after dumping either one or two containers; or 2 complete packing cycles after dumping one container or 3 complete packing cycles after dumping one container. As the body becomes loaded, the operator shall be notified by a red power light in the control console, to signal maximum compaction power mode.

d) A two-piece hinged travel cover shall allow simultaneous load and pack and prevent refuse from falling behind the packing panel.The cover shall be 3/16" ASTM-A-715 grade 50 steel and shall incorporate 4 rollers made of self lubricating nylon to reduce noise and wear.

e) The hopper shall have a minimum storage capacity of 4 cubic yards. The hopper shall have manually operated plastic gull wing covers to cover the load during transport. The hopper shall have an interlock eliminating the ability to dump a container if the hopper covers are closed.

f) The packing panel shall be actuated by a single stage hydraulic cylinder. The pack cylinder shall AS SPECIFIED

BIDDER'S EXCEPTION

have a 6" bore and a 4' rod diameter and shall generate a packing force of 83,000 lbs. — AS SPECIFIED

g) In normal operation, the packing panel shall displace material at a minimum rate of 10.5 cubic yards per minute. — AS SPECIFIED

h) The packing panel shall be guided on a single 1/2" X 13 1/4" T rail fabricated from ½" AR400 ultra high strength, abrasion resistant steel plate. Packing panel wear shoes shall be ¼" AR400. — AS SPECIFIED

XXXV. BODY

a) The body shall have a minimum space capable of receiving and storing compacted waste of 27 cubic yards (excluding the receiving hopper). It shall have a minimum payload capacity of 18,000 pounds of normal domestic refuse. The body shall be installed, ready for regular use on a cabover truck chassis of proper type and capacity.

LEGAL ESTIMATED PAYLOAD IS ESTIMATED @ 17,000 LBS. WITH A 203" WHEELBASE & A 19 FT. BRIDGE @ 50,000 LBS TO REALIZE A 18,000 LB. PAYLOAD @ A 20 FT. BRIDGE ALLOWING 51,000 LBS., WHEELBASE MUST INCREASE FROM 203" TO 208".

Volume of body is: BH27 SPECIAL cubic yards

Payload of body will be: 17,000 pounds

b) The 33" X 70" packer panel shall travel 52" and extend 10" into the body for better compaction. — AS SPECIFIED

c) The load shall be dumped using hydraulically operated controls mounted in the cab which shall raise the tailgate and the body. The tailgate shall be free of manually operated latching or restraining devices. The tailgate shall incorporate a drip pan under the seal to catch any liquids. The seal on the tailgate shall extend 60" above the floor.

d) Lights (LED), reflectors and other required accessories shall be furnished and the delivered vehicle shall be certified to comply with all applicable DOT requirements. Mid body turn signals shall be provided.

(1) Two (2) 9"X7" LED amber warning lights with adjustable flash patterns (Code3 PSE Model 85BZAH, or approved equal) shall be mounted on each side of rear of body and approximately 120" above the ground.

(2) Two aim-adjustable weather-resistant work light (3,000 candlepower minimum) shall be included. One light to illuminate the hopper area and one light to illuminate the lift arm area. — AS SPECIFIED

BIDDER'S EXCEPTION

e) Mud flaps and brackets shall be installed and mounted to the tailgate frame and hinge upward with tailgate during the dumping operation. AS SPECIFIED

f) Length: Body shall be kept as compact as possible to keep wheel base as compact as possible.

g) Width: 96" maximum

h) Body height above chassis frame: 98" maximum height from ground to point shall not be exceed when mounted.

i) Body Accessories:

1) Holder or receptacle for storing, one of each, standard-sized push broom and flat shovel. Consult with customer for placement (James: 310.285.2465). AS SPECIFIED

XXXVI. CONSTRUCTION

a) Body:

(1) Floor shall be not less than 7 gauge. AS SPECIFIED

(2) Sides shall be not less than 10 gauge. AS SPECIFIED

(3) Roof shall be not less than 10 gauge. AS SPECIFIED

b) Body material thickness:

Floor: 7 GAUGE ASTM A-715 GR 50

Sides: 10 GAUGE ASTM A-715 GR 50

Roof: 10 GAUGE ASTM A-715 GR 50

c) Hopper:

(1) Floor shall extend 38" into the body and be not less than ¼" AR400. AS SPECIFIED

(2) Sides shall be not less than 3/16" AR400. AS SPECIFIED

d) Hopper material thickness:

Floor: 1/4" AR400

Sides: 3/16" AR400

e) Reinforcements should be adequate to withstand required loading without warping or distortion. AS SPECIFIED

f) The body sides and roof shall have a brake-formed radius design providing superior strength. The body sides shall be formed from a one piece panel with no vertical welds seams. The body sides shall incorporate full length steel fenders covering all rear wheels. AS SPECIFIED

g) The hopper shall have a 28" X 32" access door with a bolt on ladder with grip handles located on

BIDDER'S EXCEPTION

the street side of the hopper. The access door shall be equipped with a safety interlock to disable all functions if the door is opened. It shall have 2 14" X 20" clean-out sump access doors. AS SPECIFIED

h) A clean out tool shall be provided on the body. AS SPECIFIED

XXXVII. HYDRAULIC

a) The body shall be furnished with a hydraulic oil reservoir with a minimum capacity of 65 gallons. The hydraulic system shall be sealed to prevent the entry of moist or dusty air and engineered to assure that the pump suction is under pressure at all times. The hydraulic reservoir shall be equipped with a fluid level sight glass, temperature gauge and a low level indicator. AS SPECIFIED

b) The hydraulic reservoir shall be equipped with a 90 degree ball type shut-off valve mounted on tank supply line to hydraulic pump.

c) The hydraulic system shall include 2 replaceable hydraulic oil filters. One 100 mesh strainer in the suction side and a full flow 10 micron absolute filter in tank return line.

d) Provision for cooling hydraulic oil shall be made by a self contained air to oil cooler mounted on the body. AS SPECIFIED

XXXVIII. POWER SOURCE

a) The hydraulic system shall be powered by a hot-shift PTO-driven dual vane pump of sufficient capacity to meet requirements for an operate-in-gear-at-idle system. The system shall operate in gear at 800 RPM and achieve 8 second cycle times. Specify: AS SPECIFIED

Pump make/model: PARKER DENISON / T60DCM

Pump maximum output capacity: 35 GAL PACKER / 31 GAL ARM

b) The equipment shall be operated by hydraulic cylinders and have positive sensors incorporated into the system to provide feedback of the position of the lift arm while raising and dumping the container. AS SPECIFIED

c) A controller designed for mobile equipment with multiple digital and analog inputs and outputs shall be mounted near the main lifting mechanism hydraulic control valve. AS SPECIFIED

BIDDER'S EXCEPTION

d) Valves shall be of ample size and ratings with ports no smaller than 1/2" NPT and 1" NPT for the packing valve. Each hose shall be assembled with JIC or O-ring Boss. — AS SPECIFIED

XXXIV. SAFETY CIRCUIT

a) The truck should be equipped with a warning system, which shall emit an audible alarm to warn the operator if any of the following events occur: — AS SPECIFIED

(1) The loader arm is not fully retracted. — AS SPECIFIED

(2) The tailgate is not completely latched. — AS SPECIFIED

(3). The body is not fully down and resting in the chocks. — AS SPECIFIED

b) The safety circuit shall indicate if the following conditions have been met: — AS SPECIFIED

(1) Loader stowed: YES

(2) Tailgate latched: YES

(3) Body Chocked: YES

XXXVI. TRAINING

a) The successful bidder shall provide factory authorized training, to include operation and maintenance procedures to be held at a designated location in the City of Beverly Hills. — AS SPECIFIED

b) Factory training available: ☒YES / ☐NO

XXXVII. WARRANTY

a) The entire unit shall be warranted against defects in materials and workmanship. The warranties shall cover both parts and labor and begin at the in-service date. — AS SPECIFIED

(1) State standard warranties

Bumper-to-bumper:	1 YEAR - SEE ATTACHED AUTOCAR LLC
Chassis CNG Engine:	2 YEARS OR 250,000 MILES
CNG tanks:	20 YEARS TANKS ONLY.
Transmission:	4 YEARS / UNLIMITED MILES
Loading equipment:	1 YEAR PARTS & LABOR
Hydraulic pump:	1 YEAR PARTS & LABOR

(2) Optional warranty offerings:

Bumper-to-bumper:	NOT AVAILABLE AT THIS TIME

Chassis CNG Engine:	5 YEARS OR 200,000 MILES $4,150.00
CNG tanks:	CNG SYSTEM 3 YRS. $750.00
Transmission:	5 YEAR / UNLIMITED $450.00
Loading equipment:	2 YEAR TOTAL $3,800.00
Hydraulic pump:	2 YEAR TOTAL $1,900.00

XXXVIII. MISCELLLANEOUS REQUIREMENT

a) Information for mounted accessories.

b) State name and contact information of at least five (5) local municipal agencies that currently use a similar machine being offered.

1) CITY OF PASADENA
(Agency Name)
DANIEL AYERS 626-744-3710
(Contact name & telephone number)

2) CITY OF LONG BEACH
(Agency Name)
JOHN SEEVERS 562-570-5406
(Contact name & telephone number)

3) CITY OF SANTA MONICA
(Agency Name)
RICK SIKES 310-458-8514
(Contact name & telephone number)

4) CITY OF REDLANDS
(Agency Name)
MIKE SEPULVEDA
(Contact name & telephone number)

5) CITY OF SAN DIEGO
(Agency Name)
BEN TORRES 858-526-2320
(Contact name & telephone number)

(End of technical specification)

SUBSECTION B - SPECIAL REQUIREMENTS

1. The successful bidder will complete all documents and / or file all applications necessary to obtain exempt registration and license plates for vehicle(s) covered by this bid from the California Department of Motor Vehicles in the name of the City of Beverly Hills, 455 North Rexford Drive, Beverly Hills, California 90210, before the vehicles(s) are delivered. Ownership Certificate(s), Registration(s) and license plates must be delivered with the vehicle(s).

2. Delivery is an important consideration in award of this bid. Bidder will be strictly bound to his commitments.

3. Vehicle(s) covered by this bid, including all equipment and accessories, must comply with all requirements of the California Vehicle and Federal Motor Vehicle Safety Standards for 1997 vehicles, and safety orders of the California Division of Industrial Safety, including all amendments thereto.

4. Bidder is to state warranty period(s) on all vehicle(s).

5. City shall be the sole and final judge of compliance with bid specifications and reserves the exclusive right to award this bid in any manner it deems to be in the best interests of the City.

SECTION IV - BID FORM
(Must be completed by Vendor)

The undersigned proposes to furnish all materials, supplies, equipment or services set forth herein subject to all conditions outlined in the Bid Document, including the general instructions and information to bidders, at prices indicated below:

Bid Proposal: $ 298,159.00

Payment Terms: NET 30

Exceptions or Deviations attached (Check appropriate box) YES [x] NO [ ]

Delivery: 210-240 ARO (Number of Days)

Company Name: LOS ANGELES TRUCK CENTER, LLC dba LOS ANGELES FREIGHTLINER

Address: 2429 S. PECK ROAD WHITTIER, CA. 90601

Telephone: 562-447-1515 Fax: 562-447-1544

Contact Email: RCreighton@lafreightliner.com

Person Submitting Bid: RON CREIGHTON
(Print Name)

Title: MUNICIPAL SALES

Signature: Ronald J. Creighton

F.O.B.

All prices of the bid shall be F.O.B. destination Beverly Hills, California; and delivery to any point within Beverly Hills shall be without additional charge.

TAX

All bid proposals shall be exclusive of tax; City staff will compute all tax involved when applicable.

ACCEPTANCE OF PROPOSAL

The City reserves the right to accept or reject any and all bids and reserves the right to waive technicalities where such action best serves the interests of the City. The manufacturer of the proposed materials or equipment may be required to acknowledge by written conformation that the minimum requirements of the specifications are included in the Bidder's proposal before the award of the bid.

EXCEPTIONS

Any bidder's exceptions to these terms or conditions or deviations from the written specifications shall be shown in writing and attached to bid form. However, such exceptions or deviations may result in bid rejection.

INSURANCE (applicable to successful bidder who may come into the City)

(1) **Commercial general liability** coverage at least as broad as Insurance Services Office Commercial General Liability occurrence coverage ("occurrence" form CG0001, Ed. 11/85) with a limit of not less than $2,000,000 (Two Million Dollars) per occurrence. If the insurance includes a general aggregate limit, that limit shall apply separately to this contract or it shall be at least twice the required per occurrence limit.

(2) **Business automobile liability** insurance at least as broad as Insurance Services office form CA 0001 (Ed. 1/87) covering Automobile Liability, code 1 "any auto" and endorsement CA 0029 (Ed. 12/88) with a limit not less than $1,000,000 (One Million Dollars) per accident.

(3) **Workers Compensation** Insurance as required by the State of California and **employers liability** insurance with a limit not less than $1,000,000 (One Million Dollars) per accident.

All insurance coverages shall be provided by insurers with a rating of B+; VII or better in the most recent edition of Best's Key Rating Guide, Property-Casualty Edition.

Work on City property covered by a purchase order cannot be commenced until certificates of insurance have been approved.

Please use the official City of Beverly Hills certificate of insurance form (attached). If you use another form, the following requirements must be met to make the certificates acceptable to the City:

1	name the City of Beverly Hills as additional insured for both GENERAL liability and AUTO liability; and
2	have at least thirty (30) days written notice of cancellation.

All certificates of insurance must remain current until the purchase order expires or is sooner cancelled.

AFTER THE ACCEPTANCE AND AWARD OF THE BID BY THE CITY COUNCIL UPON RECEIPT OF A WRITTEN PURCHASE ORDER EXECUTED BY A PROPER OFFICER OF THE CITY, THIS DOCUMENT WILL CONSTITUTE THE LEGAL CONTRACT BETWEEN THE CITY AND THE SUCCESSFUL BIDDER.

If your response is **"NO BID"**, please explain below:

_____

_____

_____

_____

_____

_____

_____

COMPANY NAME:_____

ADDRESS:_____

CITY, STATE, ZIP CODE:_____

TELEPHONE NUMBER:_____

FAX NUMBER: _____

BY:_____ _____
(Print Name) (Signature)

_____ _____
(Title) (Date)

PLEASE RETURN TO:

CITY OF BEVERLY HILLS
OFFICE OF THE CITY CLERK, ROOM 290
455 NORTH REXFORD DRIVE
BEVERLY HILLS, CA 90210

(Attn: Bid 11-24)

(END)

TITLE: TRUCK, REFUSE 27CY AUTOMATED SIDE LOADERBID No.: 11-24 EVALUATION

DESCRIPTION	HEIL	WAYNE	COMMENT
Chassis shall be an Autocar ACX low-cab-forward design or approved equal. Specify:	Autocar ACX64X	Autocar ACX64X	
Wheelbase and CA dimensions shall be determined by body manufacturer, and shall be as compact as possible. State (inches):	197"; Effective CT = 173"	203"; effective CT = 180"	
CNG engine must be serviced locally during warranty and post warranty. Specify location of nearest service center for engine:	Agility Fuel Systems, Fontana, CA	Same	
A roof-mounted 60 Diesel Gallon Equivalent (DGE) 4-Cylinder Type-3 "Neck-Mounted" 3600-psi service pressure CNG fuel system shall be installed. State:	60DGE	Same	
An Allison hydraulic brake retarder to match the vehicle and its operating conditions shall be furnished. Retarder application shall be automatic in consonance with service brake application. A separate retarder switch shall be furnished on the dash in reach of the operator	Option Klam Driveline retarder #CFK-360-52 as option	Same	
Turning radius, in both directions, shall be as short as possible. Cramp angle shall be a minimum of 50 degrees in both directions. Bidder to specify:	Radius Left: 33.90 ft Cramp Angle Left: 50d Radius Right: 33.90 ft Cramp Angle Right: 50d	34.20 50 34.20 50	
An automatic lubrication system (LUBRIQUIP GREASE JOCKEY or approved equal) designed to keep all chassis suspension and steering component	Midwest Lube Inc. XGS Auto Lube System	same	
The loading equipment shall be installed on the truck chassis and shall be integrated in design and construction to work effectively with the hopper and body	Heil rapid rail	Wayne	
Collection rate to be demonstrated at:_____containers per hour.	350	180	
The loader shall be constructed utilizing an inner and outer arm assembly. The inner and outer assembly shall be fabricated rectangular box constructed of ASTM-A-500 Grade B. The inner arm shall glide on an AR400 roller bearing track using five 4" diameter steel	Main beam: 3/8" 80,000psi Vertical arm: ½" 80000 psi Roller track wear bar: ¼" AR400 Track carriage rollers:	none	

TITLE: TRUCK, REFUSE 27CY AUTOMATED SIDE LOADERBID No.: 11-24 EVALUATION

DESCRIPTION	HEIL	WAYNE	COMMENT
roller bearings. Arm pivot pins shall be 2' C1045 heat treated and polished pins with 2" self aligning spherical bearings. Roller bearings shall rotate on adjustable eccentric shafts to compensate for wear.	2X4" rollers 10X2 rollers		
Maximum Container height:	Feet for 90's = 13' Feet for 300's = 14'	13' 14.5'	
The packer shall be a platen type design integral with the body. The packing panel top thickness shall be 1/4" AR400 and the panel face plate shall be 3/8" AR400	Paddle design suspended	AS SPECIFIED	
The body shall have a minimum space capable of receiving and storing compacted waste of 27 cubic yards (excluding the receiving hopper). It shall have a minimum payload capacity of 18,000 pounds of normal domestic refuse. The body shall be installed, ready for regular use on a cabover truck chassis of proper type and capacity.	Volume of body is: 26CY Payload of body will be: 18400 lbs	BH27 Special 17000 lbs	
Body material thickness	Floor: 7gauge Sides: 10 gauge Roof: 12 gauge	7 gauge 10 gauge 10 gauge	
Hopper material thickness:	Floor: ½" astm-A36 Sides: ½" astm-A36	¼" AR400 3/16" AR400	
The body shall be furnished with a hydraulic oil reservoir with a minimum capacity of 65 gallons. The hydraulic system shall be sealed to prevent the entry of moist or dusty air and engineered to assure that the pump suction is under pressure at all times. The hydraulic reservoir shall be equipped with a fluid level sight glass, temperature gauge and a low level indicator.	50 gl	As specified	
The hydraulic system shall be powered by a hot-shift PTO-driven dual vane pump of sufficient capacity to meet requirements for an operate-in-gear-at-idle system. The system shall operate in gear at 800 RPM and achieve 8 second cycle times. Specify	Pump make/model: Chelsea hot shift Pump maximum output capacity: 33gpm@800rpm	Parker dennison /T60DCM 35Gl packer/31gl arm	

TITLE: TRUCK, REFUSE 27CY AUTOMATED SIDE LOADERBID No.: 11-24 EVALUATION

DESCRIPTION	HEIL	WAYNE	COMMENT
COST PROPOSAL	**$293,203.00**	**$298,159.00**	
NET	**30**	**30**	
DELIVERY	**200-230 DAYS ARO**	**210-240 ARO**	
Standard warranties			
Bumper-to-bumper:	1 year	1 year	
Chassis CNG Engine:	2 yrs – 250,000 miles	2 yrs – 250,000 miles	
CNG tanks:	20 yrs	20 yrs	
Transmission:	4yrs / unlimited miles	4yrs / unlimited miles	
Loading equipment:	1 year parts / labor	1 year parts / labor	
Hydraulic pump:	1 year parts / labor	1 year parts / labor	
Optional warranty offerings			
Bumper-to-bumper:	Not available	Not available	
Chassis CNG Engine: (5 yrs/200K):	$4,150.00	$4,150.00	
CNG tanks: (3yrs)	$750.00	$750.00	
Transmission (5 yrs/unlimited)	$450.00	$450.00	
Loading equipment:	2yrs-$5K; 3yrs-$7K	2yrs-$3,800.00	
Hydraulic pump:	Including w/ loading eqpt	2yrs - $1,900.00	