

City of San Antonio
Finance Department - Purchasing Division
Local Preference Program Identification Form

ORIGINAL

CITY RESERVES THE RIGHT TO REQUEST ADDITIONAL INFORMATION TO VALIDATE BIDDERS'/RESPONDENTS' DESIGNATION AS A CITY BUSINESS.

COMPLETE THE FOLLOWING FORM AND SUBMIT WITH YOUR RESPONSE EVEN IF YOU ARE NOT SEEKING A LOCAL PREFERENCE. THE BIDDER / RESPONDENT MUST COMPLETE THE FOLLOWING FORM TO BE IDENTIFIED AS A CITY BUSINESS. IF BIDDER / RESPONDENT IS SUBMITTING AS A JOINT VENTURE, EACH CITY BUSINESS THAT IS A MEMBER OF THE JOINT VENTURE MUST COMPLETE AND SIGN THIS FORM.

PROVIDE THE FOLLOWING INFORMATION IF BIDDER/ RESPONDENT IS SUBMITTING AS PART OF A JOINT VENTURE. Joint Venture means a collaboration of for-profit business entities, in response to a solicitation, which is manifested by a written agreement, between two or more independently owned and controlled business firms to form a third business entity solely for purposes of undertaking distinct roles and responsibilities in the completion of a given contract. Under this business arrangement, each joint venture partner shares in the management of the joint venture and also shares in the profits or losses of the joint venture enterprise commensurately with its contribution to the venture.

STATE BIDDER'S / RESPONDENT'S PERCENTAGE OF OWNERSHIP IN THE JOINT VENTURE: N/A%

SUBMIT A COPY OF THE JOINT VENTURE AGREEMENT. SUBMIT ANY OTHER DOCUMENTATION REQUESTED BY CITY TO SUBSTANTIATE THE EXISTANCE OF AND/OR PARTICIPATION IN THE JOINT VENTURE. NO PREFERENCE POINTS WILL BE ALLOCATED TO A JOINT VENTURE THAT FAILS TO SUBMIT REQUIRED DOCUMENTATION.

SOLICITATION NAME/NUMBER: 6100008207

PROVIDE THE FOLLOWING INFORMATION REGARDING BIDDER'S / RESPONDENT'S HEADQUARTERS:

Name of Business:	Grande Truck Center	
Physical Address:	4562 IH-10 East	
City, State, Zip Code:	San Antonio, TX 78219	
Phone Number:	210-666-9112	
Email Address:	rshoffstall@grandetruck.com	
Provide the total number of full-time, part-time, and contract personnel employed by Bidder / Respondent:	<u>212</u>	
Is Business headquartered within the incorporated San Antonio city limits? (circle one)	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Has the business been headquartered in the incorporated San Antonio city limits for one year or more? (circle one)	<input checked="" type="radio"/> Yes	<input type="radio"/> No
If the answers to the questions above are "Yes", stop here. If the answer to either of the above questions is "No", provide responses to the following questions:		

City of San Antonio
Finance Department - Purchasing Division
Local Preference Program Identification Form

PROVIDE THE FOLLOWING INFORMATION REGARDING BIDDER'S / RESPONDENT'S LOCAL OFFICE (IF APPLICABLE):

Name of Business:		
Physical Address:		
City, State, Zip Code:		
Phone Number:		
Email Address:		
Provide the total number of full-time, part-time, and contract personnel employed by Bidder / Respondent in the local office: _____		
Is the business located in the incorporated San Antonio city limits? (circle one)	Yes	No
Has the business been located in the incorporated San Antonio city limits for one year or more? (circle one)	Yes	No
Are at least 100 full-time, part-time or contract employees regularly based in the San Antonio office? (circle one)	Yes	No
Are at least 20% of the business' total full-time, part-time or contract employees regularly based in the San Antonio office? (circle one)	Yes	No
Do the employees in the San Antonio office perform a substantial role in the business' performance of a commercially useful function or are a substantial part of the business' operations conducted in the San Antonio office? (circle one)	Yes	No

City of San Antonio
Finance Department - Purchasing Division
Local Preference Program Identification Form

ACKNOWLEDGEMENT

THE STATE OF TEXAS

I certify that my responses and the information provided on this Local Preference Program Identification Form are true and correct to the best of my personal knowledge and belief and that I have made no willful misrepresentations on this form, nor have I withheld any relevant information in my statements and answers to questions. I am aware that any information given by me on this Local Preference Program Identification Form may be investigated and I hereby give my full permission for any such investigation, including the inspection of business records and site visits by City or its authorized representative. I fully acknowledge that any misrepresentations or omissions in my responses and information may cause my offer to be rejected or contract to be terminated. I further acknowledge that providing false information is grounds for debarment.

BIDDER'S / RESPONDENT'S FULL NAME:

Keith Shoffstall
(Print Name) Authorized Representative of Bidder / Respondent

Keith Shoffstall
(Signature) Authorized Representative of Bidder / Respondent

Sales
Title

11/8/2012
Date

**This Local Preference Identification Form must be submitted with the bidder's /
respondent's bid/proposal response.**

**Originating Department
SBEDA Policy Waiver Request Form**

*This form need **not** be completed for solicitations for contracts excluded from the SBEDA Program in Section 2 of the SBEDA Ordinance (Ordinance No. 2010-06-17-0531).*

ORIGINATING DEPARTMENT:	Building & Equipment Services		
CONTACT PERSON:	LD McGarity		
CONTACT PHONE #:	210-207-2078	CONTACT EMAIL:	ld.mcgarity@sanantonio.gov
SOLICITATION NAME:	Sanitation Refuse Trucks		
ESTIMATED CONTRACT VALUE:	\$7,495,596.00		
TYPE OF SOLICITATION :	Request for Offers	INDUSTRY CATEGORY:	Goods and Supplies

1. Scope of work/specification summary:

The City of San Antonio is issuing a Request for Offers to purchase twenty-five (25) automated side load sanitation refuse trucks for the Solid Waste Management Department (SWMD) for a total estimated cost of \$7,183,058.00. Twenty-four (24) automated side loaders are replacements for existing units in service shall be funded from the Equipment Renewal and Replacement Fund, estimated at \$7,183,058.00. One (1) automated side loader is a new unit, estimated at \$312,583.00, that is being purchased with funding from the Solid Waste Operating & Maintenance Fund. Three solicitations are requested: 1 - Mack chassis with Hell body AND Mack chassis with Scorpion body; 2 - Peterbilt chassis with Scorpion body; and 3-Autocar CNG chassis with Hell body.

The Local Preference Program Ordinance and VOSBPP are not applicable to this solicitation.

2. Please describe any extraordinary and necessary requirements of this contract that render the application of the SBEDA Program infeasible or impractical.

Solid Waste Management has experienced parts and service provider shortages where two manufacturers of existing equipment have gone out of business. A committee of sanitation collection drivers, heavy duty technicians, and other sanitation personnel have examined available refuse trucks and determined there is a limited number of manufacturers, that would be capable supplying on-going parts supply and service once equipment was purchased. As such there are no sufficient qualified S/M/WBE's within the San Antonio Metropolitan Statistical Area.

3. Are sufficient qualified S/M/WBEs within the San Antonio Metropolitan Statistical Area available to provide the goods or services being procured?

YES NO

3a. If yes, please describe the rationale for your waiver request.

3b. If no, please describe and attach documentation of your research to support this finding.

Requesting the waiver due to lack of SBE within the SAMSA for the requested goods. All items have been researched with CVR.

4. Additional Information:

[Empty box for additional information]

SUBMITTAL:

I CONFIRM THAT ALL INFORMATION CONTAINED IN THIS FORM IS ACCURATE AND COMPLETE.


Department Director

9/21/16
Date

FOR SMALL BUSINESS OFFICE USE ONLY

DATE RECEIVED: 10/4/2016

EDD STAFF ASSIGNED: Gus Loeffelholz

ACTION TAKEN: APPROVED DENIED for EDD DIRECTOR: 

JUSTIFICATION:

SBO recommends approval of waiver based on the OD's analysis that the available S/W/MBEs cannot supply the products listed on the project's scope.

DATE OF ORIGINATING DEPARTMENT NOTIFICATION: _____

City of San Antonio
Finance Department - Purchasing Division
Local Preference Program Identification Form

The City of San Antonio Local Preference Program, described in the San Antonio City Code Chapter 2, Article XII, establishes a local preference for specific contracting categories. Each time a bidder or respondent submits a bid for a solicitation, this Local Preference Program Identification Form must be completed and turned in with the solicitation response in order to be identified as a City Business and receive the preference described below. The City will not rely on Local Preference Program Identification Forms submitted with prior or contemporaneous bids or proposals.

The Local Preference Program allows the City to grant a preference to a business meeting the definition of *City Business* in the award of the following types of contracts, when selection is made based on price alone:

- Personal Property (Goods / Supplies): The local bidder's price must be within 3% of the price of the lowest non-local bidder for contracts of \$50,000 or more;
- Non-professional Services: The local bidder's price must be within 3% of the price of the lowest non-local bidder for contracts of \$50,000 to under \$500,000;
- Construction Services: The local bidder's price must be within 3% of the price of the lowest non-local bidder for contracts of \$50,000 to under \$100,000, excluding contracts awarded using alternative delivery methods.

The Local Preference Program also allows the award of additional points, when multiple evaluation criteria are used in the award of professional service contracts, where the selection process is not governed by statute and in revenue generating and concession contracts. A business meeting the definition of *City Business* stated below may be awarded 10 points for being headquartered within the city, or 5 points for having a local office within the city.

Moreover, the program recognizes joint venture agreements and allows for apportioning of points based upon the percentage of ownership of joint ventures by *City Businesses* responding to solicitations for which discretionary points are applied. For solicitations where selection is made based on price alone, all members of a joint venture must be *City Businesses* for the preference to be applied.

City Business is defined as a business headquartered within the incorporated San Antonio city limits for one year or more OR one that meets the following conditions:

- Has an established place of business for one year or more in the incorporated limits of the City:
 - (a) from which at least 100 of its employees OR at least 20% of its total full-time, part-time and contract employees are regularly based; and
 - (b) from which a substantial role in the business' performance of a commercially useful function or a substantial part of its operations is conducted by those employees.

A location utilized solely as a post office box, mail drop or telephone message center or any similar combination, with no other substantial work function, is not a *City Business*.

For the purposes of this program, Headquartered is defined as the place where a business entity's officers direct, control, and coordinate the entity's activities.

NOTE: Bidders / Respondents are required to submit documentation to substantiate that the requirements of a *City Business* have been met. Examples of documentation may include, but are not limited to the following:

1. Existence of local headquarters or office: For corporations, Texas Comptroller's listing of names/addresses of officers and directors. For partnerships, partnership agreement and any documents identifying the current managing partners and their current work addresses
2. Evidence of local headquarters or office in existence for one year or more: Utility bills, real property lease agreements, equipment leases, personal property taxes, real property taxes
3. Evidence of number of employees: Organizational charts, payroll records by location

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.
 Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

**OFFICE USE ONLY
 CERTIFICATION OF FILING**

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
 Grande Truck Center
 San Antonio, TX United States

Certificate Number:
 2016-134035

Date Filed:
 11/08/2016

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
 City of San Antonio

Date Acknowledged:

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
 61400008207
 Refuse Collection Trucks

4	Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
			Controlling	Intermediary

5 Check only if there is NO Interested Party.

6 AFFIDAVIT I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

Keith Shoffstall

 Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Keith Shoffstall, this the 8th day of November, 2016, to certify which, witness my hand and seal of office.

Sherry Jolley SHERRY JOLLEY NOTARY PUBLIC
 Signature of officer administering oath Printed name of officer administering oath Title of officer administering oath

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of person who has a business relationship with local governmental entity.

Keith Shoffstall / Grande Truck Center

2 Check this box if you are filing an update to a previously filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Name of local government officer with whom filer has employment or business relationship.

NONE

Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the filer of the questionnaire?

Yes

No

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

Yes

No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

Yes

No

D. Describe each employment or business relationship with the local government officer named in this section.

N/A

4

Keith Shoffstall
Signature of person doing business with the governmental entity

11/8/2016
Date



City of San Antonio

ADDENDUM II

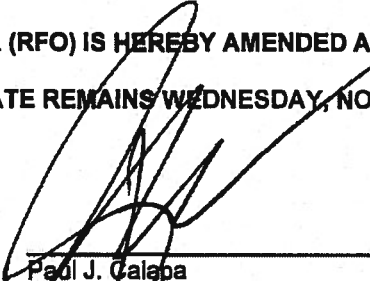
SUBJECT: Formal Request For Offer (RFO) 6100008207 REFUSE COLLECTION TRUCKS
scheduled to open Wednesday, November 9, 2016 date of issue October 27, 2016.

DATE: November 8, 2016

THE ABOVE MENTIONED REQUEST FOR OFFER (RFO) IS HEREBY AMENDED AS FOLLOWS:

- 1. THE REQUEST FOR OFFER OPENING DATE REMAINS WEDNESDAY, NOVEMBER 9, 2016, 10:00 a.m. CENTRAL TIME.**

This is a correction to Addendum I.



Paul J. Calapa
Purchasing Administrator
Finance Department, Purchasing Division

mg



City of San Antonio

ADDENDUM I

SUBJECT: Formal Request For Offer (RFO) 6100008207 REFUSE COLLECTION TRUCKS scheduled to open Wednesday, November 9, 2016 date of issue October 27, 2016.

DATE: November 4, 2016

THE ABOVE MENTIONED REQUEST FOR OFFER (RFO) IS HEREBY AMENDED AS FOLLOWS:

1. **THE REQUEST FOR OFFER OPENING DATE REMAINS WEDNESDAY, NOVEMBER 4, 2016, 10:00 a.m. CENTRAL TIME.**
2. Document Section 004 – Specifications / Scope of Services, Item Description changed to read:

Changed to read:

- 4.1 **SCOPE:** The City of San Antonio is issuing this Request for Offer (RFO) to furnish a total 25 Turnkey Refuse Collection Trucks with High Compaction Automated Side Load Body in accordance with the Building and Equipment Services Department - Fleet Services specifications listed herein. These vehicles will include cab and chassis, and refuse body. These trucks will be utilized for refuse collection by the Solid Waste Management Department. These vehicles specified are for 7 Peterbilt 320 Cab and Chassis with a Scorpion 30 Cubic Yard Capacity, 6 Mack LR613 Cab and Chassis with a Heil Durapak Python Refuse Collection Body, 6 Mack LR613 Cab and Chassis with a Scorpion 30 Cubic Yard Capacity Refuse Body and 7 Autocar ACX64 CNG Cab/Chassis with a Heil Durapak Python 26 Cubic Yard Refuse Body (NO ALTERNATIVES WILL BE CONSIDERED).

Changed to read:

4.3.4.1 DELETED.

4.4	ITEM	QUANTITY	DESCRIPTION
	1	7	Refuse Collection Trucks Peterbilt 320 Cab and Chassis Minimum 66,000-lbs. GVWR with a Scorpion 30 Cubic Yard Capacity Automated Side Loader Refuse Body (NO ALTERNATIVES)

Changed to read:

- 4.4.2 **ENGINE:** Must meet as a minimum the 2013 U.S. EPA emission standards. Ultra Low Sulfur Diesel, water cooled ,Cummins 12 Liter, minimum 350 horsepower rated at

manufactured recommended RPM of 2,100, producing a minimum of 1,450 lbs./ft. of torque. A single element, dry type air cleaner and pre cleaner element to be equipped. Engine alternator to be a Delco 12V 160A. Batteries to be three (3) PACCAR Premium 12V Dual Purpose 2100 CCA with a Kissling battery disconnect switch. Diesel Exhaust Fluid (DEF) tank to be equipped to work in conjunction with Exhaust/Emissions system. Exhaust after-treatment system diesel particulate filter to be a ceramic passive regeneration type equipped with a Diesel Particle Filter (DPF) Smart Switch. A DPF Regenerative Switch Inhibitor will not be available. Limiting speed to be 65 MPH. The engine idle time will be limited to 5 minutes.

Changed to read:

- 4.4.5 **TRANSMISSION:** Allison 4500 Series, 6 Speed; Vocation, RDS -R 5th Generation push button controls to include a direct mount oil cooler, external oil cooler, internal filter, and oil level sensor. Unit to have the largest capacity oil pan that will fit this application and filled with synthetic transmission fluid. Transmission Shift Schedule to be primary performance then secondary then economy to provide optimal performance. Generation 5 Allison output retarder for RDS Transmission w/ Prognostics to be equipped with a PTO Transmission Mounted Audible Alarm. Unit to be equipped with a Spicer 1810HD half round Driveshaft w/ Transmission Retarder. Direct mount rear engine PTO (REPTO), furnish pump MTG provisions-include wiring switches and indicators as required. Transmission cooler must be oil to water type.

Changed to read:

- 4.4.6 **FRONT AXLE:** Minimum 20,000 lbs. capacity 3.5in drop Factory front axle alignment to improve handling and reduce tire wear; Dana Spicer D2000F or equivalent. Axle to be equipped with Zerk fittings on tie rod ends, kingpins, and draglink ball joints. 20,000lbs shocks, Taper leaf springs, and Bendix or Meritor air cam front drum brakes (16.5 x 7) shall be used with 16,000-22,000 lbs. steer axles.

Changed to read:

- 4.4.7 **REAR AXLE:** The rear drive axle (single & tandem) to be a Hendrickson Haulmax HMX4600 rated at 46,000 lbs. with 54in axle spacing, 60K creep rating. Bendix Air Cam rear drum brakes; 16.5x8.6 with heavy duty brake drums and gusseted cam brackets. Driver controlled inter wheel differential lock for both RR axles, manual air valve w/ warning light

Changed to read:

- 4.4.13 **LIGHTING:** Head Light Lamps to be single rectangular halogen type or LED head lights if available. Front turn signals and Clearance Lights to be LED. Turn signals & flasher switches will be self-canceling. Marker lamps, amber LED roof markers, parking lamps, and corner marker lamps will be wired to battery shut-off. Unit will be equipped with running daytime lamps; identification/clearance lights; seven (7) marker and clearance, and provision for local installation of strobe lights. Unit to be equipped with (2) dome lights w/self-contained switches (one each side). All electrical connections shall be waterproof sprayed w/protective coating. No LED manual cut-off switch in cab. Side Markers, Lamps and Reflectors to meet or exceed Federal Regulations.

Changed to read:

- 4.4.15 **FRONT TIRES/WHEELS:** Disc wheel type, 22.5" x 9.0" Accuride 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear.

Changed to read:

4.4.16 REAR TIRES/WHEELS: Disc wheel type, 22.5" x 9.0" HP, 5HH, 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear.

Added:

4.4.27.7 The unit will have an audible alarm and flashing light in cab to indicate the lifting arm is out when the vehicle is in motion.

4.5	ITEM	QUANTITY	DESCRIPTION
	2	6	Refuse Collection Trucks Mack LR613 Cab and Chassis Minimum 66,000-lbs. GVWR with a Heil Durapack Python Refuse Collection Body 28 plus Cubic Yard, High Compaction, Automated, Side Load (NO ALTERNATIVES)

Changed to read:

4.5.2 ENGINE: Must meet as a minimum the 2013 U.S. EPA emission standards. Ultra Low Sulfur Diesel, water cooled, minimum 345 horsepower rated at manufactured recommended RPM (1,500-1,700), producing a minimum of 1,275 lbs. of max torque @ 1,100-1,350 RPM output. A front mounted engine PTO (FEPTO), must be equipped with power take off hydraulic pump, furnish pump MTG provisions-include wiring switches and indicators as required. A single element, dry type air cleaner and pre-cleaner element to be equipped. Engine alternator to be a minimum 12V 160A. Batteries to be three (3) Mack 12V 760/2280 CCA Threaded Stud Type. Starter to be 12 volts. DEF fluid tank to be equipped to work in conjunction with Exhaust /Emissions system. Exhaust after-treatment system diesel particulate filter to be a ceramic passive regeneration type equipped with a Diesel Particle Filter Smart Switch. A DPF Regeneration Switch Inhibitor will not be available. Limiting speed to be 65 MPH. The engine idle time will be limited to 5 minutes.

Changed to read:

4.5.5 TRANSMISSION: Allison 4500 Series, 6 Speed; Vocation, RDS -R 5th Generation push button controls to include a direct mount oil cooler, external oil cooler, internal filter, and oil level sensor. Unit to have the largest capacity oil pan that will fit this application and filled with synthetic transmission fluid. Transmission Shift Schedule to be primary performance then secondary then economy to provide optimal performance. Generation 5 Allison output retarder for RDS Transmission w/ Prognostics to be equipped with a PTO Transmission Mounted Audible Alarm. Unit to be equipped with a Spicer 1810HD half round Driveshaft w/ Transmission Retarder. Transmission cooler must be oil to water type.

Changed to read:

4.5.6 FRONT AXLE: Minimum 20,000 lbs. capacity equipped with Mack FXL20 wide pivot center straight spindle/unitized bearings. Front springs to be Mack Taper leaf 20,000 lbs. ground load rating, static load cushion equipped. Front Brakes to be Meritor front air disc with dust shields.

Changed to read:

4.5.7 REAR AXLE: Minimum 46,000 lbs. capacity and equipped with a rear drive axle. Rear disc brakes to be Meritor and equipped with the 4S/4M system sensing both rear axles w/ wheel

end sensors. V-Rods for m drive suspension and driver controlled inter wheel differential lock both RR Axles with manual air valve w/warning lights to be equipped.

Changed to read:

4.5.14 **LIGHTING:** Head Light Lamps to be single rectangular halogen type or LED head lights if available. Front turn signals and Clearance Lights to be LED. Turn signals & flasher switches will be self-canceling. Marker lamps, amber LED roof markers, parking lamps, and corner marker lamps will be wired to battery shut-off. Unit will be equipped with running daytime lamps; identification/clearance lights; seven (7) marker and clearance, and provision for local installation of strobe lights. Unit to be equipped with (2) dome lights w/self-contained switches (one each side). All electrical connections shall be waterproof sprayed w/protective coating. No LED manual cut-off switch in cab. Side Markers, Lamps and Reflectors to meet or exceed Federal Regulations;

Changed to read:

4.5.16 **FRONT TIRES/WHEELS:** Disc wheel type, 22.5" x 9.0" Accuride 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear.

Changed to read:

4.5.17 **REAR TIRES/WHEELS:** Disc wheel type, 22.5" x 9.0" HP, 5HH, 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear.

Added:

4.5.28.7 The unit will have an audible alarm and flashing light in cab to indicate the lifting arm is out when the vehicle is in motion

4.6	ITEM	QUANTITY	DESCRIPTION
	3	5	Refuse Collection Trucks Mack LR613 Cab and Chassis Minimum 66,000-lbs. GVWR with a Scorpion 30 Cubic Yard Capacity Automated Side Loader Refuse Body (NO ALTERNATIVES)

Changed to read:

4.6.1 The below listed specifications are intended to describe a low entry, cab forward, hydraulic tilt type cab and chassis, Mack - LR613 Cab and Chassis. Maximum insulation for the engine compartment will be used to prevent heat and noise from penetrating into the cab.

Changed to read:

4.6.2 **ENGINE:** Must meet as a minimum the 2013 U.S. EPA emission standards. Ultra Low Sulfur Diesel, water cooled, minimum 345 horsepower rated at manufactured recommended RPM (1,500-1,700), producing a minimum of 1,275 lbs. of max torque @ 1,100-1.350 RPM output. A single element, dry type air cleaner and pre-cleaner element to be equipped. Engine alternator to be a minimum 12V 160A. Batteries to be three (3) Mack 12V 760/2280 CCA Threaded Stud Type. Starter to be 12 volts. DEF fluid tank to be equipped to work in conjunction with Exhaust /Emissions system. Exhaust after-treatment system diesel particulate filter to be a ceramic passive regeneration type equipped with a

Diesel Particle Filter Smart Switch. A DPF Regeneration Switch Inhibitor will not be available. Limiting speed to be 65 MPH. The engine idle time will be limited to 5 minutes.

Changed to read:

- 4.6.5 **TRANSMISSION:** Allison 4500 Series, 6 Speed; Vocation, RDS -R 5th Generation push button controls to include a direct mount oil cooler, external oil cooler, internal filter, and oil level sensor. Unit to have the largest capacity oil pan that will fit this application and filled with synthetic transmission fluid. Transmission Shift Schedule to be primary performance then secondary then economy to provide optimal performance. Generation 5 Allison output retarder for RDS Transmission w/ Prognostics to be equipped with a PTO Transmission Mounted Audible Alarm. Unit to be equipped with a Spicer 1810HD half round Driveshaft w/ Transmission Retarder. Direct mount rear engine PTO (REPTO), furnish pump MTG provisions-include wiring switches and indicators as required. Transmission cooler must be oil to water type.

Changed to read:

- 4.6.6 **FRONT AXLE:** Minimum 20,000 lbs. capacity equipped with Mack FXL20 wide pivot center straight spindle/unitized bearings. Front springs to be Mack Taper leaf 20,000 lbs. ground load rating, static load cushion equipped. Front Brakes to be Meritor front air disc with dust shields.

Changed to read:

- 4.6.7 **REAR AXLE:** Minimum 46,000 lbs. capacity and equipped with a rear drive axle. Rear disc brakes to be Meritor and equipped with the 4S/4M system sensing both rear axles w/ wheel end sensors. V-Rods for m-drive suspension and driver controlled inter wheel differential lock both RR Axles with manual air valve w/warning lights to be equipped.

Changed to read:

- 4.6.14 **LIGHTING:** Head Light Lamps to be single rectangular halogen type or LED head lights if available. Front turn signals and Clearance Lights to be LED. Turn signals & flasher switches will be self-canceling. Marker lamps, amber LED roof markers, parking lamps, and corner marker lamps will be wired to battery shut-off. Unit will be equipped with running daytime lamps; identification/clearance lights; seven (7) marker and clearance, and provision for local installation of strobe lights. Unit to be equipped with (2) dome lights w/self-contained switches (one each side). All electrical connections shall be waterproof sprayed w/protective coating. No LED manual cut-off switch in cab. Side Markers, Lamps and Reflectors to meet or exceed Federal Regulations.

Changed to read:

- 4.6.16 **FRONT TIRES/WHEELS:** Disc wheel type, 22.5" x 9.0" Accuride 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear.

Changed to read:

- 4.6.17 **REAR TIRES/WHEELS:** Disc wheel type, 22.5" x 9.0" HP, 5HH, 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear.

Added:

- 4.6.28.7 The unit will have an audible alarm and flashing light in cab to indicate the lifting arm is out when the vehicle is in motion

Changed to read:

4.7	ITEM	QUANTITY	DESCRIPTION
	4	7	Refuse Collection Trucks Autocar ACX64 CNG Cab and Chassis Minimum 66,000-lbs. GVWR with a Heil Durapak Python 26 Cubic Yard, High Compaction, Automated Side Loader Refuse Body (NO ALTERNATIVES)

Changed to read:

- 4.7.3 **ENGINE EQUIPMENT:** Cummins GAS, CM2180A, engine protect system warning to be audible/visual alarm/LOP, HT, LWL. No additional fuel filter provided. Natural Gas fuel cleaner mounted. Standard engine oil. 1300 sq. inch 2 row high capacity aluminum radiator with extended life coolant. 2 speed fan & drive engine. Radiator surge tank w sight glass. 16" two stage air cleaner, black hood type air intake rain cap. Single vertical left hand side muffler system. Stainless steel vertical muffler shield-single, vertical diffuser, single stainless steel exhaust stack. No DEF tank provided. Aluminums turbo/exhaust pipe debris shield. Air compressor to be Cummins WABCO 18.7 CFM compressor. DELCO Remy 12V 39 MT w/OCP to be the starting motor. DELCO Remy 3681 12V 160 AMP to be the alternator. Unit to be governed at 65; no cruise control. Unit to have an engine idle shutdown enabled at 5 minutes.

Changed to read:

- 4.7.4 **TRANSMISSION:** Allison 4500 Series, 6 Speed; Vocation, RDS -R 5th Generation push button controls to include a direct mount oil cooler, external oil cooler, internal filter, and oil level sensor. Unit to have the largest capacity oil pan that will fit this application and filled with synthetic transmission fluid. Transmission Shift Schedule to be primary performance then secondary then economy to provide optimal performance. Generation 5 Allison output retarder for RDS Transmission w/ Prognostics to be equipped with a PTO Transmission Mounted Audible Alarm. Unit to be equipped with a Spicer 1810HD half round Driveshaft w/ Transmission Retarder. PTO Transmission Mounted Chelsea 890/897 PTO. Direct mount rear engine PTO (REPTO), furnish pump MTG provisions-include wiring switches and indicators as required. Transmission cooler must be oil to water type.

Changed to read:

- 4.7.5 **FRONT AXLE:** Minimum 20,000 lb. capacity, Meritor MFS-20 Steer Axle, 52.5 inches, front suspension to be 9500 low camber and a Flat Leaf 20,800 lb. ground capacity. Suspension, front aux load cushion. Shock absorbers-front to be double acting single-heavy duty. Front hubs to be steel hub piloted .285MM bolt circle. Front wheel oil seals to be Scotseal Plus XL. Front axle hub caps to be CR Zytel hubcap. Front axle lubricant synthetic, Dana Spicer EP75W90, or equivalent. Front axle brake foundation to be Meritor 16.5x7" QP refuse brake. Brake slack adjusters are to be Meritor Automatic. Front brakes to have dust shields and the brake drums to be iron. Steering gear integral, power steering w/ left hand ram. Four quart remote mounted power steering reservoir.

Changed to read:

4.7.6 **REAR AXLE:** Rear drive axle-single & tandem Meritor RT46-160 46,000lb. Rear axle lube pump-Meritor. Rear drive axle ratio 5. 38. Four wheel lock rear drive axle anti-spin devices. Rear Suspensions to be Hendrickson HMX-460 SUSP @54" AS, rear suspension beams to be 54 inch steel rubber bushed. Torque rods to be longitudinal & transversal- rubber bushed. Equipped with Four Hendricks suspension shock absorbers. Rear Hubs to be iron, HP 10 Stud, standard rear axle breather. Wheel oil seals-rear to be Scotseal Plus XL. Rear axle lubricant to be synthetic. Brake-foundation, rear axle to be Meritor 16.5x8.62" QP, rear axle refuse brake. Brake slack adjusters-Rear to be Meritor, automatic tandem axle. Dust shielded rear brakes. Cam type MGM stop guard brake chambers- parking, type/vendor. Rear Brake drum to be iron. Driver controlled inter wheel differential lock both RR Axles with manual air valve w/warning lights to be equipped.

Changed to read:

4.7.15 **FRONT TIRES/WHEELS:** Disc wheel type, steel, 22.5" x 9.0" Accuride 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear. Goodyear G289 WHA, or equivalent.

Changed to read:

4.7.16 **REAR TIRES/WHEELS:** Disc wheel type, steel, 22.5" x 9.0", HP, 5HH, ACCURIDE #29300. 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear. Goodyear G289 WHA, or equivalent.

Changed to read:

Heil Durapak Python Refuse Collection Body 26 Cubic Yard, High Compaction, Automated, Side Load (NO ALTERNATES).

Changed to read:

4.7.27 **CAPACITY:** The packer body to have a capacity, excluding the receiving hopper, of not less than 26-cubic yards. Body will have a 150,000-psi body liner, a 3/16" 150,000-psi hopper floor liner, and manufacturer's severe duty packer wear kit.

Changed to read:

4.6.31.1.7 The unit will have an audible alarm and flashing light in cab to indicate the lifting arm is out when the vehicle is in motion

Attachment A, Price Schedule Item 1 only, Changed to read:

PRICE SCHEDULE

ITEM	QUANTITY	DESCRIPTION
1	7	Refuse Collection Trucks Peterbilt 320 Cab and Chassis Minimum 66,000-lbs. GVWR with a Scorpion 30 Cubic Yard Capacity Automated Side Loader Refuse Body (NO ALTERNATIVES)

PRICE EACH: \$ NO BID

TOTAL: \$ _____

PETERBILT YEAR of CAB & CHASSIS:

PETERBILT CAB & CHASSIS WARRANTY (Must meet minimum warranty requirements stated herein):

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

ENGINE WARRANTY (Must meet minimum warranty requirements stated herein):

TRANSMISSION WARRANTY (Must meet minimum warranty requirements stated herein):

PETERBILT WARRANTY SERVICE PROVIDER FACILITY NAME:

PETERBILT WARRANTY SERVICE PROVIDER FACILITY ADDRESS:

SCORPION BODY WARRANTY (Must meet minimum warranty requirements stated herein):

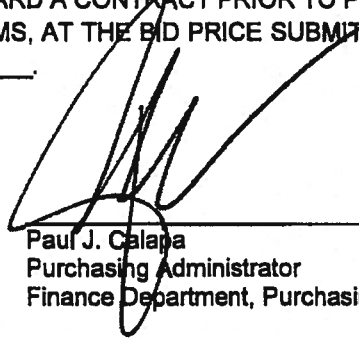
SCORPION WARRANTY SERVICE PROVIDER FACILITY NAME:

SCORPION WARRANTY SERVICE PROVIDER FACILITY ADDRESS:

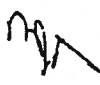
PRODUCTION CUT-OFF DATE: _____

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: _____.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? _____.



Paul J. Calapa
Purchasing Administrator
Finance Department, Purchasing Division



Date: 11/8/2016

Company Name: Grande Truck Center

Address: 4562 IH-10 East

City/State/Zip Code: SAN ANTONIO, TX 78219

Kent Stoffelt
Signature



CITY OF SAN ANTONIO
PURCHASING AND GENERAL SERVICES DEPARTMENT

REQUEST FOR OFFER ("RFO") NO.: 6100008207

REFUSE COLLECTION TRUCKS

Date Issued: OCTOBER 27, 2016

RESPONSES MUST BE RECEIVED NO LATER THAN:
10:00 AM CENTRAL TIME, NOVEMBER 9, 2016

Responses may be submitted by any of the following means:

- Electronic submission through the Portal
- Hard copy in person or by mail

Address for hard copy responses:

Physical Address:

Purchasing & General Services
Riverview Tower
111 Soledad, Suite 500
San Antonio, Texas 78205

Mailing Address:

Purchasing & General Services
P.O. Box 839966
San Antonio, Texas 78283-3966

For Hard Copy Submissions, Mark Envelope

"REFUSE COLLECTION TRUCKS"

Offer Due Date: 10:00 A.M. CENTRAL TIME, NOVEMBER 9, 2016

RFO No.: 6100008207

Offeror's Name and Address

Bid Bond: Performance Bond: Payment Bond: Other:

See Supplemental Terms & Conditions for information on these requirements.

Affirmative Procurement Initiative:

DBE / ACDBE Requirements:

See Instructions for Offerors and Attachments sections for more information on these requirements.

Pre-Submittal Conference * YES

* If YES, the Pre-Submittal conference will be held on **November 2, 2016** at 10:00 A.M. at FLEET TRAINING ROOM, 329 S. FRIO ST. SAN ANTONIO, TX 78207.

Staff Contact Person: LD MCGARITY, PROCUREMENT SPECIALIST II, P.O. Box 839966, San Antonio, TX 78283-3966

Email: ld.mcgarity@sanantonio.gov

Phone: 210-207-2078

Fax: 210-207-4360

002 - TABLE OF CONTENTS

002 - TABLE OF CONTENTS..... 2
003 - INSTRUCTIONS FOR OFFERORS 3
004 - SPECIFICATIONS / SCOPE OF SERVICES 9
005 - SUPPLEMENTAL TERMS & CONDITIONS 34
006 - GENERAL TERMS & CONDITIONS 37
007 - SIGNATURE PAGE 41
008 - STANDARD DEFINITIONS 42
009 - ATTACHMENTS 43

003 - INSTRUCTIONS FOR OFFERORS

Submission of Offers.

Submission of Hard Copy Offers. Submit one original offer, signed in ink, and two copies of the offer enclosed in a sealed envelope addressed to the Purchasing and General Services Department at the address and by the due date provided on the Cover Page. The name and address of offeror, the offer due date and RFO number and title shall be marked on the outside of the envelope(s). All times stated herein are Central Time. Any offer or modification received after the time and date stated on the Cover Page shall be rejected.

Submission of Electronic Offers. Submit one offer electronically by the due date provided on the Cover Page. All times stated herein are Central Time. Any offer or modification received after the time and date stated on the Cover Page shall be rejected. All forms in this solicitation which require a signature must have a signature affixed thereto, either by manually signing the document, prior to scanning it and uploading it with your submission, or affixing it electronically.

Offers sent to City by facsimile or email shall be rejected.

Modified Offers. Offers may be modified provided such modifications are received prior to the time and date set for submission of offers, and submitted in the same manner as original offers. For hard copy offers, provide a cover letter with the offer, indicating it is a modified offer and that the Original offer is being withdrawn. For electronic offers, a modified offer will automatically replace a prior offer submission. See below for information on submitting Alternate Offers.

City shall not be responsible for lost or misdirected offers or modifications.

Offerors must sign the Signature Page on hard copy offers and return the RFO document to City. For electronic offers, Offeror's electronic submission, with accompanying affirmations, constitutes a binding signature for all purposes.

Offerors are cautioned that they are responsible for the security of their log on ID and password, since unauthorized use could result in Offeror's being held liable for the submission.

Certified Vendor Registration Form. If Offeror has not completed the City's Certified Vendor Registration (CVR) Form, Offeror is required to do so prior to the due date for submission of offers. The CVR form may be accessed at <http://www.sanantonio.gov/purchasing/>. Offerors must identify the correct name of the entity that will be providing the goods and/or services under the contract. No nicknames, abbreviations (unless part of the legal title), shortened or short-hand names will be accepted in place of the full, true and correct legal name of the entity.

Alternate Offers. Alternate offers may be allowed at the sole discretion of City.

Hard Copy Alternate Offers. Hard copy alternate offers must be submitted in separate sealed envelopes in the same manner as submission of other offers. Alternate offers must be marked consecutively on the envelope as Alternate Offer No. 1, 2, etc. Failure to submit alternate offers in separate envelopes may result in rejection of an offer.

Electronic Alternate Offers Submitted Through the Portal. All alternate offers are recorded with original offers when submitted electronically.

Catalog Pricing. (This section applies to offers using catalog pricing, unless this is a cooperative purchase.)

The offer will be based on manufacturer's latest dated price list(s). Said price list(s) must denote the manufacturer, latest effective date and price schedule.

Offerors shall be responsible for providing one copy of the manufacturer's catalog for each manufacturer for which an offer is submitted. Offeror shall provide said catalog at the time of submission of its offer. Manufacturers' catalogs may be submitted in any of the following formats: paper copy or CD ROM for bids submitted on paper, or PDF file for offers submitted electronically.

Offerors may submit price lists other than the manufacturer's price list. Said price list(s) must denote the company name, effective date and price schedule. These price lists are subject to approval of the City Purchasing & General Services Department.

Specified items identified herein, if any, are for overall offer evaluation and represent the commonly and most used items. Net prices entered for those specified items must reflect the actual price derived from quoted price list less all discounts offered.

Restrictions on Communication.

Offerors are prohibited from communicating with: 1) elected City officials and their staff regarding the RFO or offers from the time the RFO has been released until the contract is posted as a City Council agenda item; and 2) City employees from the time the RFO has been released until the contract is awarded. These restrictions extend to "thank you" letters, phone calls, emails and any contact that results in the direct or indirect discussion of the RFO and/or offer submitted by Offeror. Violation of this provision by Offeror and/or its agent may lead to disqualification of the offer from consideration.

Exceptions to the restrictions on communication with City employees include:

Offerors may ask verbal questions concerning this RFO at the Pre-Submittal Conference.

Offerors may submit written questions, or objections to specifications, concerning this RFO to the Staff Contact Person listed on the Cover Page on or before 3 calendar days prior to the date offers are due. Questions received after the stated deadline will not be answered. Questions submitted and the City's responses will be posted with this solicitation. All questions shall be sent by e-mail or through the portal.

Offerors may provide responses to questions asked of them by the Staff Contact Person after responses are received. The Staff Contact Person may request clarification to assist in evaluating the Offeror's response. The information provided is not intended to change the offer response in any fashion. Such additional information must be provided within two business days from City's request.

Offerors and/or their agents are encouraged to contact the Small Business Office of the International and Economic Development Department for assistance or clarification with issues specifically related to the City's Small Business Economic Development Advocacy (SBEDA) Program policy and/or completion of the SBEDA form (s), if any. The point of contact is identified on the Cover Page. Contacting the Small Business Office regarding this RFO after the due date is not permitted. If this solicitation contains Affirmative Procurement Initiatives, it will be noted on the Cover Page.

If this solicitation contains DBE/ACDBE requirements, respondents and/or their agents may contact the Aviation Department's DBE/ACDBE Liaison Officer for assistance or clarification with issues specifically related to the DBE/ACDBE policy and/or completion of the required form(s). Point of contact is Ms. Lisa Brice, who may be reached via telephone at (210) 207-3505 or through e-mail at lisa.brice@sanantonio.gov. Respondents and/or their agents may contact Ms. Brice at any time prior to the due date for submission of bids. Contacting her or her office regarding this RFO after the due date is not permitted. If this solicitation contains DBE/ACDBE requirements, it will be noted on the Cover Page.

Pre-Submittal Conference.

If a Pre-Submittal Conference is scheduled, it will be held at the time and place noted on the Cover Page. Offerors are encouraged to prepare and submit their questions in writing in advance of the Pre-Submittal Conference in order to expedite the proceedings. City's responses to questions received prior to the conference may be distributed at the Pre-Submittal Conference and posted with this solicitation. Attendance at the Pre-Submittal Conference is optional, but highly encouraged.

This meeting place is accessible to disabled persons. Call the Staff Contact Person for information on the location of the wheelchair accessible entrance, or to request an interpreter for the deaf. Interpreters for the deaf must be requested at least 48 hours prior to the meeting. For other assistance, call (210) 207-7245 Voice/TTY.

Any oral response given at the Pre-Submittal Conference that is not confirmed in writing and posted with this solicitation shall not be official or binding on City.

Changes to RFO.

Changes to this RFO made prior to the offer due date shall be made directly to the original RFO. Changes are captured by creating a replacement version each time the RFO is changed. It is Offeror's responsibility to check for

new versions until the offer due date. City will assume that all offers received are based on the final version of the RFO as it exists on the day offers are due.

No oral statement of any person shall modify or otherwise change or affect the terms, conditions or specifications stated in the RFO.

Preparation of Offers.

All information required by the RFO must be furnished or the offer may be deemed non-responsive and rejected. Any ambiguity in the offer as a result of omission, error, unintelligible or illegible wording shall be construed in the favor of City.

Correct Legal Name. If an Offeror is found to have incorrectly or incompletely stated the name of the entity that will provide goods and/or services, the offer may be rejected.

Line Item Offers. Any offer that is considered for award by each unit or line item, must include a price for each unit or line item for which Offeror wishes to be considered. All offers are awarded on the basis of low line item, low total line items, or in any other combination that serves the best interest of City, unless City designates this solicitation as an "all or none" offer in the Supplemental Terms & Conditions.

All or None Offers. Any offer that is considered for award on an "all or none" basis must include a price for all units or line items. In an "All or None" offer, a unit price left blank shall result in the offer being deemed nonresponsive and disqualified from consideration. An "All or None" offer is one in which City will award the entire contract to one offeror only.

Delivery Dates. Proposed delivery dates must be shown in the offer form where required and shall include weekends and holidays, unless specified otherwise in this RFO. Proposed delivery times must be specific. Phrases such as "as required", "as soon as possible" or "prompt" may result in disqualification of the offer. Special delivery instructions, if any, may be found in the Specifications / Scope of Services section of this document, or in the Purchase Order.

Tax Exemption. The City of San Antonio is exempt from payment of federal taxes, and State of Texas limited sales excise and use taxes. Offerors must not include such taxes in offer prices. An exemption certificate will be signed by City where applicable upon request by Offeror after contract award.

Samples, Demonstrations and Pre-award Testing. If requested by City, Offeror shall provide product samples, demonstrations, and/or testing of items offered to ensure compliance with specifications prior to award of the contract. Samples, demonstrations and/or testing must be provided within 7 calendar days of City's request. Failure to comply with City's request may result in rejection of an offer. All samples (including return thereof), demonstrations, and/or testing shall be at Offeror's expense. Samples will be returned upon written request. Requests for return of samples must be made in writing at the time the samples are provided. Otherwise, samples will become property of City at no cost to City. Samples that are consumed or destroyed during demonstrations or testing will not be returned.

Estimated Quantities for Annual Contracts.

Designation as an "annual" contract is found in the contract's title on the Cover Page of this document. The quantities stated are estimates only and are in no way binding upon City. Estimated quantities are used for the purpose of evaluation. City may increase or decrease quantities as needed. Where a contract is awarded on a unit price basis, payment shall be based on the actual quantities supplied.

Offerors shall thoroughly examine the drawings, specifications, schedule(s), instructions and all other contract documents.

Offerors shall make all investigations necessary to thoroughly inform themselves regarding plant and facilities for delivery of material and equipment, or conditions and sites/locations for providing goods and services as required by this RFO. No plea of ignorance by Offeror will be accepted as a basis for varying the requirements of City or the compensation to Offeror.

Confidential or Proprietary Information. All offers become the property of City upon receipt and will not be returned. Any information deemed to be confidential by Offeror should be clearly noted; however, City cannot guarantee that it will not be compelled to disclose all or part of any public record under the Texas Public Information Act, since information deemed to be confidential by Offeror may not be considered confidential under Texas law, or pursuant to a

Court order. Pricing may be tabulated and posted to City's website, so shall not be considered proprietary or confidential.

Costs of Preparation. Offeror shall bear any and all costs that are associated with the preparation of the Offer, attendance at the Pre-Submittal conference, if any, or during any phase of the selection process.

Rejection of Offers.

City may reject any and all offers, in whole or in part, cancel the RFO and reissue the solicitation. City may reject an offer if:

Offeror misstates or conceals any material fact in the offer; or

The offer does not strictly conform to law or the requirements of the offer;

The offer is conditional; or

Any other reason that would lead City to believe that the offer is non-responsive or Offeror is not responsible.

City, in its sole discretion, may also waive any minor informalities or irregularities in any offer, such as failure to submit sufficient offer copies, failure to submit literature or similar attachments, or business affiliation information.

Changes to Offer Form. Offers must be submitted on the forms furnished. Offers that change the format or content of City's RFO may be rejected.

Withdrawal of Offers. Offers may be withdrawn prior to the due date. Written notice of withdrawal shall be provided to the Staff Contact Person for offers submitted in hard copy. Offers submitted electronically may be withdrawn electronically.

Evaluation and Award of Contract.

City reserves the right to make an award on the basis of City's best interests. Award may also be made based on low line item, low total line items, or in any other combination that serves the best interest of City, unless City designates this solicitation as an "all or none" offer in the Supplemental Terms & Conditions.

A written award of acceptance, manifested by a City Ordinance, and a purchase order furnished to Offeror results in a binding contract without further action by either party. Offeror must have the Purchase Order before making any delivery.

City reserves the right to delete items prior to the awarding of the contract, and purchase said items by other means.

Inspection of Facilities/Equipment. Depending on the nature of the RFO, Offerors' facilities and equipment may be a determining factor in making the offer award. All Offerors may be subject to inspection of their facilities and equipment.

Prompt Payment Discount.

Provided Offeror meets the requirements stated herein, City shall take Offeror's offered prompt payment discount into consideration. The evaluation will not be based on the discount percentage alone, but rather the net price as determined by applying the discount to the offer price, either per line item or total offer amount. However, City reserves the right to reject a discount if the percentage is too low to be of value to City, all things considered. City may also reject a discount if the percentage is so high as to create an overly large disparity between the price City would pay if it is able to take advantage of the discount and the price City would pay if it were unable to pay within the discount period. City may always reject the discount and pay within the 30 day period, at City's sole option.

City will not consider discounts that provide fewer than 10 days to pay in order to receive the discount.

For example, payment terms of 2% 5, Net 30 will NOT be considered in offer evaluations or in the payment of invoices. However, payment terms of 2% 10, Net 30 will result in a two percent reduction in the offer price during offer evaluation, and City will take the 2% discount if the invoice is paid within the 10 day time period.

Prohibited Financial Interest. The Charter of the City of San Antonio and its Ethics Code prohibit a City officer or employee, as those terms are defined in the Ethics Code, from having a financial interest in any contract with City or any City agency such as City-owned utilities. An officer or employee has a "prohibited financial interest" in a contract with City

or in the sale to City of land materials, supplies or service, if any of the following individual(s) or entities is a party to the contract or sale: the City officer or employee; his parent, child or spouse; a business entity in which he or his parent, child or spouse owns ten (10) percent or more of the voting stock or shares of the business entity, or ten (10) percent or more of the fair market value of the business entity; or a business entity in which any individual or entity above listed is a subcontractor on a City contract, a partner or a parent or subsidiary business entity.

Conflict of Interest. Effective January 1, 2006, Chapter 176 of the Texas Local Government Code requires that persons, or their agents, who seek to contract for the sale or purchase of property, goods, or services with the City, shall file a completed conflict of interest questionnaire with the City Clerk not later than the 7th business day after the date that the person: (1) begins contract discussions or negotiations with the City; or (2) submits to the City an application, response to a request for proposals or offers, correspondence, or another writing related to a potential agreement with the City. The conflict of interest questionnaire form is available from the Texas Ethics Commission at www.ethics.state.tx.us. Completed conflict of interest questionnaires may be mailed or delivered by hand to the Office of the City Clerk. If mailing a completed conflict of interest questionnaire, mail to: Office of the City Clerk, P.O. Box 839966, San Antonio, TX 78283-3966. If delivering a completed conflict of interest questionnaire, deliver to: Office of the City Clerk, City Hall, 2nd floor, 100 Military Plaza, San Antonio, TX 78205. Offeror should consult its own legal advisor with questions regarding the statute or form. Do not include this form with your sealed offer. The Purchasing Division will not deliver the form to the City Clerk for you.

State of Texas Conflict of Interest Questionnaire (Form CIQ). Chapter 176 of the Texas Local Government Code requires that persons, or their agents, who seek to contract for the sale or purchase of property, goods, or services with the City, shall file a completed Form CIQ with the City Clerk if those persons meet the requirements under 176.006(a) of the statute.

By law this questionnaire must be filed with the City Clerk not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Texas Local Government Code.

Form CIQ is available from the Texas Ethics Commission by accessing the following web address:

https://www.ethics.state.tx.us/filinginfo/conflict_forms.htm

In addition, please complete the **City's Addendum to Form CIQ (Form CIQ-A)** and submit it with Form CIQ to the Office of the City Clerk. The Form CIQ-A can be found at:

<http://www.sanantonio.gov/atty/ethics/pdf/OCC-CIQ-Addendum.pdf>

When completed, the CIQ Form and the CIQ-A Form should be submitted together, either by mail or hand delivery, to the Office of the City Clerk. If mailing, mail to:

Office of the City Clerk, P.O. Box 839966, San Antonio, TX 78283-3966.

If delivering by hand, deliver to:

City Hall, 100 Military Plaza, San Antonio, TX 78205.

Do not include these forms with your sealed bid. The Purchasing Division will not deliver the forms to the City Clerk for you.

Certificate of Interested Parties (Form 1295)

The Texas Government Code §2252.908, and the rules issued by the Texas Ethics Commission found in Title 1, Sections 46.1, 46.3 and 46.5 of the Texas Administrative Code, require a business entity to submit a completed Form 1295 to the City before the City may enter into a contract with that business entity.

Form 1295 must be completed online. It is available from the Texas Ethics Commission by accessing the following web address: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm.

Print your completed Form 1295 and sign it in front of a notary. Submit your signed and notarized Form 1295 with your response to this solicitation. Where requested to provide the name of the public entity with whom you are contracting, insert "City of San Antonio". Where requested to provide the contract number, provide the solicitation number shown on the cover page of this solicitation (e.g. IFB 6100001234, RFO 6100001234 or RFCSP 6100001234).

The following definitions found in the statute and Texas Ethics Commission rules may be helpful in completing Form 1295.

"Business entity" includes an entity through which business is conducted with a governmental entity or state agency, regardless of whether the entity is a for-profit or nonprofit entity. The term does not include a governmental entity or state agency. (NOTE: The City of San Antonio should never be listed as the "Business entity".)

"Controlling interest" means: (1) an ownership interest or participating interest in a business entity by virtue of units, percentage, shares, stock, or otherwise that exceeds 10 percent; (2) membership on the board of directors or other governing body of a business entity of which the board or other governing body is composed of not more than 10 members; or (3) service as an officer of a business entity that has four or fewer officers, or service as one of the four officers most highly compensated by a business entity that has more than four officers. Subsection (3) of this section does not apply to an officer of a publicly held business entity or its wholly owned subsidiaries.

"Interested party" means: (1) a person who has a controlling interest in a business entity with whom a governmental entity or state agency contracts; or (2) an intermediary.

"Intermediary," for purposes of this rule, means a person who actively participates in the facilitation of the contract or negotiating the contract, including a broker, adviser, attorney, or representative of or agent for the business entity who:

- (1) receives compensation from the business entity for the person's participation;
- (2) communicates directly with the governmental entity or state agency on behalf of the business entity regarding the contract; and
- (3) is not an employee of the business entity or of an entity with a controlling interest in the business entity.

004 - SPECIFICATIONS / SCOPE OF SERVICES

4.1 **SCOPE:** The City of San Antonio is issuing this Request for Offer (RFO) to furnish a total 25 Turnkey Refuse Collection Trucks with High Compaction Automated Side Load Body in accordance with the Building and Equipment Services Department - Fleet Services specifications listed herein. These vehicles will include cab and chassis, and refuse body. These trucks will be utilized for refuse collection by the Solid Waste Management Department. These vehicles specified are for 7 Peterbilt 320 Cab and Chassis with a Scorpion 30 Cubic Yard Capacity, 6 Mack LR613 Cab and Chassis with a Heil Durapak Python Refuse Collection Body, 6 Mack LR613 Cab and Chassis with a Scorpion 30 Cubic Yard Capacity Refuse Body and 7 Autocar ACX64 CNG Cab/Chassis with a Heil Durapak Python 26 Cubic Yard Refuse Body (NO ALTERNATIVES WILL BE CONSIDERED).

4.2 **DELIVERY DATES:**

Vendors shall deliver all awarded trucks, ready for use, no later than **285 days** after receipt of City's Purchase Order. **Time is of the essence in the performance of this contract.** City may assess liquidated damages for late delivery in accordance with section 005 – Supplemental Terms & Conditions.

4.3 **GENERAL REQUIREMENTS:**

4.3.1 The following general conditions will apply to all items within this bid unless specifically excluded within any item. Equipment shall be manufacturer's latest design, standard production model and shall have been manufactured within the last 12 months. All components shall be installed new, unused, and shall be manufacturer's standard equipment unless otherwise specified or replaced herein. Equipment is to be inspected, serviced, and adjusted in accordance with manufacturer's recommended pre-delivery checklist, and ready for operation upon delivery. Manufacturer's Statement of Origin (MSO) showing manufacture within the last 12 calendar months, and completed pre-delivery checklists for chassis and body will be required at delivery. Equipment offered under the below listed specifications will be considered unacceptable if, for any reason, the equipment's, or major component's, long term availability on the U.S. market, or in the local area, is in doubt. Vendor is required to notify the City of all production "cut-off" dates necessary for order submission.

4.3.2 **Warranty and Parts – Dealer and manufacturer must provide the maximum standard manufacturer's warranty on all components parts and service included. All components, parts, and service are required to provide, as a minimum, a 1 year unlimited mileage/hour warranty. All warranty times will start the date the vehicle is placed in service, not on the delivery date. The dealer will be notified by letter of the in-service date of each vehicle by serial number. Vendor will fully explained the warranty by attaching separate, authenticated correspondence or entering such information in the remarks section of this bid. Warranty, reliability, and replacement captive parts costs and availability shall be a consideration in award of this bid. Warranty parts and service must be available within a 50 mile radius of San Antonio City Hall and by a factory-authorized dealer identified on the Price Schedule page (NO EXCEPTIONS). All warranty repairs must be completed within 3 days from the date equipment is delivered to the vendor unless otherwise approved by the appropriate City of San Antonio maintenance superintendent. By submitting an offer, Vendors certifies that all repairs needed after the warranty period will be available within 50 mile radius of San Antonio City Hall.**

4.3.3 **Delivery - All deliveries are to be made inside the City limits of San Antonio. Vendor must deliver equipment to the following address:**

Vendor must deliver equipment to:

City of San Antonio,
Northeast Service Center,
10303 Tool Yard, Bldg #2,
San Antonio, TX 78233
Attn: Acquisitions

Delivery to a non-specified location will result in non-acceptance of the equipment by the City. All deliveries must be pre-arranged with a minimum 24-hour notification, NO EXCEPTIONS. Vehicles will be accepted 8:00 A.M. to 3:00 P.M. CT. Vehicles with more than 3700 miles accumulated on the odometer will not be accepted. All vehicles are required to have a full tank(s) when delivered to City specified location.

- 4.3.4 DOCUMENTS AND EQUIPMENT MANUALS – The supplier shall furnish (4) complete sets per vehicle type, of the following: Parts Manual, Maintenance Manual, Service Manual, and Operators Manual or on-line access per model of all equipment, accessories, and components. All bids must include complete manufacturer's specifications for each model being offered
- 4.3.4.1 DELETED.
- 4.3.4.2 The Manufacturer's Statement of Origin (MSO), Dealer Temporary license plates/tags, proper Invoice, Texas State Inspection Certificate, signed 130U form and **State Weight Certificate/slip (for trucks over one ton)** are required upon delivery of each vehicle. Any of these missing items will deem the vehicle delivered *Not as Specified* and will not be processed or accepted vehicle all required paperwork is completed and provided to Fleet Acquisition.
- 4.3.4.3 All bodies and components in this bid will be installed in accordance with the appropriate complete Vehicle Data Manual. Certification of compliance will be posted on the left door post of the vehicle. Except for manufacturer's data plates (maximum 4" x 6"), vendor or manufacturer's identifying markings (decals and plates) will not be applied to the vehicle or mounted components. Installation will be completed in compliance with Federal Motor Vehicle Department of Transportation Standards and Texas State Highway requirements. Installation of body and accessories on City furnished vehicles will be accomplished by drilling holes in the frame. Welding on or cutting of frame is **not** authorized forward of the rear spring hanger or support. Bidders will be responsible for the relocation of any truck components to facilitate installation of the body and equipment. Such relocation must be included as part of the basic bid. No dealership nameplates, markings or decals will be permitted on the vehicles.
- 4.3.4.4 Upon contract award, vendor shall provide written acknowledgement of order placement. A copy of the finalized build sheet with a Solid Waste Management representative signature confirming equipment build out shall be provided to the City prior to equipment delivery. The delivery date for the completed unit shall be communicated when the build sheet is finalized. Electrical wiring schematics that include lighting and air conditioning systems for body shall be provided at time of delivery. Electrical wiring schematics and finalized build sheet shall be provided in paper, or in Adobe PDF format.
- 4.3.5 VEHICLE INSPECTION: The vendor shall have each vehicle properly inspected in compliance with Texas motor vehicle laws. A Texas Vehicle Inspection Report shall be provided for each truck being purchased.
- 4.3.5.1 PRIOR TO DELIVERY: City of San Antonio shall be notified and allowed a final Inspection of the first unit of each configuration prior to delivery. If such final inspection occurs outside of the City of San Antonio, accommodations including airfare and lodging will be provided by the vendor at no cost to the City of San Antonio for up to 2 City employees. The final inspection will occur at the body installer's facility.
- 4.3.5.2 CHECK-IN INSPECTION: The City shall check the vehicle upon delivery to ensure compliance with this specification and any other specific requirements. The vendor shall deliver with the vehicle the manufacturer's invoice, and Manufacturer's Statement of Origin (MSO), or any official documentation to verify the fact that ordered options, GVWR rating, and other requirements have been met.
- 4.3.5.3 Failure to provide required documentation as listed may cause the delay of payment. Payment will be made within 30 days after vehicle's acceptance or receipt of correct invoice, whichever is later. Acceptance will not be made, nor payment initiated on vehicles failing to meet specifications (unless they are brought into full compliance), and all necessary documents (i.e. MSO, odometer statement, etc.) are received by the City.
- 4.3.5.4 Vendor shall remove noncompliant vehicle(s) from City premises within 5 working days after receiving written notification from Fleet Acquisition staff. If vehicle is not removed by vendor within the specified time frame, the City may arrange for vehicle to be removed and secured by a local towing and storage facility. Vendor will be responsible for payment of all related towing and storage charges. The City will not

be responsible or liable for damage or loss of noncompliant vehicles which remain on City premises, or which are removed by towing company, 5 working days after vendor notification.

- 4.3.6 As used in this bid the left and right side is determined by sitting in the operator seat.
- 4.3.7 **CONVENIENCE FEATURES:** Vehicle shall be equipped with Air ride adjustable driver and a fixed passenger seat, intermittent wipers, when applicable. All vehicles are to be equipped at the factory with air conditioning/Heater/defroster, (Maximum capacity cooling system offered by manufacturer), full headliner minimum OEM AM/FM radio, power steering, power ABS brakes, power windows, power door locks, power mirrors and manual tilt steering wheel. **Each unit shall have a minimum three sets of keys.**
- 4.3.8 **Any diesel engine being bid must conform to latest NOx EPA and GHG emission standard in effect at the time of offer. Vendor must supply a copy of the latest Emissions Certificate of Conformity for the vehicles bid. Only engines using selective catalytic reduction (SCR) technology will be accepted.**
- 4.3.9 **BASIC MAINTENANCE TRAINING:** The vendor shall hold a training seminar at a City of San Antonio facility at a time that will be agreed to by both the City and Vendor within 30 days of delivery. The training seminar shall provide maintenance staff with the basic knowledge and skills to maintain the chassis
- 4.3.10 All bids must include complete manufacturer's specifications for each model being bid.

4.4	ITEM	QUANTITY	DESCRIPTION
	1	7	Refuse Collection Trucks Peterbilt 320 Cab and Chassis Minimum 66,000-lbs. GVWR with a Scorpion 30 Cubic Yard Capacity Automated Side Loader Refuse Body (NO ALTERNATIVES)

SPECIFICATIONS REFUSE COLLECTION CAB and CHASSIS:

- 4.4.1 The below listed specifications are intended to describe a low entry, cab forward, hydraulic tilt type cab and chassis, Peterbilt 320 Cab and Chassis. Maximum insulation for the engine compartment will be used to prevent heat and noise from penetrating into the cab.
- 4.4.2 **ENGINE:** Must meet as a minimum the 2013 U.S. EPA emission standards. Ultra Low Sulfur Diesel, water cooled ,Cummins 12 Liter, minimum 350 horsepower rated at manufactured recommended RPM of 2,100, producing a minimum of 1,450 lbs./ft. of torque. A single element, dry type air cleaner and pre cleaner element to be equipped. Engine alternator to be a Delco 12V 160A. Batteries to be three (3) PACCAR Premium 12V Dual Purpose 2100 CCA with a Kissling battery disconnect switch. Diesel Exhaust Fluid (DEF) tank to be equipped to work in conjunction with Exhaust/Emissions system. Exhaust after-treatment system diesel particulate filter to be a ceramic passive regeneration type equipped with a Diesel Particle Filter (DPF) Smart Switch. A DPF Regenerative Switch Inhibitor will not be available. Limiting speed to be 65 MPH. The engine idle time will be limited to 5 minutes.
- 4.4.3 **ENGINE EQUIPMENT:** All engine hoses and tubing to be silicone and capable of withstanding the engine block heater production of 120V/ 1,500 watts. Unit equipped with a 13" Air Cleaner, (330mm) Diameter behind cab w/snorkel. Fuel-water separator, fuel heater/water separator w/vendor; Davco 382 fuel filters and hoses. Radiator / heater hoses to be silicone. Starter to be PACCAR12V. Each battery box is to have a tether devise and plastic coated cables mounted on the front of each box with length to allow cover to set on ground. A Cleartech VV Diesel Particle Filer to be mounted vertically on LH side back of cab.
- 4.4.4 **ENGINE COOLING SYSTEM:** Maximum capacity offered by the manufacturer. Coolant to be extended life, mixed type; preferably Texaco brand long life coolant with nitrates (50/50 mix) or equal, to -34 degrees F (-37 degrees C). In cab low coolant warning to be provided.
- 4.4.5 **TRANSMISSION:** Allison 4500 Series, 6 Speed; Vocation, RDS –R 5th Generation push button controls to include a direct mount oil cooler, external oil cooler, internal filter, and oil level sensor. Unit to have the largest capacity oil pan that will fit this application and filled with synthetic transmission fluid. Transmission Shift Schedule to be primary performance then secondary then economy to provide optimal performance. Generation 5 Allison output retarder for RDS Transmission w/ Prognostics to be equipped with a PTO Transmission Mounted Audible Alarm. Unit to be equipped with a Spicer 1810HD half round Driveshaft w/ Transmission Retarder. Direct mount rear

engine PTO (REPTO), furnish pump MTG provisions-include wiring switches and indicators as required. Transmission cooler must be oil to water type.

- 4.4.6 **FRONT AXLE:** Minimum 20,000 lbs. capacity 3.5in drop Factory front axle alignment to improve handling and reduce tire wear; Dana Spicer D2000F or equivalent. Axle to be equipped with Zerk fittings on tie rod ends, kingpins, and draglink ball joints. 20,000lbs shocks, Taper leaf springs, and Bendix or Meritor air cam front drum brakes (16.5 x 7) shall be used with 16,000-22,000 lbs. steer axles.
- 4.4.7 **REAR AXLE:** The rear drive axle (single & tandem) to be a Hendrickson Haulmaax HMX4600 rated at 46,000 lbs. with 54in axle spacing, 60K creep rating. Bendix Air Cam rear drum brakes; 16.5x8.6 with heavy duty brake drums and gusseted cam brackets. Driver controlled inter wheel differential lock for both RR axles, manual air valve w/ warning light
- 4.4.8 **FRAME:** Frame Rails measurements (10.75" x 3.25"x 375") to be on a steel section modulus of 17.8 cu. in. The Resisting Bending Moment (RBM) to be 2,136,000 lbs. per rail. Two (2) solid mount cable hooks are to be installed.
- 4.4.9 **CHASSIS:** The base model Peterbilt 320, 6-wheel truck with the RH sit down drive package will be offered. Wheelbase, to meet body manufactures specifications for cab to trunnion. Chassis to be equipped with a Bendix AD -IS EP Air Dryer with Heater, air tank valve guards, steep painter air tanks and nylon chassis hose. A 26in, aluminum 80 gallon fuel tank to be installed on the LH side, back of cab. The fuel cooler to be at top of fuel tank and 5in below top of frame. Diesel Exhaust Fluid (DEF) tank to be mounted on the LH side, back of cab. An aluminum space saver battery box to be on the LH side, back of cab. A rubber battery pad to be at the bottom of the battery box. Eight (8) inches below the top frame is to be a mounted space saver battery box. Steel Bumper painted Swept Back. Petcock air tank release valve to be located near battery cutoff switch.
- 4.4.10 **CAB EXTERIOR:** Unit to be equipped with fresh air Heater/Air Conditioner with radiator mounted condenser capable of 54,500 BTU/HR with silicone heater hoses. 4.5 inch rubber flares on equipped on cab. Rain Gutters to be equipped over driver and passenger doors with two (2) grab handles equipped horizontal front of cab under windshield. Rear window, back of cab, to be standard tint. Driver and passenger to be mirrors SSTL Each Side Heated and Motorized with switch on door; (2) Convex 8in SS mounted under mirror bracket. A stainless steel grille, (1) Air Horn, and dual cab fenders are to be equipped on unit. Cab tilt pump assist equipped.
- 4.4.11 **CAB INTERIOR:** Cab configuration to be ProBilt Cab RH Drive with dual door stops, door locks, tinted safety glass thru-out with cab and door mounted entry grab handles. Fully insulated doors with mounted arm rests and power windows. Adjustable Steering Column, Tilt/Telescope and electric windshield wipers with an intermittent feature to be equipped. An ergonomic center console shall be equipped. Driver seat to be a Sears C2 vinyl Air Ride, color Midnight Back Seat. The passenger seat to be a Peterbilt, Non-Air Ride. Seat Belt Color Orange (NO EXCEPTIONS). Inside interior to be IPO Gray Interior Color. Diamond Plate Floor Covering on Driver side floor. Unit to be equipped with dedicated side window defrosters and Bi-level Heater/Defroster controls.
- 4.4.12 **GAUGES & INSTRUMENTATION:** All instrumentation gauge displays are to be in English. Gauges required for proper use are: dual air pressure, voltmeter, engine coolant temperature, engine oil pressure, fuel level, electronic speedometer/odometer proximity pick-up and magnetic sensor, tachometer, transmission gauge and transmission oil high temperature light, gear shift w/ neutral to range inhibit, low air pressure indicator light and buzzer, parking brake control w/warning light, and SmartLINQ remote diagnostics.
- 4.4.13 **LIGHTING:** Head Light Lamps to be single rectangular halogen type or LED head lights if available. Front turn signals and Clearance Lights to be LED. Turn signals & flasher switches will be self-canceling. Marker lamps, amber LED roof markers, parking lamps, and corner marker lamps will be wired to battery shut-off. Unit will be equipped with running daytime lamps; identification/clearance lights; seven (7) marker and clearance, and provision for local installation of strobe lights. Unit to be equipped with (2) dome lights w/self-contained switches (one each side). All electrical connections shall be waterproof sprayed w/protective coating. No LED manual cut-off switch in cab. Side Markers, Lamps and Reflectors to meet or exceed Federal Regulations.
- 4.4.14 **RADIO/MISC:** All unit chassis keys will be keyed alike; Key Number 0002. Unit to be equipped with an AM/FM stereo radio with a CD player, WB, USB, and MP3. A mid-level speaker package to be included. Mandatory automatic radio /entertainment shut-off system when vehicle is engaged in reverse. A 5lb fire extinguisher will be mounted in cab out the operator's workspace.

- 4.4.15 **FRONT TIRES/WHEELS:** Disc wheel type, 22.5" x 9.0" Accuride 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear.
- 4.4.16 **REAR TIRES/WHEELS:** Disc wheel type, 22.5" x 9.0" HP, 5HH, 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear.
- 4.4.17 **PAINT:** Cab paint type to be single color, Axalta with a two-stage White (high gloss). Chassis Color, Axalta Two Stage Black; Bumper Color, Same as Chassis; Wheel Disc or Rim Color, Prefinished powder coat white.
- 4.4.18 **OPERATORS/MAINTENANCE/PARTS MANUALS:** Successful bidder shall furnish one set of operator's manual per unit covering all major components of the vehicle (cab & chassis) for each unit delivered. Successful bidder shall also provide four (4) complete sets of Parts and Maintenance manuals per model of all equipment, accessories, and major components, or four (4) USB drives, or a prepaid 8-year subscription to manufactures' maintenance/parts web site at no cost to the City which will be required at time of delivery. Parts manual shall have manufactures' parts breakdowns and part numbers listed.
- 4.4.19 Engine warranty: Cummins 5yr/ 300K Miles
- 4.4.20 Transmission Warranty: Allison 5 year Edge warranty.

Scorpion 30 Cubic Yard Capacity Automated Side Loader Refuse Body (NO ALTERNATES).

SPECIFICATIONS REFUSE BODIES:

- 4.4.21 The below list specifications for a fully automated side loading packer body equipped with a mechanical lifting device capable of handling standardized American brand, two-bar, 30- through 300-gallon refuse carts. The body must be capable of collecting, compacting, and transporting refuse to a landfill or transfer station and hydraulically dumping the load. Acceptable Scorpion ASL (NO ALTERNATES).
- 4.4.22 **CAPACITY:** The packer body to have a capacity, excluding the receiving hopper, of not less than 30-cubic yards. Hopper to have a minimum capacity of 3-cubic yards. The structural integrity of the body must allow high density loading of up to 1,000-pounds per cubic yards of normal refuse.
- 4.4.23 **BODY CONSTRUCTION:** The body interior shall have a smooth flat floor. The sides and roof shall be smooth construction. All materials shall be steel (NO ALTERNATIVES). No hydraulic cylinders, valve, or other hydraulic components shall come in contact with refuse packed into the body. Body roof shall be a minimum 12 gauge hi-tensile sheet fully welded. Body sides shall be minimum 10 gauge hi-tensile sheet, fully welded. Body floor shall be flat with radius corners at the side walls. Floor shall be a minimum ¼" AR 400 steel plate. Floor longitudinal shall be 10" at 20lbs/ft. structural channel. Longitudinal shall be a minimum 2.7" wide sill base.
- 4.4.24 **HOPPER:** The hopper shall be capable of accepting the contents of a fully loaded 300 gallon container in one continuous motion without spillage over the hopper lip. Hopper shall be of flat floor and vertical sidewalls. The front of the hopper shall be a radius and free of any corners allowing operation of the lifting divide from conventional left hand or right hand drive chassis. Hopper shall be designed to properly handle thirty (30) gallon through three hundred (300) gallon automated side loader containers. Hopper floor shall be a minimum ¼" AR 400 steel plate. Hopper floor longitudinal shall be 10" at 20lbs/ft. structural channel. The curb side hopper wall shall be equipped with a replaceable rubber flap constructed of 3 ply cord reinforced neoprene rubber. The hopper and body floor are to be water proof to a minimum 24" above floor.
- 4.4.25 **PACKER:** Blade cycle time from sweep to sweep shall not exceed (16) seconds total elapsed time when the body is empty or partially full. Packer must operate on the run. Packer blade cycle time from sweep to sweep shall not increase beyond (16) seconds as the packer body reaches maximum capacity. The sweep blade shall be fabricated from a minimum ¼" AR400 steel plate. The packing assembly grease maintenance shall be accessible from ground level without the use of a ladder or platform; and being greased without entering the hoppy or under body. The packing system shall be activated by four (4) hydraulic cylinders side mounted to the body and connected to the sweep blade. The cylinders shall be 4" diameter bore x 2" rod x 29" stroke for the slider cylinders and 14 3/8" stroke for the sweep cylinders.
- 4.4.26 **BUSTLE TAILGATE:** The tailgate must be one piece; top hinged and shall open approximately 110°. Tailgate shall be constructed of minimum 10 gauge hi-tensile steel on rear and side walls. The tail gate roof, floor, and

sides shall be reinforced by a 2" x 6" x ¼" structural tube mainframe minimum. The tailgate shall be secured to the body by two (2) sets of hinges at the roof line. The heavy duty replaceable pop-in one piece rubber seal will be installed the full length of the bottom and 24" up the sides of the tailgate to prevent leakage. Bolt on or bend over tab seal retainer is acceptable. The tailgate shall be raised and lowered, locked and unlocked by hydraulically actuating two (2) double acting cylinders with a minimum 3-1 12" bore x 18.5" stroke x 1.50" diameter chrome plated rod. The cylinder must retract to unlock and raise the tailgate. Cylinder design shall include an orifice fitting to prevent the rapid descent of the tailgate in the event of a hydraulic failure. Locking and un-locking of tailgate to be controlled from cab of truck without manual removal of pin at tailgate lock. Tailgate props shall be provided to be manually lowered and secured in the raised position by a positive locking device.

4.4.27 **LIFTING MECHANISM:** The lift arm and guide rail shall be of tube type construction fabricated from Hi-Tensile steel minimum. The standard lifting mechanism shall be capable of lifting round containers ranging from 30 to 300 gallons. The lifting mechanism shall be capable of individually controlled motion for extending, grabbing, raising, dumping and returning a container from any position. The lifting mechanism shall have the ability to combine multiple functions into a single switch for ease of operation. The lifting capacity shall be a minimum of 1,600 pounds at any extension. The lift shall have a minimum reach capable of a 96" reach from the side of the body to the center line of a 90 gallon container. G The lifting mechanism shall be powered by four (4) hydraulic cylinders (Reach - 2" bore x 70" stroke, Raise - 2.5" bore x 30" stroke, Dump - 2-1/2" bore x 8" stroke, Grab - 2-1/2" bore x 8" stroke). Gripper Cylinder to be internally cushioned when releasing. The lifting mechanism shall perform the following lift cycle functions in under eight (8) seconds at idle:

- 4.4.27.1 Reach to container
- 4.4.27.2 Grab the container
- 4.4.27.3 Lift the container to the full dump position
- 4.4.27.4 Lower the container to the full down position
- 4.4.27.5 Release the grabbers from the container
- 4.4.27.6 Retract to body
- 4.4.27.7 The unit will have an audible alarm and flashing light in cab to indicate the lifting arm is out when the vehicle is in motion.

4.4.28 **BODY HOIST:** The body shall be raised by one 6.5" bore, chrome plated single acting three stage telescopic cylinder. The body shall achieve a dump angle of approximately 35° and be lowered by gravity. Bodies requiring a greater dump angle to eject the load are unacceptable. (NO ALTERNATIVES) Cylinder design shall include an orifice fitting in the base port which will prevent the rapid descent of the body in the event of a hydraulic failure. A "one man operation" 2" x 3" structural tube welded assembly body prop shall be provided to hold the empty body in a partially raised position for any underbody service.

4.4.29 **HYDRAULICS:** The maximum operating pressure of the system shall be 2400 PSI for the Arm Pump and 2800 PSI for the Packer circuit. The hydraulic pump shall be a Parker Hydraulic Pump with electronic flow control or equal. All hydraulic tubes will be secured with bulkhead fittings on both ends and double bolted clamps to prevent movement, vibration, abrasion, and excessive noise. All hydraulic tubes shall be clear coated with an environmentally approved Zinc coating. All hydraulic hoses shall conform to SAE standards for designed pressure. The hydraulic oil reservoir shall have a gross capacity of 55 gallons. The tank shall be complete with a screened fill pipe and cap, filter breather, clean out cover, oil level sight and temperature gauge, and suction line shut-off valve. Shut off valve to be accessible from outside of body. Tank to be located above pump and non-pressurized to prevent cavitations. Units requiring operator to crawl under chassis to shut valve off are unacceptable. NO EXCEPTIONS. The hydraulic system shall be protected by a ten (10) micron in tank, return line filter along with a 100 mesh (140 micron) reusable oil strainer in the suction line. The hydraulic system shall operate at an acceptable temperature without the need for external hydraulic oil cooling devices. All hydraulic components including tubing, hoses and wiring shall be free of paint and overspray for ease of maintenance. Units where components are painted over are unacceptable. NO EXCEPTIONS.

4.4.30 **LUBRICATION:** All lubrication to be performed from a ground level position without the use of ladder or platform. All lube points to be accessible without movement of arm, body or tailgate for position. Bodies requiring technicians to go inside or under body for lubrication are unacceptable. NO EXCEPTIONS

4.4.31 **CONTROLS:** The lift controls shall be electronic over hydraulic and shall operate the lift arm functions in a controlled "smooth shift" fashion without use of hydraulic cushioned cylinders. All hydraulic valves shall be solenoid controlled electronic over hydraulic valves. Pneumatically controlled valves are not acceptable. The body controls shall be electronic over hydraulic and located in the cab convenient to the operator. All valve components are to be easily serviceable without changing entire valve body. Valves are to be of the sectional design rather than mono-block for serviceability. Truck shall be equipped with Electronically controlled grip pressure adjustment

- 4.4.32 **ELECTRICAL:** The body functions in-cab control center shall be provided for system functions. Return line indicator in cab. All body controls shall be electronic and in easy reach of the operator. Large control box shall be free of obstructing driver view. For ease of service, the lift arm and body function electrical to be independent from all lighting electrical. Separate harnesses for both circuits required. Protected wiring on all applications. All electrical components including wiring shall be free of paint and overspray for ease of maintenance.
- 4.4.33 **LIGHTING:** All lighting to comply with Federal and local lighting requirements. All lighting to be in shock mounted rubber grommets. All lights to be LED including Strobe and Work lights. LED lighting at Hopper and at curbside. All lighting and reflectors must be provided in accordance with FMVSS #108 and ANSI 245.1-1999, plus mid body turn signals on each side of the body and a high center brake light on the rear. Included to be, four (4) each, minimum 4-inch diameter, minimum 10-diode, LED, combination tail/stop lamps to be installed. Two (2) on the left and right hand side of the upper portion of the tailgate and two (2) on the left side and on the right side below the tailgate. Turn signals will be separate 4-inch Red LED lamps and placed next to each stop/tail light. Each light must be protected by expanded metal shields that are easily removable to repair lights when necessary. A lighted license plate bracket to be installed centered left to right on the bottom third of the tailgate. A minimum of 2 (two), high output, white backup lights to be installed. Four (4), flush mounted amber strobe lights are to be equipped. Two (2) to be flush mounted at rear with user selectable flash patterns and to be wired to activate whenever brake pedal is applied. Two (2) strobe lights to be located on the front grill and are to be wired to the battery cutoff switch. Strobes will be set to "three flash, pause" pattern. There will be no switch inside the cab that will turn off strobe lights. Clearance, marker, stop, back up, and directional lights to be LED with Lexan lens, shock mounted in a protective housing, the entire unit to be replaceable pop out style. All lighting to be wired to standard chassis controls for the type lighting being installed. Two (2) wide-angle halogen or LED work lights shall be attached to the body in such a manner to provide light at night during the container lift and dump cycle. Controls for spot lights to be mounted in the cab. Reflectors provided shall be rivet secured type; adhesive styles are unacceptable. Reflective conspicuity tape must be applied along both sides and across the back of each packer body.
- 4.4.34 **REAR UNDERRIDE AND THE GUARD:** The body shall be equipped with a rear underride guard as standard equipment, to meet Federal Motor Carrier Safety Regulation 49CFR393.86. TTMA RP No. 41-02, and SAE J682 MAY.11.- Rear wheel splash and stone throw protection.
- 4.4.35 **PAINTING:** The entire unit shall be properly cleaned of all dirt, grease, and sand blasted prior to Powder Coating. The entire unit shall be treated with weather resistant Powder Coat primer for adverse weather protection. The complete unit shall be coated with a low VOC Powder Coating process to a minimum of 4 mils. The body and lifting mechanism shall be Powder Coated to be painted DuPont color number G-8845-WM.
- 4.4.36 **ACCESSORIES:**
- 4.4.36.1 Rear Mud Flaps
 - 4.4.36.2 Front of Rear Axle Mud Flaps
 - 4.4.36.3 A lockable, water tight, toolbox, approx. 18" x 18" x 20" to be securely mounted to rear bumper of the refuse body
 - 4.4.36.4 Rear Center Mud Flap over Brake Pads
 - 4.4.36.5 One 20 lbs. fire extinguisher to be installed on body, curbside, horizontally.
 - 4.4.36.6 3rd Eye Quad color video camera system, with four (4) mounted cameras, installed to ensure proper and safe operation of the truck. One camera to be mounted high on the tailgate to assist in backing up, one camera to be installed to providing a view of the hopper operation and two (2) cameras, one on each side of the cab chassis facing rearward
 - 4.4.36.7 Cameras and connectors must be sealed and waterproof. Flat screen, minimum 7-inch monitor to have extended visor and swivel base and be reachable and viewable from either driver position. Automatic video feed switch feature, with optional remote switch, must be capable of switching between cameras based on operation controls, transmission setting, or operator's preference. Monitor to have a 4-way split screen capability and provision to add another camera without modification. Cameras to have built in infrared night vision, minimum 1300 field of view, and sun shade device

4.4.36.8 The hopper camera to provide view when arm is in the lift and dump positions. The rear view camera must be activated when the transmission is shifted to reverse, view from the rear camera to be on the monitor when the truck is in transit (i.e. the truck is in motion and the hydraulic system is not engaged). A back up detection system to be installed - Rear object detection system, beeps faster the closer you get to an object while reversing; it will be ties into the camera system specified.

4.4.36.9 Adequate sized wheel chock to support a minimum 60,000 GVWR shall be supplied with mounting brackets on the street side of the body.

4.4.37 **Extended Warranty:** The complete Automated Side Loader Refuse Body shall be warranted for a period of 3 years beginning upon City's acceptance of each vehicle. Acceptance may be in writing, designating the date of acceptance. If none is provided, the date of issuance of payment shall be deemed the acceptance date. The warranty shall cover all parts, components, cylinders, body structure and labor for 3 years against defects in materials and workmanship. Costs of transportation for warranty work, if performed outside of the City, shall be at Vendor's expense.

4.5	ITEM	QUANTITY	DESCRIPTION
	2	6	Refuse Collection Trucks Mack LR613 Cab and Chassis Minimum 66,000-lbs. GVWR with a Heil Durapack Python Refuse Collection Body 28 plus Cubic Yard, High Compaction, Automated, Side Load (NO ALTERNATIVES)

SPECIFICATIONS REFUSE COLLECTION CAB and CHASSIS:

4.5.1 The below listed specifications are intended to describe a low entry, cab forward, hydraulic tilt type cab and chassis, Mack - LR613 Cab and Chassis. Maximum insulation for the engine compartment will be used to prevent heat and noise from penetrating into the cab.

4.5.2 **ENGINE:** Must meet as a minimum the 2013 U.S. EPA emission standards. Ultra Low Sulfur Diesel, water cooled, minimum 345 horsepower rated at manufactured recommended RPM (1,500-1,700), producing a minimum of 1,275 lbs. of max torque @ 1,100-1.350 RPM output. A front mounted engine PTO (FEPTO), must be equipped with power take off hydraulic pump, furnish pump MTG provisions-include wiring switches and indicators as required. A single element, dry type air cleaner and pre-cleaner element to be equipped. Engine alternator to be a minimum 12V 160A. Batteries to be three (3) Mack 12V 760/2280 CCA Threaded Stud Type. Starter to be 12 volts. DEF fluid tank to be equipped to work in conjunction with Exhaust /Emissions system. Exhaust after-treatment system diesel particulate filter to be a ceramic passive regeneration type equipped with a Diesel Particle Filter Smart Switch. A DPF Regeneration Switch Inhibitor will not be available. Limiting speed to be 65 MPH. The engine idle time will be limited to 5 minutes.

4.5.3 **ENGINE EQUIPMENT:** All engine hoses and tubing to be silicone (except heater & radiator) and capable of withstanding the engine block heater production of 120V/ 1,500 watts. Unit equipped with a 13" Air Cleaner, (330mm) Diameter behind cab w/snorkel. Fuel-water separator, fuel heater/water separator w/vendor prim & Mack SEC fuel filters and hoses. Radiator / heater hoses to be silicone. Starter to be a 12V Delco39MT-MXT. Each battery box is to have a tether devise and plastic coated cables mounted on the front of each box with length to allow cover to set on ground. Diesel Particle Filer to be mounted vertically on LH side back of cab.

4.5.4 **ENGINE COOLING SYSTEM:** Maximum capacity offered by the manufacturer. Coolant to be extended life, mixed type; preferably Texaco brand long life coolant with nitrates (50/50 mix) or equal, to -34 degrees F (-37 degrees C). In cab low coolant warning to be provided.

4.5.5 **TRANSMISSION:** Allison 4500 Series, 6 Speed; Vocation, RDS -R 5th Generation push button controls to include a direct mount oil cooler, external oil cooler, internal filter, and oil level sensor. Unit to have the largest capacity oil pan that will fit this application and filled with synthetic transmission fluid. Transmission Shift Schedule to be primary performance then secondary then economy to provide optimal performance. Generation 5 Allison output retarder for RDS Transmission w/ Prognostics to be equipped with a PTO Transmission Mounted Audible Alarm. Unit to be equipped with a Spicer 1810HD half round Driveshaft w/ Transmission Retarder. Transmission cooler must be oil to water type.

- 4.5.6 **FRONT AXLE:** Minimum 20,000 lbs. capacity equipped with Mack FXL20 wide pivot center straight spindle/unitized bearings. Front springs to be Mack Taper leaf 20,000 lbs. ground load rating, static load cushion equipped. Front Brakes to be Meritor front air disc with dust shields.
- 4.5.7 **REAR AXLE:** Minimum 46,000 lbs. capacity and equipped with a rear drive axle. Rear disc brakes to be Meritor and equipped with the 4S/4M system sensing both rear axles w/ wheel end sensors. V-Rods for m drive suspension and driver controlled inter wheel differential lock both RR Axles with manual air valve w/warning lights to be equipped.
- 4.5.8 **REAR SUSPENSION:** Single & tandem Mack M ride 46 parabolic 3 leaf spring suspension with a 46,000 lbs. capacity. Suspension to have a power divider lockout w/ warning light and buzzer system, high mount rear brake chambers, a 54" axle spacing (body wheelbase), 4 spring break chambers; MGM model TR-T (tamper resistant). High Mount Rear Brake Chambers are to be equipped. (rear axle only)
- 4.5.9 **FRAME:** Frame Rails measurements (13.375" x 3.25"x 375") to be on a steel section modulus of 23.49 cu. in. The Resisting Bending Moment (RBM) to be 2,818,800 lbs. per rail. Inside frame reinforcement to be ¼" steel inside channel. Unit must be a minimum 54" axle spacing (body wheelbase). A power divider lockout w/warning light and buzzer (includes in cab manual air valve) and a 4S/4M system sensing both rear axles w/ wheel end sensors is to be equipped. Driver controlled inter wheel differential lock equipped on both RR Axles, manual air valve w/warning light. V Rods for m-drive suspension (both axles) equipped.
- 4.5.10 **CHASSIS:** Base model Mack LR613 6-wheel truck with the RH sit down drive package will be offered. Wheelbase, to meet body manufactures specifications for cab to trunnion. The front bumper is to be painted steel flush with 4 inch extensions. MTD 59"/BBC (Corp 94"x15.5"); Crossmembers are to be ½" steel, intermediate 1/8" below rail, and the first XMBR BOC RR 38.17" from AL line of the frame rail clearance. A skid plate to be located under radiator- RH side. Unit to be equipped with a front tow pin. The fuel tank is to be mounted on the LH side of the unit and must hold a minimum 70 gallons of diesel. The tank is to be rectangular in shape and not exceed the measurements of 26" x 24". An Aeroquip Fire resistant tank fuel draw/return system tank will be mounted on the left side (includes sump). Tank will be 6.6 gallons and 22" in diameter and mounted behind LH fender- 5" below top rail. Air lines must be extruded nylon tubing. Single extrusion air lines are be 1/8" & ¼" and the larger extrusion air lines are to be 3/8" and have a polyester reinforced center. Unit to be equipped with a dual air brake system and a Meritor/Wabco Heated Air Dryer 1800 W/coalescing oil filter. The anti-lock brake system and air control valves & switches where possible are to be Bendix. Manual Drain Valves are to be accessible on all tanks, in manifold w/label. Battery Boxes are to be steel base with molded plastic covers. Each single battery box to hold 3 batteries max. Perp to frame 11" from NTOF; The Flaming Red River Big Switch wired on positive side; Battery Switch Warning Light on in the run position- furnished on or near battery box. Quick connect coupling to be located in a protected area near the front bumper but not attached to the front bumper (Milton 747 or proven equal) for operating brakes during tow.
- 4.5.11 **CAB EXTERIOR:** Unit to be equipped with extended cab integral A/C and integral cab heater defroster w/ sanden rotary compressor. An air restriction monitor (intake) and a graduated lock-up (air cleaner intake mounted) are to be equipped. Exterior mirrors to motorized Moto Mirror type and will be mounted RH/LH HTD on retractable arms and brackets. Rectangular convex mirrors will be mounted below lower arm on both RH & LH doors. Unit will have 12" fender mounted mud flaps. The rear window will be a fixed type and both LH & RH roll-up windows will be electrical. Both windshield side and rear windows will be tinted. Aluminum RH & LH exterior grab handles, behind door and interior RH and LH windshield post and RH on instrument dash. Exterior grill to be standard finish. A CH style cowl will be mounted on the LH side of the cab. A radio antenna capable of AM/FM reception will be mounted. A wire rope, minimum 7/8"-inch diameter loop shall be provided and fastened to the center tow hook to tow equipment. Back-up Alarm to be equipped. (Preco, model 1059 preferred.)
- 4.5.12 **CAB INTERIOR:** Right Hand Drive w/Left Hand passenger seat. Driver Seat to be Bostrom Talladega 910 (Mid-Back) Air Suspension model. Rider Seat, Mack Fixed Seat or equivalent. Seat Covering are to be all cloth; Black. For safety purposes, seatbelts are to be bright Orange/Retractors, lap and shoulder for driver and rider seat. Sun Visor are to be fold down type; both sides. Turn signal switches shall be the manually cancelling type. Cab ventilation will be equipped with left-hand & right hand door vents. Cab windshield wipers are to be 2 speed electric motor controlled with an intermittent feature and a w/7 QT reservoir. Unit will have a heater w/ integral defroster for cab climate control. Driver will have access to two (2) different horns; one (1) air horn twin-under cab trumpet w/roof mounted lanyard and one (1) dual tone horn. A 5-way binding post for CB radio shall be equipped. Every unit will have a DOT warning kit securely mounted in the cab.
- 4.5.13 **GAUGES & INSTRUMENTATION:** All instrumentation gauge displays are to be in English. Gauges required for proper are: dual air pressure, voltmeter; engine coolant temperature, engine oil pressure, fuel level, tachometer,

transmission gauge & "transmission oil high" temperature light, gear shift w/ neutral to range inhibit, low air pressure indicator (light and buzzer); parking brake control w/warning light, and electronic speedometer/odometer proximity pick-up and magnetic sensor.

- 4.5.14 **LIGHTING:** Head Light Lamps to be single rectangular halogen type or LED head lights if available. Front turn signals and Clearance Lights to be LED. Turn signals & flasher switches will be self-canceling. Marker lamps, amber LED roof markers, parking lamps, and corner marker lamps will be wired to battery shut-off. Unit will be equipped with running daytime lamps; identification/clearance lights; seven (7) marker and clearance, and provision for local installation of strobe lights. Unit to be equipped with (2) dome lights w/self-contained switches (one each side). All electrical connections shall be waterproof sprayed w/protective coating. No LED manual cut-off switch in cab. Side Markers, Lamps and Reflectors to meet or exceed Federal Regulations;
- 4.5.15 **RADIO/MISC:** All unit chassis keys will be keyed alike; Key Number 0002. Unit to be equipped with an AM/FM stereo radio with a CD player and equipped with a weather band and audio input. Mandatory automatic radio /entertainment shut-off system when vehicle is engaged in reverse. A 5lb fire extinguisher will be mounted in cab out the operator's workspace.
- 4.5.16 **FRONT TIRES/WHEELS:** Disc wheel type, 22.5" x 9.0" Accuride 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear.
- 4.5.17 **REAR TIRES/WHEELS:** Disc wheel type, 22.5" x 9.0" HP, 5HH, 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear.
- 4.5.18 **PAINT:** Cab paint type to be single color, Mack White (high gloss). Chassis color to be Mack Black (paint code 6AB-Z1X). Bumper color to be the same as the chassis. Unpainted Aluminum, or Chrome on unit. Wheel Disc or Rim Color to be prefinished powder coat white.
- 4.5.19 **OPERATORS/MAINTENANCE/PARTS MANUALS:** Successful bidder shall furnish one set of operator's manual per unit covering all major components of the vehicle (cab & chassis) for each unit delivered. Successful bidder shall also provide four (4) complete sets of Parts and Maintenance manuals per model of all equipment, accessories, and major components, or four (4) USB drives, or a prepaid 8-year subscription to manufactures' maintenance/parts web site at no cost to the City which will be required at time of delivery. Parts manual shall have manufactures' parts breakdowns and part numbers listed.
- 4.5.20 Engine Warranty, 2Yr. 250,000 Mile Engine Warranty
- 4.5.21 Transmission Warranty, Allison 5 Yr. Edge Warranty

Heil Durapak Python Refuse Collection Body 28 + Cubic Yard, High Compaction, Automated, Side Load (NO ALTERNATES).

SPECIFICATIONS REFUSE BODIES:

- 4.5.22 The below listed specifications are intended to describe a refuse collection body equipped with a mechanical lifting device capable of handling standardized American brand, two-bar, 30- through 110-gallon refuse carts. The body must be capable of collecting, compacting, and transporting refuse to a landfill or transfer station and hydraulically ejecting the load. Ejector cylinder must travel entire length of body. Dump type unloading will not be accepted. Acceptable model Heil Durapak Python (NO ALTERNATES).
- 4.5.23 **CAPACITY:** The packer body to have a capacity, excluding the receiving hopper, of not less than 28-cubic yards. Body will have a 150,000-psi body liner, a 3/16" 150,000-psi hopper floor liner, and manufacturer's severe duty packer wear kit.
- 4.5.24 **BODY CONSTRUCTION:** No hydraulic cylinders, valves, or other hydraulic components will come in contact with refuse packed into the body. Follower Arm Extension to follow packer extension/retract movement to reduce gap on both sides of packer. All body hinges, cylinder rod ends, cylinder base trunnions, and high cycle pivot points must be equipped with accessible grease fittings. Fittings not easily accessible must have a remote lubrication device installed. Street Side lube manifold for packer cylinders inside body, to be accessible from body side door

without entry to refuse body. An in-cab mounted light and audible alarm to be provided to indicate that the tailgate is not fully closed and locked.

- 4.5.25 **HOPPER:** Minimum capacity of 5-cubic yards. The structural integrity of the body must allow high density loading of up to 1,000-pounds per cubic yards of normal refuse. Maximum body, loader and tailgate weight exclusive of special options must not exceed 16,000-pounds. Hopper hood will be provided to prevent debris from blowing out. Manually operated hopper cover, with extended handle, will also be provided inside hopper hood. Hopper cover shall be operated while standing on the ground.
- 4.5.26 **PACKER:** Minimum of 900-lbs. per cubic yard as determined by the City of San Antonio. The packing capability of each body purchased will be re-evaluated at periodic intervals during the 12-month warranty period after the unit goes into service. Should the City determine that a body does not meet the minimum compaction requirements during any of these tests, the vendor will be advised and be required to take action to repair the body in question so that it will meet the minimum compaction requirements. Once the repair is accomplished to the satisfaction of the City, the warranty on the body will then be extended for a 12-month period from the date of re-acceptance by the City. The contractor will have the right to inspect compaction units during normal City working hours to assure that proper factory recommended service and maintenance is being performed. Abuse and damage not attributable to faulty design, materials or workmanship will exempt warranty expectations and must be documented by the vendor. A damage statement will be provided to the service center superintendent within 48 hours of inspection.
- 4.5.27 **LIFTING MECHANISM:** The lift base must support the lift arm, the dump arm, the level pivot, the level link, the pivot link and the reach link. The lift base to rest atop the chassis frame rails for vertical distribution of loads induced into the chassis frame rails. Lift mechanisms mounted alongside the chassis frame rails will not be accepted. The lift base shall consist of a .75" x 16" x 61", 50,000 PSI minimum yield, surface plate for chassis frame mounting and shall be reinforced by four (4) vertical ribs for rigidity and arm pivot placement. The ribs shall utilize .75" x 6.5", 50,000 PSI minimum yield steel. The front-to-rear mounting length shall not exceed 18". Stops will be welded to the vehicle frame to prevent arm assembly from shifting. Arm Stopper shall be 1/2" square rod or larger. The front-to-rear mounting length must not exceed 18-inches. Grip Rite Gripper by Heil.
- 4.5.28 Interlock shall be in-place to eliminate the grabbers from opening when in the dump position. The lifting mechanism must be capable of lifting containers ranging from 30-110 gallons at level, or 16-inch below and above level container placement, and to be capable of extending, grabbing, raising, dumping and returning a container from any position without the need to retract the lift arm and perform the following lift cycle functions in a maximum 12 seconds at engine idle as follows:
- 4.5.28.1 Reach to container
 - 4.5.28.2 Grab the container
 - 4.5.28.3 Lift the container to the full dump position
 - 4.5.28.4 Lower the container to the full down position
 - 4.5.28.5 Release the grabbers from the container
 - 4.5.28.6 Retract to body
 - 4.5.28.7 The unit will have an audible alarm and flashing light in cab to indicate the lifting arm is out when the vehicle is in motion
- 4.5.29 **HYDRAULICS:** The lifting capacity to be a minimum of 750-pounds at the 9-foot full reach extension to minimize high over turning loads on the truck chassis. The lifting capacity must progressively increase as the reach decreases to achieve a minimum of 1,600-pound lift at 2-foot reach.
- 4.5.29.1 The hydraulic pump to be a conventional "on-command" tandem vane design to operate-in-gear, at-idle. The lift hydraulics must operate at a working pressure of minimum 2,300-PSI. The body hydraulics to operate at a working pressure of minimum 2,500-PSI. All hydraulic tubes will be securely clamped to prevent vibration, abrasion, and excessive noise. All hydraulic hoses must conform to SAE standards for designed pressure. Bending radius not to exceed one half that of the S.A.E. standards. This requirement will prevent fiat spots in the hoses. The hydraulic oil reservoir to have a minimum 50-gallon gross capacity and a net capacity of 45-gallons minimum. The tank must be complete with a screened fill pipe and cap, filter breather, clean out cover, oil level sight and temperature gauge.
 - 4.5.29.2 The hydraulic system must be protected with a, minimum 6-micron in-tank return line filter along with a minimum 100-mesh (140-micron) reusable oil strainer in the suction line. A magnet to be used to eliminate contamination and will be accessible for cleaning. One quarter turn ball valves must be installed on suction and outlet lines and to isolate the reservoir and filter assembly for service and

maintenance. The return line filter to also include an in cab filter by-pass monitor, which will alert the operator or service personnel when the filter is in need of replacement. A hydraulic pump shut down system must also be installed which will prohibit prolonged operation of the hydraulics when the filter is in the by-pass mode. Quick disconnect fittings to be installed so that a pressure gauge can be easily connected without the use of tools or the need to remove hydraulic fittings.

- 4.5.30 **LUBRICATION:** All lubrication to be performed from a safe position with the use of a manufacturer supplied access ladder or platform. All lube points to be accessible without movement of arm, body or tailgate for position. Bodies requiring technicians to go inside or under body for lubrication are unacceptable. NO EXCEPTIONS
- 4.5.31 **CONTROLS:** Joystick, air over electronic; Lift controls to be located in the cab and convenient to the operator; Joystick shall operate the lift arm functions in a controlled "smooth shift" fashion without use of hydraulic cushioned cylinders. All hydraulic valves shall be solenoid controlled electronic over hydraulic valves. Pneumatically controlled valves are not acceptable. The body controls shall be electronic over hydraulic and located in the cab convenient to the operator. All valve components are to be easily serviceable without changing entire valve body. Valves are to be of the sectional design rather than mono-block for serviceability. The joystick must be properly labeled and indicate the direction of travel as follows: Reach (extend-retract) (in-out), Grab (grip release), Lift arm (up-down) (lift-lower). The lift controls must be self-centering type, returning to the neutral position when released. Operating the lift controls while packing must reverse and return the packer to the start position. The packer push button controls to be electrical over hydraulic and located in the cab convenient to the operator. Separate push buttons must be provided for "Pack" and "Retract" to provide complete packer panel movement control in either direction. Pushing the "Pack" button must automatically extend and retract the packer panel for a complete cycle. Tailgate raise and tailgate lock controls to be electric over hydraulic. Toggle switches to be used to control each function individually. The dumping system provided shall be full ejecting. The load shall be dumped via cab mounted, electrical controls which raise the tailgate and packer body. The tailgate shall be unlatched and opened/closed hydraulically. The controls shall be located in the cab to allow the operator to remain in the cab and seated during the unloading procedure. Tailgate lock and lifting controls shall be isolated from all other controls and shall be designed to eliminate the possibility of accidental operation. Manually operated latching or restraining devices are not acceptable. Remote switch for arm activation will be installed inside of cab on near the right side door.
- 4.5.31.1 A mobile controller with control center and display shall be provided in the cab to monitor system functions and operation of the truck. This controller shall be able to withstand the vibration, moisture, dirt ingress and climate variations that are present in the cab of the vehicle. The controller shall use solid-state technology with no mechanical relays or switches inside the controller. This controllers shall use IEC 61131-3 software and will have SAE J1939 built into the controller for communication to the vehicle power train. The mobile controller shall be installed inside the truck cab and shall display self-diagnosing error codes in readable text format which identify the potential trouble source. Both audio and text alerts must be made available to aid in locating trouble source.
- 4.5.31.2 A non-resetting counting device will be furnished to track grabber arm cycling. Counter will be securely mounted in cab and advance one number each time the arm is lowered and grabber is opened.
- 4.5.32 **ELECTRICAL:** The body functions in-cab control center shall be provided for system functions. Return line indicator in cab. All body controls shall be electronic and in easy reach of the operator. Large control box shall be free of obstructing driver view. For ease of service, the lift arm and body function electrical to be independent from all lighting electrical. Separate harnesses for both circuits required. Protected wiring on all applications. All electrical components including wiring shall be free of paint and overspray for ease of maintenance.
- 4.5.33 **LIGHTING:** All lighting to comply with Federal and local lighting requirements. All lighting to be in shock mounted rubber grommets. All lights to be LED including Strobe and Work lights. LED lighting at Hopper and at curbside. All lighting and reflectors must be provided in accordance with FMVSS #108 and ANSI 245.1-1999, plus mid body turn signals on each side of the body and a high center brake light on the rear. Included to be, four (4) each, minimum 4-inch diameter, minimum 10-diode, LED, combination tail/stop lamps to be installed. Two (2) on the left and right hand side of the upper portion of the tailgate and two (2) on the left side and on the right side below the tailgate. Turn signals will be separate 4-inch Red LED lamps and placed next to each stop/tail light. Each light must be protected by expanded metal shields that are easily removable to repair lights when necessary. A lighted license plate bracket to be installed centered left to right on the bottom third of the tailgate. A minimum of 2 (two), high output, white backup lights to be installed. Four (4), flush mounted amber strobe lights are to be equipped. Two (2) to be flush mounted at rear with user selectable flash patterns and to be wired to activate whenever brake pedal is applied. Two (2) strobe lights to be located on the front grill and are to be wired to the battery cutoff

switch. Strobes will be set to "three flash, pause" pattern. There will be no switch inside the cab that will turn off strobe lights. Clearance, marker, stop, back up, and directional lights to be LED with Lexan lens, shock mounted in a protective housing, the entire unit to be replaceable pop out style. All lighting to be wired to standard chassis controls for the type lighting being installed. Two (2) wide-angle halogen or LED work lights shall be attached to the body in such a manner to provide light at night during the container lift and dump cycle. Controls for spot lights to be mounted in the cab. Reflectors provided shall be rivet secured type; adhesive styles are unacceptable. Reflective conspicuity tape must be applied along both sides and across the back of each packer body.

4.5.34 **REAR UNDERRIDE AND THE GUARD:** The body shall be equipped with a rear underride guard as standard equipment, to meet Federal Motor Carrier Safety Regulation 49CFR393.86. TTMA RP No. 41-02, and SAE J682 MAY.11.- Rear wheel splash and stone throw protection

4.5.35 **PAINTING:** A high luster finish coat must be applied using acrylic urethane, or proven equal. An ample amount to be applied to achieve a minimum dry thickness of two and one-half (2) 1 mil and will result in a finish of 3) 1mil minimum thickness and up to 4-mil maximum finish. Body and lifting mechanism to be painted DuPont color number G-8845-WM.

4.5.36 **ACCESSORIES:**

4.5.36.1 A lockable, water tight, toolbox, approx. 18" x 18" x 20" to be securely mounted to rear bumper of the refuse body. Placement to be approved prior to completion of first unit.

4.5.36.2 A 20 lb. Fire extinguisher to be installed on body, curbside, front of body behind first bolster mounted horizontally.

4.5.36.3 3rd Eye Quad color video camera system, with four (4) mounted cameras, installed to ensure proper and safe operation of the truck. One camera to be mounted high on the tailgate to assist in backing up, one camera to be installed to providing a view of the hopper operation and two (2) cameras, one on each side of the cab chassis facing rearward

4.5.36.4 Cameras and connectors must be sealed and waterproof. Flat screen, minimum 7-inch monitor to have extended visor and swivel base and be reachable and viewable from either driver position. Automatic video feed switch feature, with optional remote switch, must be capable of switching between cameras based on operation controls, transmission setting, or operator's preference. Monitor to have a 4-way split screen capability and provision to add another camera without modification. Cameras to have built in infrared night vision, minimum 1300 field of view, and sun shade device.

4.5.36.5 The hopper camera to provide view when arm is in the lift and dump positions. The rear view camera must be activated when the transmission is shifted to reverse, view from the rear camera to be on the monitor when the truck is in transit (i.e. the truck is in motion and the hydraulic system is not engaged). A back up detection system to be installed - Rear object detection system, beeps faster the closer you get to an object while reversing; it will be ties into the camera system specified.

4.5.36.6 Adequate sized wheel chock to support a minimum 60,000 GVWR shall be supplied with mounting brackets on the street side of the body.

4.5.37 **Extended Warranty:** The complete Automated Side Loader Refuse Body shall be warranted for a period of 3 years beginning upon City's acceptance of each vehicle. Acceptance may be in writing, designating the date of acceptance. If none is provided, the date of issuance of payment shall be deemed the acceptance date. The warranty shall cover all parts, components, cylinders, body structure and labor for 3 years against defects in materials and workmanship. Costs of transportation for warranty work, if performed outside of the City, shall be at Vendor's expense.

4.6	ITEM	QUANTITY	DESCRIPTION
	3	5	Refuse Collection Trucks Mack LR613 Cab and Chassis Minimum 66,000-lbs. GVWR with a Scorpion 30 Cubic Yard Capacity Automated Side Loader Refuse Body (NO ALTERNATIVES)

SPECIFICATIONS REFUSE COLLECTION CAB and CHASSIS

- 4.6.1 The below listed specifications are intended to describe a low entry, cab forward, hydraulic tilt type cab and chassis, Mack - LR613 Cab and Chassis. Maximum insulation for the engine compartment will be used to prevent heat and noise from penetrating into the cab.
- 4.6.2 **ENGINE:** Must meet as a minimum the 2013 U.S. EPA emission standards. Ultra Low Sulfur Diesel, water cooled, minimum 345 horsepower rated at manufactured recommended RPM (1,500-1,700), producing a minimum of 1,275 lbs. of max torque @ 1,100-1.350 RPM output. A single element, dry type air cleaner and pre-cleaner element to be equipped. Engine alternator to be a minimum 12V 160A. Batteries to be three (3) Mack 12V 760/2280 CCA Threaded Stud Type. Starter to be 12 volts. DEF fluid tank to be equipped to work in conjunction with Exhaust /Emissions system. Exhaust after-treatment system diesel particulate filter to be a ceramic passive regeneration type equipped with a Diesel Particle Filter Smart Switch. A DPF Regeneration Switch Inhibitor will not be available. Limiting speed to be 65 MPH. The engine idle time will be limited to 5 minutes.
- 4.6.3 **ENGINE EQUIPMENT:** All engine hoses and tubing to be silicone (except heater & radiator) and capable of withstanding the engine block heater production of 120V/ 1,500 watts. Unit equipped with a 13" Air Cleaner, (330mm) Diameter behind cab w/snorkel. Fuel-water separator, fuel heater/water separator w/vendor prim & Mack SEC fuel filters and hoses. Radiator / heater hoses to be silicone. Starter to be a 12V Delco39MT-MXT. Each battery box is to have a tether devise and plastic coated cables mounted on the front of each box with length to allow cover to set on ground. Diesel Particle Filer to be mounted vertically on LH side back of cab.
- 4.6.4 **ENGINE COOLING SYSTEM:** Maximum capacity offered by the manufacturer. Coolant to be extended life, mixed type; preferably Texaco brand long life coolant with nitrates (50/50 mix) or equal, to -34 degrees F (-37 degrees C). In cab low coolant warning to be provided.
- 4.6.5 **TRANSMISSION:** Allison 4500 Series, 6 Speed; Vocation, RDS -R 5th Generation push button controls to include a direct mount oil cooler, external oil cooler, internal filter, and oil level sensor. Unit to have the largest capacity oil pan that will fit this application and filled with synthetic transmission fluid. Transmission Shift Schedule to be primary performance then secondary then economy to provide optimal performance. Generation 5 Allison output retarder for RDS Transmission w/ Prognostics to be equipped with a PTO Transmission Mounted Audible Alarm. Unit to be equipped with a Spicer 1810HD half round Driveshaft w/ Transmission Retarder. Direct mount rear engine PTO (REPTO), furnish pump MTG provisions-include wiring switches and indicators as required. Transmission cooler must be oil to water type.
- 4.6.6 **FRONT AXLE:** Minimum 20,000 lbs. capacity equipped with Mack FXL20 wide pivot center straight spindle/unitized bearings. Front springs to be Mack Taper leaf 20,000 lbs. ground load rating, static load cushion equipped. Front Brakes to be Meritor front air disc with dust shields.
- 4.6.7 **REAR AXLE:** Minimum 46,000 lbs. capacity and equipped with a rear drive axle. Rear disc brakes to be Meritor and equipped with the 4S/4M system sensing both rear axles w/ wheel end sensors. V-Rods for m-drive suspension and driver controlled inter wheel differential lock both RR Axles with manual air valve w/warning lights to be equipped.
- 4.6.8 **REAR SUSPENSION:** Single & tandem Mack M ride 46 parabolic 3 leaf spring suspensions with a 46,000 lbs. capacity. Suspension to have a power divider lockout w/ warning light and buzzer system, high mount rear brake chambers, a 54" axle spacing (body wheelbase), 4 spring break chambers; MGM model TR-T (tamper resistant). High Mount Rear Brake Chambers are to be equipped. (rear axle only)
- 4.6.9 **FRAME:** Frame Rails measurements (13.375" x 3.25" x 375") to be on a steel section modulus of 23.49 cu. in. The Resisting Bending Moment (RBM) to be 2,818,800 lbs. per rail. Inside frame reinforcement to be ¼" steel inside channel. Unit must be a minimum 54" axle spacing (body wheelbase).A power divider lockout w/warning light and buzzer (includes in cab manual air valve) and a 4S/4M system sensing both rear axles w/ wheel end sensors is to be equipped. Driver controlled inter wheel differential lock equipped on both RR Axles, manual air valve w/warning light. V Rods for m-drive suspension (both axles) equipped.
- 4.6.10 **CHASSIS:** Base model Mack LR613 6-wheel truck with the RH sit down drive package will be offered. Wheelbase, to meet body manufactures specifications for cab to trunnion. The front bumper is to be painted steel flush with 4 inch extensions. MTD 59"/BBC (Corp 94"x15.5"); Crossmembers are to be ½" steel, intermediate 1/8" below rail, and the first XMBR BOC RR 38.17" from AL line of the frame rail clearance. A skid plate to be located under radiator- RH side. Unit to be equipped with a front tow pin. The fuel tank is to be mounted on the LH side of the unit and must hold a minimum 70 gallons of diesel. The tank is to be rectangular in shape and not exceed the measurements of 26" x 24". An Aeroquip Fire resistant tank fuel draw/return system tank will be mounted on the left side (includes sump). Tank will be 6.6 gallons and 22" in diameter and mounted behind LH fender- 5" below

top rail. Air lines must be extruded nylon tubing. Single extrusion air lines are to be 1/8" & 1/4" and the larger extrusion air lines are to be 3/8" and have a polyester reinforced center. Unit to be equipped with a dual air brake system and a Meritor/Wabco Heated Air Dryer 1800 W/coalescing oil filter. The anti-lock brake system and air control valves & switches where possible are to be Bendix. Manual Drain Valves are to be accessible on all tanks, in manifold w/label. Battery Boxes are to be steel base with molded plastic covers. Each single battery box to hold 3 batteries max. Perp to frame 11" from NTOF; The Flaming Red River Big Switch wired on positive side; Battery Switch Warning Light on in the run position- furnished on or near battery box. Quick connect coupling to be located in a protected area near the front bumper but not attached to the front bumper (Milton 747 or proven equal) for operating brakes during tow.

- 4.6.11 **CAB EXTERIOR:** Unit to be equipped with extended cab integral A/C and integral cab heater defroster w/ sanden rotary compressor. An air restriction monitor (intake) and a graduated lock-up (air cleaner intake mounted) are to be equipped. Exterior mirrors to motorized Moto Mirror type and will be mounted RH/LH HTD on retractable arms and brackets. Rectangular convex mirrors will be mounted below lower arm on both RH & LH doors. Unit will have 12" fender mounted mud flaps. The rear window will be a fixed type and both LH & RH roll-up windows will be electrical. Both windshield side and rear windows will be tinted. Aluminum RH & LH exterior grab handles, behind door and interior RH and LH windshield post and RH on instrument dash. Exterior grill to be standard finish. A CH style cowl will be mounted on the LH side of the cab. A radio antenna capable of AM/FM reception will be mounted. A wire rope, minimum 7/8"-inch diameter loop shall be provided and fastened to the center tow hook to tow equipment. Back-up Alarm to be equipped. (Preco, model 1059 preferred.)
- 4.6.12 **CAB INTERIOR:** Right Hand Drive w/Left Hand passenger seat. Driver Seat to be Bostrom Talladega 910 (Mid-Back) Air Suspension model. Rider Seat, Mack Fixed Seat or equivalent. Seat Covering are to be all cloth; Black. For safety purposes, seatbelts are to be bright Orange/Retractors, lap and shoulder for driver and rider seat. Sun Visor are to be fold down type; both sides. Turn signal switches shall be the manually cancelling type. Cab ventilation will be equipped with left-hand & right hand door vents. Cab windshield wipers are to be 2 speed electric motor controlled with an intermittent feature and a w/7 QT reservoir. Unit will have a heater w/ integral defroster for cab climate control. Driver will have access to two (2) different horns; one (1) air horn twin-under cab trumpet w/roof mounted lanyard and one (1) dual tone horn. A 5-way binding post for CB radio shall be equipped. Every unit will have a DOT warning kit securely mounted in the cab.
- 4.6.13 **GAUGES & INSTRUMENTATION:** All instrumentation gauge displays are to be in English. Gauges required for proper are: dual air pressure, voltmeter; engine coolant temperature, engine oil pressure, fuel level, tachometer, transmission gauge & "transmission oil high" temperature light, gear shift w/ neutral to range inhibit, low air pressure indicator (light and buzzer); parking brake control w/warning light, and electronic speedometer/odometer proximity pick-up and magnetic sensor.
- 4.6.14 **LIGHTING:** Head Light Lamps to be single rectangular halogen type or LED head lights if available. Front turn signals and Clearance Lights to be LED. Turn signals & flasher switches will be self-canceling. Marker lamps, amber LED roof markers, parking lamps, and corner marker lamps will be wired to battery shut-off. Unit will be equipped with running daytime lamps; identification/clearance lights; seven (7) marker and clearance, and provision for local installation of strobe lights. Unit to be equipped with (2) dome lights w/self-contained switches (one each side). All electrical connections shall be waterproof sprayed w/protective coating. No LED manual cut-off switch in cab. Side Markers, Lamps and Reflectors to meet or exceed Federal Regulations.
- 4.6.15 **RADIO/MISC:** All unit chassis keys will be keyed alike; Key Number 0002. Unit to be equipped with an AM/FM stereo radio with a CD player and equipped with a weather band and audio input. Mandatory automatic radio /entertainment shut-off system when vehicle is engaged in reverse. A 5lb fire extinguisher will be mounted in cab out the operator's workspace.
- 4.6.16 **FRONT TIRES/WHEELS:** Disc wheel type, 22.5" x 9.0" Accuride 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear.
- 4.6.17 **REAR TIRES/WHEELS:** Disc wheel type, 22.5" x 9.0" HP, 5HH, 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear.
- 4.6.18 **PAINT:** Cab paint type to be single color, Mack White (high gloss). Chassis color to be Mack Black (paint code 6AB==Z1X). Bumper color to be the same as the chassis. Unpainted Aluminum, or Chrome on unit. Wheel Disc or Rim Color to be prefinished powder coat white.

- 4.6.19 **OPERATORS/MAINTENANCE/PARTS MANUALS:** Successful bidder shall furnish one set of operator's manual per unit covering all major components of the vehicle (cab & chassis) for each unit delivered. Successful bidder shall also provide four (4) complete sets of Parts and Maintenance manuals per model of all equipment, accessories, and major components, or four (4) USB drives, or a prepaid 8-year subscription to manufactures' maintenance/parts web site at no cost to the City which will be required at time of delivery. Parts manual shall have manufactures' parts breakdowns and part numbers listed.
- 4.6.20 Engine Warranty, 2Yr. 250,000 Mile Engine Warranty
- 4.6.21 Transmission Warranty, Allison 5 Yr. Edge Warranty

Scorpion 30 Cubic Yard Capacity Automated Side Loader Refuse Body (NO ALTERNATES).

SPECIFICATIONS REFUSE BODIES:

- 4.6.22 The below listed specifications for a fully automated side loading packer body equipped with a mechanical lifting device capable of handling standardized American brand, two-bar, 30- through 300-gallon refuse carts. The body must be capable of collecting, compacting, and transporting refuse to a landfill or transfer station and hydraulically dumping the load. Acceptable Scorpion ASL (NO ALTERNATES).
- 4.6.23 **CAPACITY:** The packer body to have a capacity, excluding the receiving hopper, of not less than 30-cubic yards. Hopper to have a minimum capacity of 3-cubic yards. The structural integrity of the body must allow high density loading of up to 1,000-pounds per cubic yards of normal refuse.
- 4.6.24 **BODY CONSTRUCTION:** The body interior shall have a smooth flat floor. The sides and roof shall be smooth construction. All materials shall be steel (NO ALTERNATIVES). No hydraulic cylinders, valve, or other hydraulic components shall come in contact with refuse packed into the body. Body roof shall be a minimum 12 gauge high tensile sheet fully welded. Body sides shall be minimum 10 gauge high tensile sheet, fully welded. Body floor shall be flat with radius corners at the side walls. Floor shall be a minimum ¼" AR 400 steel plate. Floor longitudinal shall be 10" at 20#/ft. structural channel. Longitudinal shall be a minimum 2.7" wide sill base
- 4.6.25 **HOPPER:** The hopper shall be capable of accepting the contents of a fully loaded 300 gallon container in one continuous motion without spillage over the hopper lip. Hopper shall be of flat floor and vertical sidewalls. The front of the hopper shall be a radius and free of any corners allowing operation of the lifting divide from conventional left hand or right hand drive chassis. Hopper shall be designed to properly handle thirty (30) gallon through three hundred (300) gallon automated side loader containers. Hopper floor shall be a minimum ¼" AR 400 steel plate. Hopper floor longitudinal shall be 10" at 20/ft. structural channel. The curb side hopper wall shall be equipped with a replaceable rubber flap constructed of 3 ply cord reinforced neoprene rubber. The hopper and body floor are to be water proof to a minimum 24" above floor.
- 4.6.26 **PACKER:** Blade cycle time from sweep to sweep shall not exceed (16) seconds total elapsed time when the body is empty or partially full. Packer must operate on the run. Packer blade cycle time from sweep to sweep shall not increase beyond (16) seconds as the packer body reaches maximum capacity. The sweep blade shall be fabricated from a minimum ¼" AR400 steel plate. The packing assembly grease maintenance shall be accessible from ground level without the use of a ladder or platform; and being greased without entering the hoppy or under body. The packing system shall be activated by four (4) hydraulic cylinders side mounted to the body and connected to the sweep blade. The cylinders shall be 4" diameter bore x 2" rod x 29" stroke for the slider cylinders and 14 3/8" stroke for the sweep cylinders.
- 4.6.27 **BUSTLE TAILGATE:** The tailgate must be one piece; top hinged and shall open approximately 110°. Tailgate shall be constructed of minimum 10 gauge high tensile steel on rear and side walls. The tail gate roof, floor, and sides shall be reinforced by a 2" x 6" x ¼" structural tube mainframe minimum. The tailgate shall be secured to the body by two (2) sets of hinges at the roof line. The heavy duty replaceable pop-in one piece rubber seal will be installed the full length of the bottom and 24" up the sides of the tailgate to prevent leakage. Bolt on or bend over tab seal retainer is acceptable. The tailgate shall be raised and lowered, locked and unlocked by hydraulically actuating two (2) double acting cylinders with a minimum 3-1 12" bore x 18.5" stroke x 1.50" diameter chrome plated rod. The cylinder must retract to unlock and raise the tailgate. Cylinder design shall include an orifice fitting to prevent the rapid descent of the tailgate in the event of a hydraulic failure. Locking and

un-locking of tailgate to be controlled from cab of truck without manual removal of pin at tailgate lock. Tailgate props shall be provided to be manually lowered and secured in the raised position by a positive locking device.

- 4.6.28 **LIFTING MECHANISM:** The lift arm and guide rail shall be of tube type construction fabricated from Hi-Tensile steel minimum. The standard lifting mechanism shall be capable of lifting round containers ranging from 30 to 300 gallons. The lifting mechanism shall be capable of individually controlled motion for extending, grabbing, raising, dumping and returning a container from any position. The lifting mechanism shall have the ability to combine multiple functions into a single switch for ease of operation. The lifting capacity shall be a minimum of 1,600 pounds at any extension. The lift shall have a minimum reach capable of a 96" reach from the side of the body to the center line of a 90 gallon container. G The lifting mechanism shall be powered by four (4) hydraulic cylinders (Reach - 2" bore x 70" stroke, Raise - 2.5" bore x 30" stroke, Dump - 2-1/2" bore x 8" stroke, Grab - 2-1/2" bore x 8" stroke). Gripper Cylinder to be internally cushioned when releasing. The lifting mechanism shall perform the following lift cycle functions in under eight (8) seconds at idle:
- 4.6.28.1 Reach to container
 - 4.6.28.2 Grab the container
 - 4.6.28.3 Lift the container to the full dump position
 - 4.6.28.4 Lower the container to the full down position
 - 4.6.28.5 Release the grabbers from the container
 - 4.6.28.6 Retract to body
 - 4.6.28.7 The unit will have an audible alarm and flashing light in cab to indicate the lifting arm is out when the vehicle is in motion
- 4.6.29 **BODY HOIST:** The body shall be raised by one 6.5" bore, chrome plated single acting three stage telescopic cylinder. The body shall achieve a dump angle of approximately 35° and be lowered by gravity. Bodies requiring a greater dump angle to eject the load are unacceptable. (NO ALTERNATIVES) Cylinder design shall include an orifice fitting in the base port which will prevent the rapid descent of the body in the event of a hydraulic failure. A "one man operation" 2" x 3" structural tube welded assembly body prop shall be provided to hold the empty body in a partially raised position for any underbody service.
- 4.6.30 **HYDRAULICS:** The maximum operating pressure of the system shall be 2400 PSI for the Arm Pump and 2800 PSI for the Packer circuit. The hydraulic pump shall be a Parker Hydraulic Pump with electronic flow control or equal. All hydraulic tubes will be secured with bulkhead fittings on both ends and double bolted clamps to prevent movement, vibration, abrasion, and excessive noise. All hydraulic tubes shall be clear coated with an environmentally approved Zinc coating. All hydraulic hoses shall conform to SAE standards for designed pressure. The hydraulic oil reservoir shall have a gross capacity of 55 gallons. The tank shall be complete with a screened fill pipe and cap, filter breather, clean out cover, oil level sight and temperature gauge, and suction line shut-off valve. Shut off valve to be accessible from outside of body. Tank to be located above pump and non-pressurized to prevent cavitations. Units requiring operator to crawl under chassis to shut valve off are unacceptable. NO EXCEPTIONS. The hydraulic system shall be protected by a ten (10) micron in tank, return line filter along with a 100 mesh (140 micron) reusable oil strainer in the suction line. The hydraulic system shall operate at an acceptable temperature without the need for external hydraulic oil cooling devices. All hydraulic components including tubing, hoses and wiring shall be free of paint and overspray for ease of maintenance. Units where components are painted over are unacceptable. NO EXCEPTIONS.
- 4.6.31 **LUBRICATION:** All lubrication to be performed from a ground level position without the use of ladder or platform. All lube points to be accessible without movement of arm, body or tailgate for position. Bodies requiring technicians to go inside or under body for lubrication are unacceptable. NO EXCEPTIONS
- 4.6.32 **CONTROLS:** The lift controls shall be electronic over hydraulic and shall operate the lift arm functions in a controlled "smooth shift" fashion without use of hydraulic cushioned cylinders. All hydraulic valves shall be solenoid controlled electronic over hydraulic valves. Pneumatically controlled valves are not acceptable. The body controls shall be electronic over hydraulic and located in the cab convenient to the operator. All valve components are to be easily serviceable without changing entire valve body. Valves are to be of the sectional design rather than monoblock for serviceability. Truck shall be equipped with Electronically controlled grip pressure adjustment
- 4.6.33 **ELECTRICAL:** The body functions in-cab control center shall be provided for system functions. Return line indicator in cab. All body controls shall be electronic and in easy reach of the operator. Large control box shall be free of obstructing driver view. For ease of service, the lift arm and body function electrical to be independent from all lighting electrical. Separate harnesses for both circuits required. Protected wiring on all applications. All electrical components including wiring shall be free of paint and overspray for ease of maintenance.

- 4.6.34 **LIGHTING:** All lighting to comply with Federal and local lighting requirements. All lighting to be in shock mounted rubber grommets. All lights to be LED including Strobe and Work lights. LED lighting at Hopper and at curbside. All lighting and reflectors must be provided in accordance with FMVSS #108 and ANSI 245.1-1999, plus mid body turn signals on each side of the body and a high center brake light on the rear. Included to be, four (4) each, minimum 4-inch diameter, minimum 10-diode, LED, combination tail/stop lamps to be installed. Two (2) on the left and right hand side of the upper portion of the tailgate and two (2) on the left side and on the right side below the tailgate. Turn signals will be separate 4-inch Red LED lamps and placed next to each stop/tail light. Each light must be protected by expanded metal shields that are easily removable to repair lights when necessary. A lighted license plate bracket to be installed centered left to right on the bottom third of the tailgate. A minimum of 2 (two), high output, white backup lights to be installed. Four (4), flush mounted amber strobe lights are to be equipped. Two (2) to be flush mounted at rear with user selectable flash patterns and to be wired to activate whenever brake pedal is applied. Two (2) strobe lights to be located on the front grill and are to be wired to the battery cutoff switch. Strobes will be set to "three flash, pause" pattern. There will be no switch inside the cab that will turn off strobe lights. Clearance, marker, stop, back up, and directional lights to be LED with Lexan lens, shock mounted in a protective housing, the entire unit to be replaceable pop out style. All lighting to be wired to standard chassis controls for the type lighting being installed. Two (2) wide-angle halogen or LED work lights shall be attached to the body in such a manner to provide light at night during the container lift and dump cycle. Controls for spot lights to be mounted in the cab. Reflectors provided shall be rivet secured type; adhesive styles are unacceptable. Reflective conspicuity tape must be applied along both sides and across the back of each packer body.
- 4.6.35 **REAR UNDERRIDE AND THE GUARD:** The body shall be equipped with a rear underride guard as standard equipment, to meet Federal Motor Carrier Safety Regulation 49CFR393.86. TTMA RP No. 41-02, and SAE J682 MAY.11.- Rear wheel splash and stone throw protection.
- 4.6.36 **PAINTING:** The entire unit shall be properly cleaned of all dirt, grease, and sand blasted prior to Powder Coating. The entire unit shall be treated with weather resistant Powder Coat primer for adverse weather protection. The complete unit shall be coated with a low VOC Powder Coating process to a minimum of 4 mils. The body and lifting mechanism shall be Powder Coated to be painted DuPont color number G-8845-WM.
- 4.6.37 **ACCESSORIES:**
- 4.6.37.1 Rear Mud Flaps
 - 4.6.37.2 Front of Rear Axle Mud Flaps
 - 4.6.37.3 A lockable, water tight, toolbox, approx. 18" x 18" x 20" to be securely mounted to rear bumper of the refuse body
 - 4.6.37.4 Rear Center Mud Flap over Brake Pads
 - 4.6.37.5 One 20 lbs. fire extinguisher to be installed on body, curbside, horizontally.
 - 4.6.37.6 3rd Eye Quad color video camera system, with four (4) mounted cameras, installed to ensure proper and safe operation of the truck. One camera to be mounted high on the tailgate to assist in backing up, one camera to be installed to providing a view of the hopper operation and two (2) cameras, one on each side of the cab chassis facing rearward.
 - 4.6.37.7 Cameras and connectors must be sealed and waterproof. Flat screen, minimum 7-inch monitor to have extended visor and swivel base and be reachable and viewable from either driver position. Automatic video feed switch feature, with optional remote switch, must be capable of switching between cameras based on operation controls, transmission setting, or operator's preference. Monitor to have a 4-way split screen capability and provision to add another camera without modification. Cameras to have built in infra-red night vision, minimum 1300 field of view, and sun shade device.
 - 4.6.37.8 The hopper camera to provide view when arm is in the lift and dump positions. The rear view camera must be activated when the transmission is shifted to reverse, view from the rear camera to be on the monitor when the truck is in transit (i.e. the truck is in motion and the hydraulic system is not engaged). A back up detection system to be installed - Rear object detection system, beeps faster the closer you get to an object while reversing; it will be ties into the camera system specified.

4.6.37.9 Adequate sized wheel chock to support a minimum 60,000 GVWR shall be supplied with mounting brackets on the street side of the body.

4.6.38 **Extended Warranty:** The complete Automated Side Loader Refuse Body shall be warranted for a period of 3 years beginning upon City's acceptance of each vehicle. Acceptance may be in writing, designating the date of acceptance. If none is provided, the date of issuance of payment shall be deemed the acceptance date. The warranty shall cover all parts, components, cylinders, body structure and labor for 3 years against defects in materials and workmanship. Costs of transportation for warranty work, if performed outside of the City, shall be at Vendor's expense.

4.7	ITEM	QUANTITY	DESCRIPTION
	4	7	Refuse Collection Trucks Autocar ACX64 CNG Cab and Chassis Minimum 66,000-lbs. GVWR with a Heil Durapak Python 26 Cubic Yard, High Compaction, Automated Side Loader Refuse Body (NO ALTERNATIVES)

SPECIFICATIONS REFUSE COLLECTION CAB and CHASSIS

- 4.7.1 The below listed specifications are intended to describe a low entry, cab forward, hydraulic tilt type cab and chassis, Autocar ACX64 Cab and Chassis. Fuel system shall be designed to facilitate a dedicated Compressed Natural Gas (CNG) fuel system rated for 3,600 PSI. Each vehicle must be constructed utilizing best industry practices, integrated structural design that provides an O.E.M. appearance and meets the following minimum standards:
- 4.7.2 **ENGINE:** Must meet as a minimum the 2013 U.S. EPA emission standards. Compressed Natural Gas (CNG) Cummins ISX12-G, 350 horsepower @ 2,100 RPM producing a minimum of 1,350 lbs./ft. torque.
- 4.7.3 **ENGINE EQUIPMENT:** Cummins GAS, CM2180A, engine protect system warning to be audible/visual alarm/LOP, HT, LWL. No additional fuel filter provided. Natural Gas fuel cleaner mounted. Standard engine oil. 1300 sq. inch 2 row high capacity aluminum radiator with extended life coolant. 2 speed fan & drive engine. Radiator surge tank w sight glass. 16" two stage air cleaner, black hood type air intake rain cap. Single vertical left hand side muffler system. Stainless steel vertical muffler shield-single, vertical diffuser, single stainless steel exhaust stack. No DEF tank provided. Aluminum turbo/exhaust pipe debris shield. Air compressor to be Cummins WABCO 18.7 CFM compressor. DELCO Remy 12V 39 MT w/OCP to be the starting motor. DELCO Remy 3681 12V 160 AMP to be the alternator. Unit to be governed at 65; no cruise control. Unit to have an engine idle shutdown enabled at 5 minutes.
- 4.7.4 **TRANSMISSION:** Allison 4500 Series, 6 Speed; Vocation, RDS -R 5th Generation push button controls to include a direct mount oil cooler, external oil cooler, internal filter, and oil level sensor. Unit to have the largest capacity oil pan that will fit this application and filled with synthetic transmission fluid. Transmission Shift Schedule to be primary performance then secondary then economy to provide optimal performance. Generation 5 Allison output retarder for RDS Transmission w/ Prognostics to be equipped with a PTO Transmission Mounted Audible Alarm. Unit to be equipped with a Spicer 1810HD half round Driveshaft w/ Transmission Retarder. PTO Transmission Mounted Chelsea 890/897 PTO. Direct mount rear engine PTO (REPTO), furnish pump MTG provisions-include wiring switches and indicators as required. Transmission cooler must be oil to water type.
- 4.7.5 **FRONT AXLE:** Minimum 20,000 lb. capacity, Meritor MFS-20 Steer Axle, 52.5 inches, front suspension to be 9500 low camber and a Flat Leaf 20,800 lb. ground capacity. Suspension, front aux load cushion. Shock absorbers-front to be double acting single-heavy duty. Front hubs to be steel hub piloted .285MM bolt circle. Front wheel oil seals to be Scotseal Plus XL. Front axle hub caps to be CR Zytel hubcap. Front axle lubricant synthetic, Dana Spicer EP75W90, or equivalent. Front axle brake foundation to be Meritor 16.5x7" QP refuse brake. Brake slack adjusters are to be Meritor Automatic. Front brakes to have dust shields and the brake drums to be iron. Steering gear integral, power steering w/ left hand ram. Four quart remote mounted power steering reservoir.
- 4.7.6 **REAR AXLE:** Rear drive axle-single & tandem Meritor RT46-160 46,000lb. Rear axle lube pump-Meritor. Rear drive axle ratio 5. 38. Four wheel lock rear drive axle anti-spin devices. Rear Suspensions to be Hendrickson HMX-460 SUSP @54" AS, rear suspension beams to be 54 inch steel rubber bushed. Torque rods to be longitudinal & transversal- rubber bushed. Equipped with Four Hendricks suspension shock absorbers. Rear Hubs to be iron, HP 10 Stud, standard rear axle breather. Wheel oil seals-rear to be Scotseal Plus XL. Rear axle

lubricant to be synthetic. Brake-foundation, rear axle to be Meritor 16.5x8.62" QP, rear axle refuse brake. Brake slack adjusters-Rear to be Meritor, automatic tandem axle. Dust shielded rear brakes. Cam type MGM stop guard brake chambers- parking, type/vendor. Rear Brake drum to be iron. Driver controlled inter wheel differential lock both RR Axles with manual air valve w/warning lights to be equipped.

- 4.7.7 **BRAKES:** Air lines chassis park brake; Bendix ABS 4S/4M brake control system
- 4.7.8 **CHASSIS:** Base model Autocar ACX64 6-wheel truck with RH Wheelbase to be 216" inches, Frame – Rear overhang to be 74". Frame rails 3/8 variable drop steel ext. B. Frame reinforcement-INNER- .25" liner standard. Frame Crossmember- CENTER- Aluminum. Frame Crossmember-END CLOSING- Aluminum (if required.) frame bolt pins. Body interface wiring to be RP 170 compliant. Alternative fuel engine (no LH or RH tank). Fuel lines to be stainless steel for CNG. Steel 3 battery box. Battery to be 3 Johnson controls 31ECL 12V 2250 CCA. To be equipped with a battery shut off switch w/ lockout/ no emergency jumper studs. Air tank brake to be steel. Wet tank drain to be Bendix D/V-2 Automatic. Air reservoir drain system central manifold w/ petcocks. Air dryer to be WABCO 1800P. Air dryer drilling mounted outside, rail, RHS. Air lines to the Cab and Main to be SAE J844 Nylon Tubing.
- 4.7.9 **CAB EXTERIOR:** Cab mounted step access; dual self-cleaning. Front mud flaps. Steel cab doors. LH and RH door check straps. Dual internal regulator power windows. Sun visor to be fiberglass mounted over windshield. Dual west coast mirrors- mirror, black, HTD, remote w/LWR HTD convex. Mirror arms to be retractable stainless steel. LH side to be equipped with a single down view mirror. Entry to have brushed SS grabs handles. Twin mounted Air Horns under the cab and one electric horn. Cab to be equipped with a hydraulic tilt. Bug screen to be mounted behind Autocar Grille. Fenders to be impact resistant; poly.
- 4.7.10 **CAB INTERIOR:** Steering wheel to be 16" diameter; 2 spoke. Steering column to be tilt and telescopic. Driver seat to be Bostrom 910 High Back, Air-Ride. Passenger seat to be fixed type; low back. Both seats to be equipped with a 3 point retractable bright Orange seatbelt. (NO EXCEPTIONS) seat insert to be Black Dordura and the carpet & mat with foam back. Interior to be AutoTuff Upholstery. To be equipped with a center console, rear console, and ash tray mounted in console. Additional electrical switches; 2 dash switches, wired to power. Driver monitoring system; driver cam wiring prep overhead console.
- 4.7.11 **CAB CLIMATE CONTROL:** Cab control temperature system to be dual evaporator A/C with heater/defroster with roof mounted condenser. Air conditioner condenser to be roof mounted.
- 4.7.12 **GAUGES & INSTRUMENTATION:** All instrumentation gauge displays are to be in English. Gauges required for proper use are: dual air pressure, voltmeter; engine coolant temperature, engine oil pressure; NG fuel level gauge, electronic speedometer/odometer, tachometer; transmission gauge and transmission oil high temperature light, low air pressure indicator light and buzzer, parking brake control w/warning light, and electronic PTO control switch.
- 4.7.13 **LIGHTING:** LED headlamps, LED front turn signals, LED Amber roof markers. Lamps- Corner marker lamp wired to batter shut off. Unit must be equipped with daytime running lamps. Equipped with auto circuit breakers.
- 4.7.14 **RADIO/MISC:** All unit chassis keys will be keyed alike. Unit to be equipped with an AM/FM stereo radio with a CD player, WB, USB, and MP3. A mid-level speaker package to be included. Mandatory automatic radio /entertainment shut-off system when vehicle is engaged in reverse. A 5lb fire extinguisher will be mounted in cab out the operator's workspace.
- 4.7.15 **FRONT TIRES/WHEELS:** Disc wheel type, steel, 22.5" x 9.0" Accuride 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear. Goodyear G289 WHA, or equivalent.
- 4.7.16 **REAR TIRES/WHEELS:** Disc wheel type, steel, 22.5" x 9.0", HP, 5HH, ACCURIDE #29300. 10-Hole Piloted. Tire size & load range to be 315/80R 22.5 L. No spare tires needed. All wheels will have orange in color loose wheel lug nut indicators installed Front and Rear. Goodyear G289 WHA, or equivalent.
- 4.7.17 **PAINT:** Cab Paint Type, Single color, Axalta two stage White (high gloss), approved colors: DPSS-N0007EX standard white N0007. Chassis Color to be Black (color code P3036). Bumper Color, same as chassis; unpainted aluminum or chrome. Wheel disc or rim color, pre-finished powder coat white.
- 4.7.18 **OPERATORS/MAINTENANCE/PARTS MANUALS:** Successful bidder shall furnish one set of operator's manual per unit covering all major components of the vehicle (cab & chassis) for each unit delivered. Successful bidder

shall also provide four (4) complete sets of Parts and Maintenance manuals per model of all equipment, accessories, and major components, or four (4) USB drives, or a prepaid 8-year subscription to manufactures' maintenance/parts web site at no cost to the City which will be required at time of delivery. Parts manual shall have manufactures' parts breakdowns and part numbers listed.

- 4.7.19 **ADDITIONAL OPTIONS:** Standard chassis warranty. Allison 5yr Edge warranty with Transmission Retarder. Cummins standard warranty.

CNG FUEL SYSTEM SPECIFICATIONS:

- 4.7.20 **FUEL TANK ENCLOSURE:** A self-contained fuel tank enclosure is to be designed for mounting of all CNG fuel storage cylinders and to meet the following specifications. The design will incorporate high strength steel with aluminum covers and light bars as part of an integrated tailgate design. Cylinders will be arranged in collocated configuration. Left side CNG cut-off valve access holes shall be provided. Structure shall be designed to exceed all NFPA 52 codes/requirements (including 8g loading in six principal directions with two directions forward and rearward at 20g).

4.7.21 **CNG FILL PANEL:**

Mounted on left hand side of vehicle and designed to meet the following specifications:

- 4.7.21.1 Access Door
- 4.7.21.2 Manual 1/4 turn shut-off valve, "Swagelok" two-way ball type valve or equal.
- 4.7.21.3 One, NGV1 type fill receptacle with tethered dust cap, 1,500 SCFM minimum.
- 4.7.21.4 Stainless Steel double ferrule crimp style tube fittings
- 4.7.21.5 Minimum 75scfm high pressure coalescing type fuel filter installed downstream of tanks and upstream of the pressure reducing regulator
- 4.7.21.6 One solenoid shutoff valve upstream of the pressure reducing regulator
- 4.7.21.7 ITT high pressure reducing regulator
- 4.7.21.8 Liquid filled high pressure fuel gauge installed before fuel pressure regulator.
- 4.7.21.9 Liquid filled low-pressure fuel gauge installed after fuel pressure regulator
- 4.7.21.10 Pressure sending unit capable of driving the chassis OEM's fuel gauge
- 4.7.21.11 De-Fueling Port ISO 7241-1 Series B fitting

4.7.22 **FUEL STORAGE CYLINDERS:**

- 4.7.22.1 Shall be NGV2-07, type 4 cylinders rated for a minimum 20 year life-cycle up to 6 cylinders shall be supplied to meet the total specified 90 diesel gallons equivalent (DGE) minimum. DGE is determined by multiplying the total cubic feet of water volume of the five cylinders by 2.129. (Minimum total water volume is to be 35.22 cubic feet)
- 4.7.22.2 Cylinders are to be rated @ 3,600 PSI per cylinder minimum.
- 4.7.22.3 Cylinders are to be equipped with a horizontal neck mount design
- 4.7.22.4 One manual cylinder shut-off valve is to be installed at each cylinder's outlet.
- 4.7.22.5 Each cylinder is to have stainless steel pressure relief device (PRD) vent lines.

4.7.23 **FUEL FILTER(S) ACCESSORIES:**

- 4.7.23.1 Coalescing type fuel filters installed to minimize and prevent fuel system contamination (sized for the proper flow rates and easy accessibility). One installed downstream of regulator.
- 4.7.23.1 Stainless Steel double ferrule crimp style tube fittings
- 4.7.23.3 Hoses - Parker "Par-Flex" or equal NGV4.2 and NFPA 52 hose and hose connection (when used). CCNG 3/8" 5000 PSIG hose rating from top of body to CNG system that meets NFPA 52.
- 4.7.23.4 Tubing 316L stainless steel tubing conforming to ASTM A269 or equivalent. (No metal-to-metal contact in routing).

- 4.7.24 **LABELING:** Permanent type Mylar or etched aluminum labels shall be readily visible and located in the engine compartment and at the fueling connection as per NFPA52 requirements.

4.7.25 **OPTIONAL ACCESSORIES**

- 4.7.25.1 Front bumper fill port
- 4.7.25.2 Extra kill cap for bumper fill port
- 4.7.25.3 In-Dash fuel gauge

Heil Durapak Python Refuse Collection Body 26 Cubic Yard, High Compaction, Automated, Side Load (NO ALTERNATES).

SPECIFICATIONS REFUSE BODIES:

- 4.7.26 The below listed specifications are intended to describe a refuse collection body equipped with a mechanical lifting device capable of handling standardized American brand, two-bar, 30- through 110-gallon refuse carts. The body must be capable of collecting, compacting, and transporting refuse to a landfill or transfer station and hydraulically ejecting the load. Ejector cylinder must travel entire length of body. Dump type unloading will not be accepted. Acceptable model Heil Durapak Python (NO ALTERNATES).
- 4.7.27 **CAPACITY:** The packer body to have a capacity, excluding the receiving hopper, of not less than 26-cubic yards. Body will have a 150,000-psi body liner, a 3/16" 150,000-psi hopper floor liner, and manufacturer's severe duty packer wear kit.
- 4.7.28 **BODY CONSTRUCTION:** No hydraulic cylinders, valves, or other hydraulic components will come in contact with refuse packed into the body. Follower Arm Extension to follow packer extension/retract movement to reduce gap on both sides of packer. All body hinges, cylinder rod ends, cylinder base trunnions, and high cycle pivot points must be equipped with accessible grease fittings. Fittings not easily accessible must have a remote lubrication device installed. Street Side lube manifold for packer cylinders inside body, to be accessible from body side door without entry to refuse body. An in-cab mounted light and audible alarm to be provided to indicate that the tailgate is not fully closed and locked.
- 4.7.29 **HOPPER:** Minimum capacity of 5-cubic yards. The structural integrity of the body must allow high density loading of up to 1,000-pounds per cubic yards of normal refuse. Maximum body, loader and tailgate weight exclusive of special options must not exceed 16,000-pounds. Hopper hood will be provided to prevent debris from blowing out. Manually operated hopper cover, with extended handle, will also be provided inside hopper hood. Hopper cover shall be operated while standing on the ground.
- 4.7.30 **PACKER:** Minimum of 900-lbs. per cubic yard as determined by the City of San Antonio. The packing capability of each body purchased will be re-evaluated at periodic intervals during the 12-month warranty period after the unit goes into service. Should the City determine that a body does not meet the minimum compaction requirements during any of these tests, the vendor will be advised and be required to take action to repair the body in question so that it will meet the minimum compaction requirements. Once the repair is accomplished to the satisfaction of the City, the warranty on the body will then be extended for a 12-month period from the date of re-acceptance by the City. The contractor will have the right to inspect compaction units during normal City working hours to assure that proper factory recommended service and maintenance is being performed. Abuse and damage not attributable to faulty design, materials or workmanship will exempt warranty expectations and must be documented by the vendor. A damage statement will be provided to the service center superintendent within 48 hours of inspection.
- 4.7.31 **LIFTING MECHANISM:** The lift base must support the lift arm, the dump arm, the level pivot, the level link, the pivot link and the reach link. The lift base to rest atop the chassis frame rails for vertical distribution of loads induced into the chassis frame rails. Lift mechanisms mounted alongside the chassis frame rails will not be accepted. The lift base shall consist of a .75" x 16" x 61", 50,000 PSI minimum yield, surface plate for chassis frame mounting and shall be reinforced by four (4) vertical ribs for rigidity and arm pivot placement. The ribs shall utilize .75" x 6.5", 50,000 PSI minimum yield steel. The front-to-rear mounting length shall not exceed 18". Stops will be welded to the vehicle frame to prevent arm assembly from shifting. Arm Stopper shall be 1/2" square rod or larger. The front-to-rear mounting length must not exceed 18-inches. Grip Rite Gripper by Heil.
- 4.7.31.1 Interlock shall be in-place to eliminate the grabbers from opening when in the dump position. The lifting mechanism must be capable of lifting containers ranging from 30-110 gallons at level, or 16-inch below and above level container placement, and to be capable of extending, grabbing, raising, dumping and returning a container from any position without the need to retract the lift arm and perform the following lift cycle functions in a maximum 12 seconds at engine idle as follows:
- 4.7.31.1.1 Reach to container
 - 4.7.31.1.2 Grab the container
 - 4.7.31.1.3 Lift the container to the full dump position
 - 4.7.31.1.4 Lower the container to the full down position
 - 4.7.31.1.5 Release the grabbers from the container
 - 4.7.31.1.6 Retract to body

4.6.31.1.7 The unit will have an audible alarm and flashing light in cab to indicate the lifting arm is out when the vehicle is in motion

4.7.32 **HYDRAULICS:** The lifting capacity to be a minimum of 750-pounds at the 9-foot full reach extension to minimize high over turning loads on the truck chassis. The lifting capacity must progressively increase as the reach decreases to achieve a minimum of 1,600-pound lift at 2-foot reach.

4.7.32.1 The hydraulic pump to be a conventional "on-command" tandem vane design to operate-in-gear, at-idle. The lift hydraulics must operate at a working pressure of minimum 2,300-PSI. The body hydraulics to operate at a working pressure of minimum 2,500-PSI. All hydraulic tubes will be securely clamped to prevent vibration, abrasion, and excessive noise. All hydraulic hoses must conform to SAE standards for designed pressure. Bending radius not to exceed one half that of the S.A.E. standards. This requirement will prevent flat spots in the hoses. The hydraulic oil reservoir to have a minimum 50-gallon gross capacity and a net capacity of 45-gallons minimum. The tank must be complete with a screened fill pipe and cap, filter breather, clean out cover, oil level sight and temperature gauge

4.7.32.2 The hydraulic system must be protected with a, minimum 6-micron in-tank return line filter along with a minimum 100-mesh (140-micron) reusable oil strainer in the suction line. A magnet to be used to eliminate contamination and will be accessible for cleaning. One quarter turn ball valves must be installed on suction and outlet lines and to isolate the reservoir and filter assembly for service and maintenance. The return line filter to also include an in cab filter by-pass monitor, which will alert the operator or service personnel when the filter is in need of replacement. A hydraulic pump shut down system must also be installed which will prohibit prolonged operation of the hydraulics when the filter is in the by-pass mode. Quick disconnect fittings to be installed so that a pressure gauge can be easily connected without the use of tools or the need to remove hydraulic fittings.

4.7.33 **LUBRICATION:** All lubrication to be performed from a safe position with the use of a manufacturer supplied access ladder or platform. All lube points to be accessible without movement of arm, body or tailgate for position. Bodies requiring technicians to go inside or under body for lubrication are unacceptable. NO EXCEPTIONS

4.7.34 **CONTROLS:** Joystick, air over electronic; Lift controls to be located in the cab and convenient to the operator; Joystick shall operate the lift arm functions in a controlled "smooth shift" fashion without use of hydraulic cushioned cylinders. All hydraulic valves shall be solenoid controlled electronic over hydraulic valves. Pneumatically controlled valves are not acceptable. The body controls shall be electronic over hydraulic and located in the cab convenient to the operator. All valve components are to be easily serviceable without changing entire valve body. Valves are to be of the sectional design rather than monoblock for serviceability. The joystick must be properly labeled and indicate the direction of travel as follows: Reach (extend-retract) (in-out), Grab (grip release), Lift arm (up-down) (lift-lower). The lift controls must be self-centering type, returning to the neutral position when released. Operating the lift controls while packing must reverse and return the packer to the start position. The packer push button controls to be electrical over hydraulic and located in the cab convenient to the operator. Separate push buttons must be provided for "Pack" and "Retract" to provide complete packer panel movement control in either direction. Pushing the "Pack" button must automatically extend and retract the packer panel for a complete cycle. Tailgate raise and tailgate lock controls to be electric over hydraulic. Toggle switches to be used to control each function individually. The dumping system provided shall be full ejecting. The load shall be dumped via cab mounted, electrical controls which raise the tailgate and packer body. The tailgate shall be unlatched and opened/closed hydraulically. The controls shall be located in the cab to allow the operator to remain in the cab and seated during the unloading procedure. Tailgate lock and lifting controls shall be isolated from all other controls and shall be designed to eliminate the possibility of accidental operation. Manually operated latching or restraining devices are not acceptable. Remote switch for arm activation will be installed inside of cab on near the right side door.

4.7.34.1 A mobile controller with control center and display shall be provided in the cab to monitor system functions and operation of the truck. This controller shall be able to withstand the vibration, moisture, dirt ingress and climate variations that are present in the cab of the vehicle. The controller shall use solid-state technology with no mechanical relays or switches inside the controller. This controllers shall use IEC 61131-3 software and will have SAE J1939 built into the controller for communication to the vehicle power train. The mobile controller shall be installed inside the truck cab and shall display self-diagnosing error codes in readable text format which identify the potential trouble source. Both audio and text alerts must be made available to aid in locating trouble source.

4.7.34.2 A non-resetting counting device will be furnished to track grabber arm cycling. Counter will be securely mounted in cab and advance one number each time the arm is lowered and grabber is opened.

- 4.7.35 **ELECTRICAL:** The body functions in-cab control center shall be provided for system functions. Return line indicator in cab. All body controls shall be electronic and in easy reach of the operator. Large control box shall be free of obstructing driver view. For ease of service, the lift arm and body function electrical to be independent from all lighting electrical. Separate harnesses for both circuits required. Protected wiring on all applications. All electrical components including wiring shall be free of paint and overspray for ease of maintenance.
- 4.7.36 **LIGHTING:** All lighting to comply with Federal and local lighting requirements. All lighting to be in shock mounted rubber grommets. All lights to be LED including Strobe and Work lights. LED lighting at Hopper and at curbside. All lighting and reflectors must be provided in accordance with FMVSS #108 and ANSI 245.1-1999, plus mid body turn signals on each side of the body and a high center brake light on the rear. Included to be, four (4) each, minimum 4-inch diameter, minimum 10-diode, LED, combination tail/stop lamps to be installed. Two (2) on the left and right hand side of the upper portion of the tailgate and two (2) on the left side and on the right side below the tailgate. Turn signals will be separate 4-inch Red LED lamps and placed next to each stop/tail light. Each light must be protected by expanded metal shields that are easily removable to repair lights when necessary. A lighted license plate bracket to be installed centered left to right on the bottom third of the tailgate. A minimum of 2 (two), high output, white backup lights to be installed. Four (4), flush mounted amber strobe lights are to be equipped. Two (2) to be flush mounted at rear with user selectable flash patterns and to be wired to activate whenever brake pedal is applied. Two (2) strobe lights to be located on the front grill and are to be wired to the battery cutoff switch. Strobes will be set to "three flash, pause" pattern. There will be no switch inside the cab that will turn off strobe lights. Clearance, marker, stop, back up, and directional lights to be LED with Lexan lens, shock mounted in a protective housing, the entire unit to be replaceable pop out style. All lighting to be wired to standard chassis controls for the type lighting being installed. Two (2) wide-angle halogen or LED work lights shall be attached to the body in such a manner to provide light at night during the container lift and dump cycle. Controls for spot lights to be mounted in the cab. Reflectors provided shall be rivet secured type; adhesive styles are unacceptable. Reflective conspicuity tape must be applied along both sides and across the back of each packer body.
- 4.7.37 **REAR UNDERRIDE AND THE GUARD:** The body shall be equipped with a rear underride guard as standard equipment, to meet Federal Motor Carrier Safety Regulation 49CFR393.86. TTMA RP No. 41-02, and SAE J682 MAY.11.- Rear wheel splash and stone throw protection.
- 4.7.38 **PAINTING:** A high luster finish coat must be applied using acrylic urethane, or proven equal. An ample amount to be applied to achieve a minimum dry thickness of two and one-half (2 ½) 1 mil and will result in a finish of 3/ 1mil minimum thickness and up to 4-mil maximum finish. Body and lifting mechanism to be painted DuPont color number G-8845-WM.
- 4.7.39 **ACCESSORIES:**
- 4.7.39.1 A lockable, water tight, toolbox, approx. 18" x 18" x 20" to be securely mounted to rear bumper of the refuse body. Placement to be approved prior to completion of first unit.
 - 4.7.39.2 A 20 lb. Fire extinguisher to be installed on body, curbside, front of body behind first bolster mounted horizontally.
 - 4.7.39.3 3rd Eye Quad color video camera system, with four (4) mounted cameras, installed to ensure proper and safe operation of the truck. One camera to be mounted high on the tailgate to assist in backing up, one camera to be installed to providing a view of the hopper operation and two (2) cameras, one on each side of the cab chassis facing rearward
 - 4.7.39.4 Cameras and connectors must be sealed and waterproof. Flat screen, minimum 7-inch monitor to have extended visor and swivel base and be reachable and viewable from either driver position. Automatic video feed switch feature, with optional remote switch, must be capable of switching between cameras based on operation controls, transmission setting, or operator's preference. Monitor to have a 4-way split screen capability and provision to add another camera without modification. Cameras to have built in infra-red night vision, minimum 1300 field of view, and sun shade device.
 - 4.7.39.5 The hopper camera to provide view when arm is in the lift and dump positions. The rear view camera must be activated when the transmission is shifted to reverse, view from the rear camera

to be on the monitor when the truck is in transit (i.e. the truck is in motion and the hydraulic system is not engaged). A back up detection system to be installed - Rear object detection system, beeps faster the closer you get to an object while reversing; it will be tied into the camera system specified.

4.7.39.6 Adequate sized wheel chock to support a minimum 60,000 GVWR shall be supplied with mounting brackets on the street side of the body.

4.7.40 Extended Warranty: The complete Automated Side Loader Refuse Body shall be warranted for a period of 3 years beginning upon City's acceptance of each vehicle. Acceptance may be in writing, designating the date of acceptance. If none is provided, the date of issuance of payment shall be deemed the acceptance date. The warranty shall cover all parts, components, cylinders, body structure and labor for 3 years against defects in materials and workmanship. Costs of transportation for warranty work, if performed outside of the City, shall be at Vendor's expense.

005 - SUPPLEMENTAL TERMS & CONDITIONS

Original Contract Term.

This contract shall begin upon the effective date of the ordinance awarding the contract, or date specified in the award letter if this contract does not exceed \$50,000. This contract shall terminate upon completion of all work described herein or delivery of all goods ordered, as applicable.

Liquidated Damages for Delay:

The parties agree that the actual damages that might be sustained by the City by reason of the breach by Vendor of its covenant to make delivery within the time specified on the Price Schedule, or later delivery per the Schedule provided by City, is uncertain and would be difficult of ascertainment, and that the sum of \$100.00 per day per unit for each day that delivery is late would be a reasonable compensation for such breach. Vendor hereby promises to pay, and City hereby agrees to accept, such sum as liquidated damages, and not as a penalty, in the event of such breach. Furthermore, the parties agree that City may withhold said liquidated damages from any payments due to Vendor hereunder. If Vendor's delay exceeds 30 days, City may, at its option, elect to terminate this contract in whole or in part. In such event, City may pursue actual damages, rather than applying this liquidated damages provision.

Warranty.

A minimum of 90-days product guarantee or the manufacturer's standard commercial warranty, whichever is greater, shall apply to all products and/or services purchased under this RFO, unless otherwise specified in the Specifications/Scope of Services section of this RFO. This warranty shall provide for replacement of defective merchandise, parts, and labor, and shall include pick-up of the defective merchandise from City and delivery of the replacement(s) to the same location. The warranty shall be effective from the date of acceptance of the merchandise, or completion of the service, as applicable.

ANY TERM OR CONDITION IN ANY DOCUMENT FURNISHED BY VENDOR, DISCLAIMING THE IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR ATTEMPTING TO LIMIT VENDOR'S LIABILITY SHALL BE OF NO FORCE OR EFFECT, AND SHALL BE STRICKEN FROM THE CONTRACT DOCUMENTS AS IF NEVER CONTAINED THEREIN.

Insurance.

A) Prior to the commencement of any work under this Agreement, Vendor shall furnish copies of all required endorsements and completed Certificate(s) of Insurance to the City's Finance Department-Purchasing Division, which shall be clearly labeled "**Refuse Collection Trucks**" in the Description of Operations block of the Certificate. The Certificate(s) shall be completed by an agent and signed by a person authorized by that insurer to bind coverage on its behalf. The City will not accept a Memorandum of Insurance or Binder as proof of insurance. The certificate(s) must be signed by the Authorized Representative of the carrier, and list the agent's signature and phone number. The certificate shall be mailed, with copies of all applicable endorsements, directly from the insurer's authorized representative to the City. The City shall have no duty to pay or perform under this Agreement until such certificate and endorsements have been received and approved by the City's Finance Department-Purchasing Division. No officer or employee, other than the City's Risk Manager, shall have authority to waive this requirement.

B) The City reserves the right to review the insurance requirements of this Article during the effective period of this Agreement and any extension or renewal hereof and to modify insurance coverages and their limits when deemed necessary and prudent by City's Risk Manager based upon changes in statutory law, court decisions, or circumstances surrounding this Agreement. In no instance will City allow modification whereby City may incur increased risk.

C) A Vendor's financial integrity is of interest to the City; therefore, subject to Vendor's right to maintain reasonable deductibles in such amounts as are approved by the City, Vendor shall obtain and maintain in full force and effect for the duration of this Agreement, and any extension hereof, at Vendor's sole expense, insurance coverage written on an occurrence basis, unless otherwise indicated, by companies authorized to do business in the State of Texas and with an A.M Best's rating of no less than A- (VII), in the following types and for an amount not less than the amount listed below:

TYPE	AMOUNTS
1. Commercial General Liability Insurance to include coverage for the following: a. Premises/Operations b. Products/Completed Operations c. Personal/Advertising Injury	For <u>Bodily Injury</u> and <u>Property Damage</u> of \$1,000,000 per occurrence; \$2,000,000 General Aggregate, or its equivalent in Umbrella or Excess Liability Coverage

D) Vendor agrees to require, by written contract, that all subcontractors providing goods or services hereunder obtain the same categories of insurance coverage required of Vendor herein, and provide a certificate of insurance and endorsement that names the Vendor and the CITY as additional insureds. Policy limits of the coverages carried by subcontractors will be determined as a business decision of Vendor. Respondent shall provide the CITY with said certificate and endorsement prior to the commencement of any work by the subcontractor. This provision may be modified by City's Risk Manager, without subsequent City Council approval, when deemed necessary and prudent, based upon changes in statutory law, court decisions, or circumstances surrounding this agreement. Such modification may be enacted by letter signed by City's Risk Manager, which shall become a part of the contract for all purposes.

E) As they apply to the limits required by the City, the City shall be entitled, upon request and without expense, to receive copies of the policies, declaration page, and all required endorsements. Vendor shall be required to comply with any such requests and shall submit requested documents to City at the address provided below within 10 days. Vendor shall pay any costs incurred resulting from provision of said documents.

City of San Antonio
 Attn: Finance Department-Purchasing Division
 P.O. Box 839966
 San Antonio, Texas 78283-3966

F) Vendor agrees that with respect to the above required insurance, all insurance policies are to contain or be endorsed to contain the following provisions:

- Name the City, its officers, officials, employees, volunteers, and elected representatives as additional insureds by endorsement, as respects operations and activities of, or on behalf of, the named insured performed under contract with the City, with the exception of the workers' compensation and professional liability policies;
- Provide for an endorsement that the "other insurance" clause shall not apply to the City of San Antonio where the City is an additional insured shown on the policy;
- Workers' compensation, employers' liability, general liability and automobile liability policies will provide a waiver of subrogation in favor of the City.
- Provide advance written notice directly to City of any suspension or non-renewal in coverage, and not less than ten (10) calendar days advance notice for nonpayment of premium.

G) Within five (5) calendar days of a suspension, cancellation or non-renewal of coverage, Vendor shall provide a replacement Certificate of Insurance and applicable endorsements to City. City shall have the option to suspend Vendor's performance should there be a lapse in coverage at any time during this contract. Failure to provide and to maintain the required insurance shall constitute a material breach of this Agreement.

H) In addition to any other remedies the City may have upon Vendor's failure to provide and maintain any insurance or policy endorsements to the extent and within the time herein required, the City shall have the right to order Vendor to stop work hereunder, and/or withhold any payment(s) which become due to Vendor hereunder until Vendor demonstrates compliance with the requirements hereof.

I) Nothing herein contained shall be construed as limiting in any way the extent to which Vendor may be held responsible for payments of damages to persons or property resulting from Vendor's or its subcontractors' performance of the work covered under this Agreement.

J) It is agreed that Vendor's insurance shall be deemed primary and non-contributory with respect to any insurance or self-insurance carried by the City of San Antonio for liability arising out of operations under this Agreement.

K) It is understood and agreed that the insurance required is in addition to and separate from any other obligation contained in this Agreement and that no claim or action by or on behalf of the City shall be limited to insurance coverage provided..

L) Vendor and any Subcontractors are responsible for all damage to their own equipment and/or property.

Incorporation of Attachments.

Each of the attachments listed below is an essential part of this contract, which governs the rights and duties of the parties, incorporated herein by reference, and shall be interpreted in the order of priority as appears below, with this document taking priority over all attachments:

Attachment A – Price Schedule

Attachment B – City of San Antonio Local Preference Program Forms

Attachment C – Veteran-Owned Small Business Preference Program Tracking Form

006 - GENERAL TERMS & CONDITIONS

Electronic Offer Equals Original. If Vendor is submitting an electronic offer, City and Vendor each agree that this transaction may be conducted by electronic means, as authorized by Chapter 322, Texas Business & Commerce Code, known as the Electronic Transactions Act.

Delivery of Goods/Services.

Destination Contract. Vendor shall deliver all goods and materials F.O.B., City of San Antonio's designated facility, inside delivery, freight prepaid, to the address provided in this RFO or, if different, in the Purchase Order. Vendor shall bear the risk of loss until delivery. Freight charges will be paid only when expedited delivery is requested and approved in writing by City. Vendor shall be responsible for furnishing necessary personnel or equipment and/or making necessary arrangements to off load at City of San Antonio facility, unless otherwise noted herein.

Failure to Deliver. When delivery is not met as provided for in the contract, City may make the purchase on the open market, with any cost in excess of the contract price paid by Vendor, in addition to any other direct, indirect, consequential or incidental damages incurred by City as a result thereof. In addition, Vendor may be removed from City's list of eligible bidders.

Purchase Orders. Each time a City department wishes to place an order against this contract, it will issue Vendor a purchase order. Vendor must have the purchase order before making any delivery.

Acceptance by City. City shall have a reasonable time (but not less than 30 days) after receipt to inspect the goods and services tendered by Vendor. City at its option may reject all or any portion of such goods or services which do not, in City's sole discretion, comply in every respect with all terms and conditions of the contract. City may elect to reject the entire goods and services tendered even if only a portion thereof is nonconforming. If City elects to accept nonconforming goods and services, City, in addition to its other remedies, shall be entitled to deduct a reasonable amount from the price thereof to compensate City for the nonconformity. Any acceptance by City, even if non-conditional, shall not be deemed a waiver or settlement of any defect in such goods and services.

Testing. After award of contract, City may, at its sole option, test the product delivered to ensure it meets specifications. Initial testing shall be at City's expense. However, if the product does not to meet specifications, Vendor shall reimburse City for the costs of testing. City may withhold the cost of testing from any amounts owed to Vendor under this or any other contract, or invoice Vendor for same. If invoiced, Vendor shall pay City within 30 calendar days' of the invoice.

Invoicing and Payment.

Address for Invoices. All original invoices must be sent to: City of San Antonio, Attn: Accounts Payable, P.O. Box 839976, San Antonio, Texas 78283-3976.

Information Required On Invoice.

All invoices must be in a form and content approved by City. City may require modification of invoices if necessary in order to satisfy City that all billing is proper and pursuant to the terms of the contract. Invoices are required to show each City Purchase Order Number. Invoices must be legible. Items billed on invoices must be specific as to applicable stock, manufacturer, catalog or part number (if any). All invoices must show unit prices for each item being billed, the quantity of items being billed and the total for each item, as well as the total for all items on the invoice. If prices are based on list prices basis, then the list prices, the percentage discount or percentage surcharge, net unit prices, extensions and net total prices must be shown. Prompt payment discounts offered shall be shown separately on the invoice.

Payment by City.

In accordance with the Texas Prompt Payment Act, City shall have not less than 30 days to pay for goods or services. Time for payment, including payment under discount terms, will be computed from the later of: (1) the date City receives conforming goods under the contract; (2) the date performance of the service under the contract is completed; or (3) the date City receives a correct and valid invoice for the goods or services. Payment is deemed to be made on the date of mailing of the check. Payment is made in US dollars only.

This provision shall not apply where there is a bona fide dispute between City and Vendor about the goods delivered or the service performed that causes the payment to be late, or where the invoice is not mailed to the address provided herein.

The payment amount due on invoices may not be manually altered by City personnel. Once disputed items are reconciled, Vendor must submit a corrected invoice or a credit memorandum for the disputed amount. City will not make partial payments on an invoice where there is a dispute.

NECESSITY OF TIMELY INVOICE / WAIVER OF PAYMENT. NOTWITHSTANDING THE FORGOING, CITY CANNOT PAY FOR ANY GOODS OR SERVICES WITHOUT AN INVOICE. VENDOR MUST INVOICE CITY NO LATER THAN 90 CALENDAR DAYS FROM THE DATE GOODS ARE DELIVERED OR SERVICES RENDERED. FAILURE TO SUBMIT AN INVOICE WITHIN SAID 90 DAY SHALL NEGATE ANY LIABILITY ON THE PART OF CITY AND CONSTITUTE A **WAIVER** BY VENDOR OF ANY AND ALL RIGHT OR CLAIMS TO COLLECT MONEYS THAT VENDOR MAY RIGHTFULLY BE OTHERWISE ENTITLED TO FOR GOODS OR SERVICES PERFORMED.

The total price for all goods and/or services is shown on the Price Schedule. No additional fees or expenses of Vendor shall be charged by Vendor nor be payable by City. The parties hereby agree that all compensable expenses of Vendor are shown on the Price Schedule. If there is a discrepancy on the Price Schedule between the unit price for an item, and the extended price, the unit price shall govern.

Amendments. Except where the terms of this contract expressly provide otherwise, any alterations, additions, or deletions to the terms hereof, shall be effected by amendment, in writing, executed by both City and Vendor. The Director of the Purchasing and General Services Department, or Director's designee, shall have authority to execute amendments on behalf of City without further action by the San Antonio City Council, subject to and contingent upon appropriation of funds for any increase in expenditures by City.

Termination.

Termination-Breach. Should vendor fail to fulfill in a timely and proper manner, as determined solely by the Director, its material obligations under this contract, or violate any of the material terms of this contract, City shall have the right to immediately terminate the contract in whole or in part. Notice of termination shall be provided in writing to the Vendor, effective upon the date set forth in the notice. City may, in City's sole discretion, provide an opportunity for Vendor to cure the default. If City elects to offer an opportunity to cure, City shall provide notice to Vendor specifying the matters in default and the cure period. If Vendor fails to cure the default within the cure period, City shall have the right, without further notice, to terminate the contract in whole or in part. Such termination shall not relieve Vendor of any liability to the City for damages sustained by virtue of any breach by Vendor.

Termination-Notice. City may terminate this contract, in whole or in part, without cause. City shall be required to give Vendor notice ten days prior to the date of termination of the contract without cause.

Termination-Funding. City retains the right to terminate this contract at the expiration of each of City's budget periods. This contract is conditioned on a best efforts attempt by City to obtain and appropriate funds for payment of any debt due by City herein.

Termination by City may be effected by Director, without further action by the San Antonio City Council.

Independent Contractor. Vendor covenants and agrees that it is an independent contractor and not an officer, agent, servant or employee of City. City shall not be liable for any claims which may be asserted by any third party occurring in connection with the services to be performed by Vendor under this contract and that Vendor has no authority to bind City. The doctrine of respondeat superior shall not apply as between City and Vendor.

INDEMNIFICATION.

VENDOR covenants and agrees to FULLY INDEMNIFY, DEFEND and HOLD HARMLESS, CITY and the elected officials, employees, officers, directors, volunteers and representatives of CITY, individually and collectively, from and against any and all costs, claims, liens, damages, losses, expenses, fees, fines, penalties, proceedings, actions, demands, causes of action, liability and suits of any kind and nature, including but not limited to, personal or bodily injury, death and property damage, made upon CITY directly or indirectly arising out of, resulting from or related to VENDOR'S activities under this Agreement, including any acts or omissions of VENDOR, any agent, officer, director, representative, employee, consultant or subcontractor of VENDOR, and their respective officers, agents employees, directors and representatives while in the exercise of the rights or performance of the duties under this Agreement. The indemnity provided for in this paragraph

shall not apply to any liability resulting from the negligence of CITY, its officers or employees, in instances where such negligence causes personal injury, death, or property damage. IN THE EVENT VENDOR AND CITY ARE FOUND JOINTLY LIABLE BY A COURT OF COMPETENT JURISDICTION, LIABILITY SHALL BE APPORTIONED COMPARATIVELY IN ACCORDANCE WITH THE LAWS FOR THE STATE OF TEXAS, WITHOUT, HOWEVER, WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO CITY UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW. In addition, Vendor agrees to indemnify, defend, and hold City harmless from any claim involving patent infringement, trademarks, trade secrets, and copyrights on goods supplied.

The provisions of this INDEMNITY are solely for the benefit of the parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity. VENDOR shall advise CITY in writing within 24 hours of any claim or demand against CITY or VENDOR known to VENDOR related to or arising out of VENDOR's activities under this AGREEMENT and shall see to the investigation and defense of such claim or demand at VENDOR's cost. CITY shall have the right, at its option and at its own expense, to participate in such defense without relieving VENDOR of any of its obligations under this paragraph.

Assignment. Except as otherwise stated herein, Vendor may not sell, assign, pledge, transfer or convey any interest in this contract, nor delegate the performance of any duties hereunder, by transfer, by subcontracting or any other means, without the consent of Director. As a condition of such consent, if such consent is granted, Vendor shall remain liable for completion of the services and provision of goods outlined in this contract in the event of default by the successor vendor, assignee, transferee or subcontractor. Any attempt to transfer, pledge or otherwise assign this Contract without said written approval, shall be void ab initio and shall confer no rights upon any third person.

Ownership of Documents. Pursuant to Texas Local Government Code Chapter 201, any and all Records produced by Vendor pursuant to the provisions of this contract are the exclusive property of City; and no such Record shall be the subject of any copyright or proprietary claim by Vendor. The term "Record" as used herein shall mean any document, paper, letter, book, map, photograph, sound or video recording, microfilm, magnetic tape, electronic medium, or other information recording medium, regardless of physical form or characteristic. Vendor understands and acknowledges that as the exclusive owner of any and all such Records, City has the right to use all such Records as City desires, without restriction.

Records Retention.

Vendor and its subcontractors, if any, shall properly, accurately and completely maintain all documents, papers, and records, and other evidence pertaining to the services rendered hereunder ("Documents"), and shall make such Documents available to City at their respective offices, at all reasonable times and as often as City may deem necessary during the contract period, including any extension or renewal hereof, and the record retention period established herein, for purposes of audit, inspection, examination, and making excerpts or copies of same by City and any of its authorized representatives.

Vendor shall retain any and all Documents produced as a result of services provided hereunder for a period of four years ("Retention Period") from the date of termination of the contract. If, at the end of the Retention Period, there is litigation or other questions arising from, involving or concerning these Documents or the services provided hereunder, Vendor shall retain the records until the resolution of such litigation or other such questions. Vendor acknowledges and agrees that City shall have access to any and all such Documents at any and all times, as deemed necessary by City, during said Retention Period. City may, at its election, require Vendor to return the documents to City at Vendor's expense prior to or at the conclusion of the Retention Period. In such event, Vendor may retain a copy of the documents.

Vendor shall notify City, immediately, in the event Vendor receives any requests for information from a third party, which pertain to the Documents referenced herein. Vendor understands and agrees that City will process and handle all such requests.

Severability. If any clause or provision of this contract is held invalid, illegal or unenforceable under present or future federal, state or local laws, including but not limited to the City Charter, City Code, or ordinances of the City of San Antonio, Texas, then and in that event it is the intention of the parties hereto that such invalidity, illegality or unenforceability shall not affect any other clause or provision hereof and that the remainder of this contract shall be construed as if such invalid, illegal or unenforceable clause or provision was never contained herein. It is also the intention of the parties hereto that in lieu of each clause or provision of this contract that is invalid, illegal, or unenforceable, there be added as a part of the contract a clause or provision as similar in terms to such invalid, illegal or unenforceable clause or provision as may be possible, legal, valid and enforceable.

Compliance with Law. Vendor shall provide and perform all services required under this Agreement in compliance with all applicable federal, state and local laws, rules and regulations.

Certifications. Vendor warrants and certifies that Vendor and any other person designated to provide services hereunder has the requisite training, license and/or certification to provide said services, and meets all competence standards promulgated by all other authoritative bodies, as applicable to the services provided herein.

Non-waiver of Performance. Unless otherwise specifically provided for in this Agreement, a waiver by either Party of a breach of any of the terms, conditions, covenants or guarantees of this Agreement shall not be construed or held to be a waiver of any succeeding or preceding breach of the same or any other term, condition, covenant or guarantee herein contained. Further, any failure of either Party to insist in any one or more cases upon the strict performance of any of the covenants of this Agreement, or to exercise any option herein contained, shall in no event be construed as a waiver or relinquishment for the future of such covenant or option. In fact, no waiver, change, modification or discharge by either party hereto of any provision of this Agreement shall be deemed to have been made or shall be effective unless expressed in writing and signed by the party to be charged. No act or omission by a Party shall in any manner impair or prejudice any right, power, privilege, or remedy available to that Party hereunder or by law or in equity, such rights, powers, privileges, or remedies to be always specifically preserved hereby.

Venue. Venue of any court action brought directly or indirectly by reason of this contract shall be in Bexar County, Texas. This contract is made and is to be performed in Bexar County, Texas, and is governed by the laws of the State of Texas.

Non-discrimination. As a condition of entering into this agreement, Vendor represents and warrants that it will comply with City's Commercial Nondiscrimination Policy, as described under Section ILC.1 of the SBEDA Ordinance. As part of such compliance, Vendor shall not discriminate on the basis of race, color, religion, ancestry or national origin, sex, age, marital status, sexual orientation, or on the basis of disability or other unlawful forms of discrimination in the solicitation, selection, hiring or commercial treatment of subcontractors, vendors, suppliers, or commercial customers, nor shall Vendor retaliate against any person for reporting instances of such discrimination. Vendor shall provide equal opportunity for subcontractors, vendors and suppliers to participate in all of its public sector and private sector subcontracting and supply opportunities, provided that nothing contained in this clause shall prohibit or limit otherwise lawful efforts to remedy the effects of marketplace discrimination that have occurred or are occurring in City's Relevant Marketplace. Vendor understands and agrees that a material violation of this clause shall be considered a material breach of this agreement and may result in termination of this agreement, disqualification of Vendor from participating in City contracts, or other sanctions. This clause is not enforceable by or for the benefit of, and creates no obligation to, any third party. Vendor shall include this nondiscrimination clause in all subcontracts for the performance of this contract. **As a party to this contract, Vendor understands and agrees to comply with the *Non-Discrimination Policy* of the City of San Antonio contained in Chapter 2, Article X of the City Code and further, shall not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, veteran status, age or disability, unless exempted by state or federal law, or as otherwise established herein.**

Delinquent Taxes. In the event that Vendor is or subsequently becomes delinquent in the payment of taxes owed to the City of San Antonio, City reserves the right to deduct any delinquent taxes from payments that City may owe to the delinquent Vendor as a result of this contract.

Binding Contract. This contract shall be binding on and inure to the benefit of the parties hereto and their respective heirs, executors, administrators, legal representatives, and successors and assigns, except as otherwise expressly provided for herein.

Entire Agreement. This contract, including City's final electronically posted online version, together with its authorizing ordinance, and its price schedule(s), attachments, purchase orders, and exhibits, if any, constitutes the final and entire agreement between the parties hereto and contains all of the terms and conditions agreed upon. No other agreements, oral or otherwise, regarding the subject matter of this contract shall be deemed to exist or to bind the parties hereto, unless same be in writing, dated subsequent to the date hereof, and be duly executed by the parties, in accordance with the Amendment provision herein. **Parties agree that City's final electronically posted online version of this solicitation contains the agreed upon specifications, scope of services, and terms and conditions of this contract, and shall control in the event of a conflict with any printed version signed and submitted by Vendor.**

007 - SIGNATURE PAGE

By submitting an offer, whether electronically or by paper, Offeror represents that:

(s)he is authorized to bind Offeror to fully comply with the terms and conditions of City's Request for Offer for the prices stated therein;

(s)he has read the entire document, including the final version issued by City, and agreed to the terms therein;

Offeror is in good standing with the Texas State Comptroller's Office; and

to the best of his/her knowledge, all information is true and correct.

If submitting your offer by paper, complete the following and sign on the signature line below. Failure to sign and submit this Signature Page will result in rejection of your offer.

Offeror Information:

Please Print or Type:

Vendor ID No.: V1006439

Signer's Name: Keith Shoffstall

Name of Business: Grande Truck Center

Street Address: 4562 IH-10 East

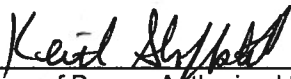
City, State, Zip Code: San Antonio, TX 78219

Email Address: rshoffstall@grandetruck.com

Telephone No.: 210-666-7112

Fax No.: 210-666-7216

City's Solicitation No.: 6100008207



Signature of Person Authorized to Sign Offer

008 - STANDARD DEFINITIONS

Whenever a term defined by the Uniform Commercial Code ("UCC"), as enacted by the State of Texas, is used in the Contract, the UCC definition shall control, unless otherwise defined in the Contract.

All-or-None Offer - an RFO in which City will award the entire contract to one offeror only.

Alternate Offer - two or more offers with substantive variations in the item or service offered from the same offeror in response to a solicitation.

Assignment - a transfer of claims, rights or interests in goods, services or property.

Bid Bond - security to ensure that Offeror (a) will not withdraw the offer within the period specified for acceptance, and (b) will furnish any required bonds and any necessary insurance within the time specified in the solicitation.

City - the City of San Antonio, a Texas home-rule municipal corporation.

Contractor - the offeror whose offer is accepted by City and is, therefore, the person, firm or entity providing goods or services to City under a contract.

Director - the Director of City's Purchasing & General Services Department, or Director's designee.

Line Item - a listing of items in an offer for which an offeror is expected to provide separate pricing.

Offer - a complete, signed response to an RFO that, if accepted, would bind Offeror to perform the resultant contract.

Offeror - a person, firm or entity that submits an offer in response to a solicitation. The offeror whose offer is accepted by City may also be referred to herein as Contractor, Vendor or Supplier.

Payment Bond - a particular form of security provided by the contractor to protect City against loss due to the contractor's failure to pay suppliers and subcontractors.

Performance Bond - a particular form of security provided by the contractor to protect City against loss due to the contractor's inability or unwillingness to complete the contract as agreed.

Performance Deposit - security provided by the contractor to protect City against loss due to the contractor's inability or unwillingness to complete the contract as agreed.

Pre-Submittal Conference - a meeting conducted by City, held in order to allow offerors to ask questions about the proposed contract and particularly, the contract specifications.

Purchase Order - a validly issued order placed by an authorized City department for the purchase of goods or services, written on City's standard purchase order form, and which is the vendor's authority to deliver to and invoice City for the goods or services specified in an RFO for the price stated in vendor's offer.

Specifications - a description of what City requires and what Offeror must offer; a description of the physical or functional characteristics of a product or material, or the nature of a service or construction item.

Subcontractor - a person, firm or entity providing goods or services to a vendor to be used in the performance of the vendor's obligations under the contract with City.

Supplier - the offeror whose offer is accepted by City and is, therefore, the person, firm or entity providing goods or services to City under a contract.

Vendor - the offeror whose offer is accepted by City and is, therefore, the person, firm or entity providing goods or services to City under a contract.

009 - ATTACHMENTS

Attachment A

PRICE SCHEDULE

Local Preference Program (LPP) Ordinance

The 82nd Texas Legislature adopted a revision to the law that allowed the City of San Antonio (City) to adopt a policy that would grant contracting preferences to local businesses for certain types of contracts. The City adopted such a policy, known as the Local Preference Program, described in the San Antonio City Code Chapter 2, Article XII, effective for solicitations issued after May 1, 2013.

This solicitation is subject to the Local Preference Program. For more information on the program, refer to the Local Preference Program Identification Form attached to this solicitation.

In order to receive consideration the Local Bidder must complete and return the attached Local Preference Identification Form.

ITEM PRICING

ITEM	QUANTITY	DESCRIPTION
1	7	Refuse Collection Trucks Peterbilt 320 Cab and Chassis Minimum 66,000-lbs. GVWR with a Scorpion 30 Cubic Yard Capacity Automated Side Loader Refuse Body (NO ALTERNATIVES)

PRICE EACH: \$ ND 1.1

TOTAL: \$ _____

PETERBILT YEAR of CAB & CHASSIS:

PETERBILT CAB & CHASSIS WARRANTY (Must meet minimum warranty requirements stated herein):

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

ENGINE WARRANTY (Must meet minimum warranty requirements stated herein):

TRANSMISSION WARRANTY (Must meet minimum warranty requirements stated herein):

PETERBILT WARRANTY SERVICE PROVIDER FACILITY NAME:

PETERBILT WARRANTY SERVICE PROVIDER FACILITY ADDRESS:

SCORPION BODY WARRANTY (Must meet minimum warranty requirements stated herein):

SCORPION WARRANTY SERVICE PROVIDER FACILITY NAME:

SCORPION WARRANTY SERVICE PROVIDER FACILITY ADDRESS:

PRODUCTION CUT-OFF DATE: _____

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: _____.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? _____.

ITEM	QUANTITY	DESCRIPTION
2	6	Refuse Collection Trucks Mack LR613 Cab and Chassis Minimum 66,000-lbs. GVWR with a Heil Durapack Python Refuse Collection Body 28 plus Cubic Yard, High Compaction, Automated, Side Load (NO ALTERNATIVES)

PRICE EACH: \$ 314,846.⁰⁰

TOTAL: \$ 1,889,076

MACK YEAR of CAB & CHASSIS:

2017 or 2018 Mack LR-613 Mack Chassis

MACK CAB & CHASSIS WARRANTY (Must meet minimum warranty requirements stated herein):

12 months

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

M P 7 - 355 355 H.P. 1280 lb Ft Torque

ENGINE WARRANTY (Must meet minimum warranty requirements stated herein):

2 Yr - or 250,000 Miles

TRANSMISSION WARRANTY (Must meet minimum warranty requirements stated herein):

5 Yr .

MACK WARRANTY SERVICE PROVIDER FACILITY NAME:

Grande Truck Center

MACK WARRANTY SERVICE PROVIDER FACILITY ADDRESS:

4562 IH-10 East

SAN Antonio, TX 78219

HEIL BODY WARRANTY (Must meet minimum warranty requirements stated herein):

3 Yr Complete Body warranty with additional 2 Yr on Packer Cyl

HEIL WARRANTY SERVICE PROVIDER FACILITY NAME:

Heil of Texas

HEIL WARRANTY SERVICE PROVIDER FACILITY ADDRESS:

503 Pop Gun Road

SAN Antonio, TX 78219

PRODUCTION CUT-OFF DATE: 6/30/2017

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: 2/15/2017.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? NO

ITEM	QUANTITY	DESCRIPTION
3	5	Refuse Collection Trucks Mack LR613 Cab and Chassis Minimum 66,000-lbs. GVWR with a Scorpion 30 Cubic Yard Capacity Automated Side Loader Refuse Body (NO ALTERNATIVES)

PRICE EACH: \$ 295,640.⁰⁰

TOTAL: \$ 1,478,200

MACK YEAR of CAB & CHASSIS:

2017 or 2018 Mack LR613

MACK CAB & CHASSIS WARRANTY (Must meet minimum warranty requirements stated herein):

12 months

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

Mack MP7-355 355 H.P. 1280 Torque

ENGINE WARRANTY (Must meet minimum warranty requirements stated herein):

2 Yr or 250,000 miles

TRANSMISSION WARRANTY (Must meet minimum warranty requirements stated herein):

5 Yr

MACK WARRANTY SERVICE PROVIDER FACILITY NAME:

Grande Truck Center

MACK WARRANTY SERVICE PROVIDER FACILITY ADDRESS:

4562 IH-10 East

SAN Antonio, TX 78219

SCORPION BODY WARRANTY (Must meet minimum warranty requirements stated herein):

3 Yr Body, Arm, Valve, Pump, Cylinder.

SCORPION WARRANTY SERVICE PROVIDER FACILITY NAME:

Fox Truck World

SCORPION WARRANTY SERVICE PROVIDER FACILITY ADDRESS:

965 Fm 1516 S

San Antonio, TX 78263

PRODUCTION CUT-OFF DATE: 6/30/2017

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: 2/15/2017.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? NO.

ITEM	QUANTITY	DESCRIPTION
4	7	Refuse Collection Trucks Autocar ACX64 CNG Cab and Chassis Minimum 66,000-lbs. GVWR with a Heil Durapak Python 28+ Cubic Yard, High Compaction, Automated Side Loader Refuse Body (NO ALTERNATIVES)

PRICE EACH: \$ 383,445.⁰⁰

TOTAL: \$ 2,684,115.⁰⁰

AUTOCAR YEAR of CAB & CHASSIS:

2017 or 2018 Autocars ACX64

AUTOCAR CAB & CHASSIS WARRANTY (Must meet minimum warranty requirements stated herein):

12 months

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

ISX12-G 350 H.P. 1350 Torque

ENGINE WARRANTY (Must meet minimum warranty requirements stated herein):

2 Yr or 250,000 miles

TRANSMISSION WARRANTY (Must meet minimum warranty requirements stated herein):

5 Yr.

AUTOCAR WARRANTY SERVICE PROVIDER FACILITY NAME:

Grande Truck Center

AUTOCAR WARRANTY SERVICE PROVIDER FACILITY ADDRESS:

4562 IH-10 East

SAN Antonio, TX 78219

HEIL BODY WARRANTY (Must meet minimum warranty requirements stated herein):

3 Yr Complete Body Warranty with additional 2 Yr on Parker cyl.

HEIL WARRANTY SERVICE PROVIDER FACILITY NAME:

Heil of Texas

HEIL WARRANTY SERVICE PROVIDER FACILITY ADDRESS:

503 Pop Gun Road

SAN Antonio, TX 78219

PRODUCTION CUT-OFF DATE: 6/30/2017

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: 2/15/2017.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? NO.

Prompt Payment Discount: Net % 30 days. (If no discount is offered, Net 30 will apply.)

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: The engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's GVWR over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	ENGINE SIZES (L)	FUEL TYPE ¹	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS ²	ECS & SPECIAL FEATURES ³	DIAGNOSTIC ⁶
2016	GCEXH0729XAE	11.9	Diesel	Diesel	HHDD-UB	DDI, TC, CAC, ECM, EGR, OC, PTOX, SCR-U, AMOX	OBD(\$)
PRIMARY ENGINE'S IDLE EMISSIONS CONTROL ⁵		ADDITIONAL IDLE EMISSIONS CONTROL ⁵					
30g		N/A					
ENGINE (L)	ENGINE MODELS / CODES (rated power, in hp)						
11.9	See attachment for engine models and ratings						

¹ not applicable; GVWR=gross vehicle weight rating; 13 CCR xyz=Title 13, California Code of Regulations, Section xyz, 40 CFR 86.abc=Title 40, Code of Federal Regulations, Section 86.abc, L=liter, hp=horsepower, kw=kilowatt, hr=hour;
² CNG/LNG=compressed/liquefied natural gas, LPG=liquefied petroleum gas, E85=85% ethanol fuel, MF=multi fuel a.k.a. BF=bi fuel, DF=dual fuel, FF=flexible fuel;
³ L/M/H HDD=light/medium/heavy heavy-duty diesel; UB=urban bus; HDO=heavy duty Otto;
⁴ ECS=emission control system, TWC/OC=three-way/oxidizing catalyst, NAC=NOx adsorption catalyst, SCR-U / SCR-N=selective catalytic reduction - urea / - ammonia, WU (prefix) =warm-up catalyst, DPF=diesel particulate filter, PTOX=periodic trap oxidizer, HC2S/O2S=heated/oxygen sensor, HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a., universal or linear oxygen sensor), TBI=turbo body fuel injection, SFVMI=sequential/multi port fuel injection, DGI=direct gasoline injection, GCARB=gaseous carburetor, DI/DDI=indirect/direct diesel injection, TC/SC= turbo/super charger, CAC=charge air cooler, EGR / EGR-G=exhaust gas recirculation / cooled EGR, PAIR/AIR=pulsed/secondary air injection, SPL=smoke puff limiter, ECM/PCM=engine/powertrain control module, EM=engine modification; 2 (prefix)=parallel; (2) (suffix)=in series;
⁵ ESS=engine shutdown system (per 13 CCR 1956.8(a)(8)(A)(1): 30g-30 g/hr NOx (per 13 CCR 1956.8(a)(5)(C); APS=inlet air combustion auxiliary power system; ALT=alternative method (per 13 CCR 1956.8(a)(8)(D); Exempt=exempted per 13 CCR 1956.8(a)(6)(B) or for CNG/LNG fuel systems; N/A=not applicable (e.g., Otto engines and vehicles);
⁶ EMD=engine manufacturer diagnostic system (13 CCR 1971); OBD(F) / (P) / (S)=full / partial / partial with a line / on-board diagnostic;

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.8; 2) the SET and NTE limits under the applicable California exhaust emission standards and test procedures for heavy-duty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, for this engine family. "Diesel" CO, SET and NTE certification compliance may have been demonstrated by the manufacturer as provided under the applicable Test Procedures in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR 1956.8 are in parentheses.)

In g/bhp-hr	NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET
STD	0.14	0.14	0.20	0.20	*	*	15.5	15.5	0.01	0.01	*	*
FEL	*	*	*	*	*	*	*	*	*	*	*	*
CERT	0.03	0.02	0.19	0.07	*	*	1.2	0.6	0.001	0.002	*	*
NTE	0.21		0.30		*		19.4		0.02		*	

⁴ g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; SET=Supplemental emissions testing; NTE=Not-to-Exceed; STD=standard or emission test cap; FEL=family emission limit; CERT=certification level; NMHC/HC=non-methane/hydrocarbon; NOx=oxides of nitrogen; CO=carbon monoxide; PM=particulate matter; HCHO=formaldehyde.

BE IT FURTHER RESOLVED: The manufacturer has demonstrated compliance with the Greenhouse Gas Emission Standards as specified in Title 13 CCR 1956.8 and the incorporated "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy Duty Diesel-Engines and Vehicles" (HDDE Test Procedures) adopted Dec. 12, 2002, as last amended Oct. 21, 2014 using the 2014 model year National Heavy-Duty Engine and Vehicle Greenhouse Gas Program as specified in Section 1036.108 of the HDDE Test Procedures. The manufacturer has submitted the required information and therefore has met the criteria necessary to receive a California Executive Order based on the Environmental Protection Agency's Certificate of Conformity for the above listed engine family.

In g/bhp-hr	EPA CERTIFICATE OF CONFORMITY				PRIMARY INTENDED SERVICE CLASS	
	CEX-ONHWY-16-11				TRACTOR / VOCATIONAL	
	CO ₂				CH ₄	N ₂ O
	FTP	SET				
STD	555	460			0.10	0.10
FCL	579	489			*	*
FEL	596	504			*	0.12
CERT	579	489			0.02	0.07

⁴ g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; SET=Supplemental emissions testing; STD = standard or emission test cap; FEL=family emission limit; FCL=family certification level; CERT=certification level; CO₂=carbon dioxide; CH₄=methane; N₂O=nitrous oxide; VOCATIONAL=vocational engine; TRACTOR=tractor engine

BE IT FURTHER RESOLVED: That the listed engine family is certified to the Alternate Phase-in CO₂ Emission Standards as specified in 13 CCR 1956.8 and section 40 CFR 1036.150 (e) as incorporated in the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy Duty Diesel-Engines and Vehicles" adopted Dec. 12, 2002, as last amended Oct. 21, 2014.

BE IT FURTHER RESOLVED: Certification to the FEL(s) / FCL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) / FCL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for certification purposes in any averaging, banking, or trading (ABT) programs. It will be used for determining compliance of any engine in this family and compliance with such ABT programs.

BE IT FURTHER RESOLVED: Except in vehicle applications exempted per 13 CCR 1956.8(a)(6)(B), engines in this engine family certified under 13 CCR 1956.8(a)(6)(C) [30 g/hr NOx] and section 35.B.4 of the incorporated "California Exhaust Emissions Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" (HDDE Test Procedures) adopted Dec. 12, 2002, as last amended Apr. 18, 2013, shall be provided with an approved "Certified Clean Idle" label that shall be affixed to the vehicle into which the engine is installed.

BE IT FURTHER RESOLVED: For the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels), 13 CCR 1971.1 (on-board diagnostic, full or partial compliance) and 13 CCR 2035 et seq. (emission control warranty).

BE IT FURTHER RESOLVED: That the manufacturer has elected to include engine models in this engine family which are identified for "emergency vehicle use only". These "emergency vehicle use only" engines are exempt from requirements imposed pursuant to California law and the regulations adopted pursuant thereto for motor vehicle pollution control devices per California Vehicle Code Section 27156.2. The manufacturer must clearly label these engines for "emergency vehicle use only" on the engines' emission control label.

BE IT FURTHER RESOLVED: The listed engine models are conditionally certified in accordance with 13 CCR Section 1971.1(k) (deficiency and fines provisions for certification of malfunction and diagnostic system) because the heavy-duty on-board diagnostic (HD OBD) system of the listed engine models has been determined to have fifteen deficiencies. The listed engine models are approved subject to the manufacturer paying a fine of \$500 per engine for the third through fifteenth deficiencies in the listed engine family that is produced and delivered for sale in California. On a quarterly basis, the manufacturer shall submit to the Air Resources Board reports of the number of engines produced and delivered for sale in California and pay the full fine owed for that quarter pursuant to this conditional certification. Payment shall be made payable to the State Treasurer for deposit in the Air Pollution Control Fund no later than thirty (30) days after the end of each calendar quarter during the 2016 model-year production period. Failure to pay the quarterly fine, in full, in the time provided, may be cause for the Executive Officer to rescind this conditional certification, effective from the start of the quarter in question, in which case all engines covered under this conditional certification for that quarter and all future quarters would be deemed uncertified and subject to a civil penalty of up to \$5000 per engine pursuant to HSC Section 43154.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 2nd day of December 2015.

FOR 
Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

EO# : A-021-0644

Attachment: Page 1 of 2

Engine Model Summary Template

11-10-15

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate mm/stroke @ peak HP (for diesel only)	5.Fuel Rate (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate, mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
GCEXH0729XAE	4591;FR20840	ISX12 425ST	413@1977	220	147	1650@1200	314	127	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20842	ISX12 425	413@1977	220	147	1650@1200	314	127	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20845	ISX12 400ST	392@1977	209	139	1650@1200	314	127	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20847	ISX12 400	392@1977	209	139	1650@1200	314	127	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20833	ISX12 500V	479@1977	259	173	1645@1200	313	127	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20834	ISX12 450V	432@1977	231	154	1650@1200	314	127	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20836	ISX12 450V	432@1977	231	154	1550@1200	293	118	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20843	ISX12 425V	413@1977	220	147	1650@1200	314	127	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20839	ISX12 425V	413@1977	220	147	1550@1200	293	118	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20846	ISX12 400V	392@1977	209	139	1650@1200	314	127	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20832	ISX12 500 RV	479@1977	259	173	1645@1200	313	127	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20835	ISX12 450 MC	432@1977	231	154	1550@1200	293	118	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20841	ISX12 425 MC	413@1977	220	147	1650@1200	314	127	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20844	ISX12 425 MC	413@1977	220	147	1450@1200	272	110	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20852	ISX12 370	379@1977	202	135	1450@1200	272	110	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20854	ISX12 370	379@1977	202	135	1350@1200	252	102	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20856	ISX12 350ST	360@1977	192	128	1450@1200	272	110	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20857	ISX12 350	360@1977	192	128	1350@1200	252	102	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20859	ISX12 330ST	341@1977	183	122	1350@1200	252	102	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20861	ISX12 330	341@1977	183	122	1350@1200	252	102	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20860	ISX12 330	341@1977	183	122	1250@1200	233	94	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20863	ISX12 310	315@1977	166	111	1150@1200	214	87	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20850	ISX12 385V	379@1977	202	135	1450@1200	272	110	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20851	ISX12 385V	379@1977	202	135	1350@1200	252	102	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20856	ISX12 350V	341@1977	183	122	1450@1200	272	110	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20858	ISX12 350V	341@1977	183	122	1350@1200	252	102	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20862	ISX12 320V	315@1977	166	111	1150@1200	214	87	SCRC, PTOX, PC
GCEXH0729XAE	4591;FR20864	ISX12 385R	379@1977	202	135	1450@1200	272	110	SCRC, PTOX, PC

DDI, TC, CAC, ECM,
EGR, OC, PTOX,
SCR-U, Amox

EO#: A-021-0644

Attachment: Page 2 of 2

11-10-15

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm ³ /stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm ³ /stroke@peak torque	8.Fuel Rate (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
GCEXH0729XAE	4591;FR20665	ISX12 385R	379@1977	202	135	1350@1200	252	102	SCR, PTOX, PC
GCEXH0729XAE	4591;FR20666	ISX12 350R	341@1977	183	122	1450@1200	272	110	SCR, PTOX, PC
GCEXH0729XAE	4591;FR20667	ISX12 350R	341@1977	183	122	1350@1200	252	102	SCR, PTOX, PC
GCEXH0729XAE	4591;FR20668	ISX12 330R	341@1977	183	122	1250@1200	233	94	SCR, PTOX, PC
GCEXH0729XAE	4591;FR20669	ISX12 320R	315@1977	166	111	1150@1200	214	87	SCR, PTOX, PC
GCEXH0729XAE	4591;FR20718	ISX12 425ST2	413@1977	220	147	1650@1200	267	127	SCR, PTOX, PC
GCEXH0729XAE	Emergency	Vehicle	Engine	Ratings	Below				
GCEXH0729XAE	4591;FR20631	ISX12 500EV	479@1977	259	173	1645@1200	313	127	SCR, PTOX, PC
GCEXH0729XAE	4591;FR20637	ISX12 450EV	432@1977	231	154	1550@1200	293	118	SCR, PTOX, PC
GCEXH0729XAE	4591;FR20638	ISX12 425EV	413@1977	220	147	1550@1200	293	118	SCR, PTOX, PC
GCEXH0729XAE	4591;FR20648	ISX12 400EV	388@1977	207	138	1550@1200	293	118	SCR, PTOX, PC
GCEXH0729XAE	4591;FR20649	ISX12 400EV	388@1977	207	138	1450@1200	272	110	SCR, PTOX, PC
GCEXH0729XAE	4591;FR20653	ISX12 370EV	379@1977	202	135	1450@1200	272	110	SCR, PTOX, PC
GCEXH0729XAE	Urban Bus	Ratings	Below						
GCEXH0729XAE	4592;FR20670	ISX12 385CC	379@1977	202	135	1450@1200	272	110	SCR, PTOX, PC

DDI, TG, EAC,
ECM, EGR, OC,
PTOX, SCR-4, AMOX

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: The engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's GVWR over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	ENGINE SIZES (L)	FUEL TYPE ¹	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS ²	ECS & SPECIAL FEATURES ³	DIAGNOSTIC ⁶
2016	GCEXH0729XBA	11.9	CNG/LNG	Diesel	HHDD	TBI, TC, CAC, ECM, EGR, TWC, HO2S	EMD+
PRIMARY ENGINE'S IDLE EMISSIONS CONTROL ⁵		ADDITIONAL IDLE EMISSIONS CONTROL ⁵					
EXEMPT		N/A					
ENGINE (L)	ENGINE MODELS / CODES (rated power, In hp)						
11.9	See Attachment for engine models and ratings						

* =not applicable; GVWR=gross vehicle weight rating; 13 CCR xyz=Title 13, California Code of Regulations, Section xyz; 40 CFR 88.abc=Title 40, Code of Federal Regulations, Section 88.abc; l=liter; hp=horsepower; kw=kilowatt; hr=hour;
¹ CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85=85% ethanol fuel; MF=multi fuel a.k.a. BF=bi fuel; DF=dual fuel; FF=flexible fuel;
² L/M/H HDD=light/medium/heavy heavy-duty diesel; UB=urban bus; HDO=heavy duty Otto;
³ ECS=emission control system; TWC/OC=three-way/oxidizing catalyst; NAC=NOx adsorption catalyst; SCR-U / SCR-N=selective catalytic reduction - urea / - ammonia; WU (prefix) =warm-up catalyst; DPF=diesel particulate filter; PTOX=periodic trap oxidizer; HO2S/O2S=heated/oxygen sensor; HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a., universal or linear oxygen sensor); TBI=throttle body fuel injection; SF/MFI=sequential/multi port fuel injection; DGI=direct gasoline injection; GCARB=gaseous carburetor; ID/DDI=indirect/direct diesel injection; TC/SC=turbo/super charger; CAC=charge air cooler; EGR / EGR-C=exhaust gas recirculation / cooled EGR; PAIR/AIR=pulsed/secondary air injection; SPL=smoke puff limiter; ECM/PCM=engine/powertrain control module; EM=engine modification; 2 (prefix)=parallel; (2) (suffix)=in series;
 ESS=engine shutdown system (per 13 CCR 1956.8(a)(6)(A)(1); 30g=30 g/hr NOx (per 13 CCR 1956.8(a)(6)(C); APS =internal combustion auxiliary power system; ALT=alternative method (per 13 CCR 1956.8(a)(6)(D); Exempt=exempted per 13 CCR 1956.8(a)(6)(B) or for CNG/LNG fuel systems; N/A=not applicable (e.g., Otto engines and vehicles);
 EMD=engine manufacturer diagnostic system (13 CCR 1971); OBD=on-board diagnostic system (13 CCR 1971.1);

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.8; 2) the SET and NTE limits under the applicable California exhaust emission standards and test procedures for heavy-duty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, for this engine family. "Diesel" CO, SET and NTE certification compliance may have been demonstrated by the manufacturer as provided under the applicable Test Procedures in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR 1956.8 are in parentheses.)

In g/bhp-hr	NMHC		NOx		CO		PM		HCHO	
	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET
STD	0.14	0.14	0.20	0.20	15.5	15.5	0.01	0.01	*	*
CERT	0.03	0.01	0.15	0.03	8.7	6.4	0.003	0.001	*	*
NTE	0.21		0.30		19.4		0.02		*	

BE IT FURTHER RESOLVED: The manufacturer has demonstrated compliance with the Greenhouse Gas Emission Standards as specified in Title 13 CCR 1956.8 and the incorporated "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy Duty Diesel-Engines and Vehicles" (HDDE Test Procedures) adopted Dec. 12, 2002, as last amended Oct. 21, 2014 using the 2014 model year National Heavy-Duty Engine and Vehicle Greenhouse Gas Program as specified in Section 1036.108 of the HDDE Test Procedures. The manufacturer has submitted the required information and therefore has met the criteria necessary to receive a California Executive Order based on the Environmental Protection Agency's Certificate of Conformity for the above listed engine family.

In g/bhp-hr	EPA CERTIFICATE OF CONFORMITY		PRIMARY INTENDED SERVICE CLASS	
	CEX-ONHWY-16-03		TRACTOR / VOCATIONAL	
	CO ₂		CH ₄	N ₂ O
STD	555	460	0.10	0.10
FCL	506	427	*	*
FEL	521	440	1.40	*
CERT	506	427	1.06	0.03

* g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; SET=Supplemental emissions testing; STD = standard or emission test cap; FEL=family emission limit; FCL=family certification level; CERT=certification level; CO₂=carbon dioxide; CH₄=methane; N₂O=nitrous oxide; VOCATIONAL=vocational engine; TRACTOR=tractor engine

BE IT FURTHER RESOLVED: That the listed engine family is certified to the Alternate Phase-in CO₂ Emission Standards as specified in 13 CCR 1956.8 and section 40 CFR 1036.150 (e) as incorporated in the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy Duty Diesel-Engines and Vehicles" adopted Dec. 12, 2002, as last amended Oct. 21, 2014.

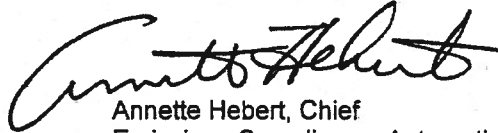
BE IT FURTHER RESOLVED: Certification to the FEL(s) / FCL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) / FCL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for certification purposes in any averaging, banking, or trading (ABT) programs. It will be used for determining compliance of any engine in this family and compliance with such ABT programs.

BE IT FURTHER RESOLVED: For the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels), 13 CCR 1971 (engine manufacturer diagnostic) and 13 CCR 2035 et seq. (emission control warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 27 day of October 2015.



Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

Engine Model Summary Template

Attachment: Page 1 of 1

EO#: A-021-0633

10-7-2015

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
GCEXH0729XBA	3647;FR20288	ISX12 G 400	400@1800	N/A	N/A	1450@1200	N/A	N/A	H02S, PCM, TWC,
GCEXH0729XBA	3647;FR20290	ISX12 G 385	385@1700	N/A	N/A	1350@1200	N/A	N/A	H02S, PCM, TWC,
GCEXH0729XBA	3647;FR20292	ISX12 G 350	350@1700	N/A	N/A	1350@1200	N/A	N/A	H02S, PCM, TWC,
GCEXH0729XBA	3647;FR20296	ISX12 G 350	350@1700	N/A	N/A	1450@1200	N/A	N/A	H02S, PCM, TWC,
GCEXH0729XBA	3647;FR20298	ISX12 G 330	330@2100	N/A	N/A	1250@1200	N/A	N/A	H02S, PCM, TWC,
GCEXH0729XBA	3647;FR20300	ISX12 G 320	320@1700	N/A	N/A	1150@1200	N/A	N/A	H02S, PCM, TWC,
GCEXH0729XBA	3647;FR20754	ISX12 G 400	400@1800	N/A	N/A	1450@1200	N/A	N/A	H02S, PCM, TWC,
GCEXH0729XBA	3647;FR20755	ISX12 G 385	385@1700	N/A	N/A	1350@1200	N/A	N/A	H02S, PCM, TWC,
GCEXH0729XBA	3647;FR20756	ISX12 G 350	350@1700	N/A	N/A	1350@1200	N/A	N/A	H02S, PCM, TWC,
GCEXH0729XBA	3647;FR20757	ISX12 G 350	350@1700	N/A	N/A	1450@1200	N/A	N/A	H02S, PCM, TWC,
GCEXH0729XBA	3647;FR20758	ISX12 G 330	330@2100	N/A	N/A	1250@1200	N/A	N/A	H02S, PCM, TWC,
GCEXH0729XBA	3647;FR20759	ISX12 G 320	320@1700	N/A	N/A	1150@1200	N/A	N/A	H02S, PCM, TWC,

TBI, TC, CAC, Ecm,
EGR, TWC, H02S

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: The engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's GVWR over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	ENGINE SIZES (L)	FUEL TYPE ¹	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS ²	ECS & SPECIAL FEATURES ³	DIAGNOSTIC ⁴
			Diesel	Diesel	HHDD	DDI, TC, CAC, ECM, EGR, DOC, PTOX, SCR-U, AMOX	OBD(\$)
2016	GVPTH10.8G01	10.8	Diesel	Diesel	HHDD	DDI, TC, CAC, ECM, EGR, DOC, PTOX, SCR-U, AMOX	OBD(\$)
PRIMARY ENGINE'S IDLE EMISSIONS CONTROL ⁵		ADDITIONAL IDLE EMISSIONS CONTROL ⁵					
30g		N/A					
ENGINE (L)		ENGINE MODELS / CODES (rated power, in hp)					
10.8		See attachments for engine models and ratings					

^{*} =not applicable; GVWR=gross vehicle weight rating; 13 CCR xyzz=Title 13, California Code of Regulations, Section xyz; 40 CFR 86.abc=Title 40, Code of Federal Regulations, Section 86, abc; L=liter; hp=horsepower, kw=kilowatt, hr=hour;
¹ CNG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85=85% ethanol fuel; MF=multi fuel a.k.a. BF=bi fuel; DF=dual fuel; FF=flexible fuel;
² L/M/H HDD=light/medium/heavy heavy-duty diesel; UB=urban bus; HDD=heavy duty Otto;
³ ECS=emission control system; TWC=three-way catalyst; NAC=NOx adsorption catalyst; SCR-U / SCR-N=selective catalytic reduction - urea / - ammonia; WU (prefix) =warm-up catalyst; DPF=diesel particulate filter; PTOX=periodic trap oxidizer; HO2S/O2S=heated/oxygen sensor; HAFS/AFS=heated/air-fuel-ratio sensor (a.k.a. universal or linear oxygen sensor); TBI=throttle body fuel injection; SFIMFI=sequential/multi port fuel injection; DGI=direct gasoline injection; GCARB=gaseous carburetor; ID/DD=indirect/direct diesel injection; TC/SC=turbo/ super charger; CAC=charge air cooler; EGR / EGR-C=exhaust gas recirculation / cooled EGR; PAIR/AIR=pulsed/secondary air injection; SPL=smoke puff limiter; ECM/PCM=engine/powertrain control module; EM=engine modification; DOC=Diesel Oxidation Catalyst; AMOX=Ammonia Oxidation catalyst; 2 (prefix)=parallel; (2) (suffix)=in series;
⁴ ESS=engine shutdown system (per 13 CCR 1956.8(a)(6)(A)(1)); 30g=30 g/hr NOx (per 13 CCR 1956.8(a)(6)(C)); APS =internal combustion auxiliary power system; ALT=alternative method (per 13 CCR 1956.8(a)(8)(D)); Exempt=exempted per 13 CCR 1956.8(a)(6)(B) or for CNG/LNG fuel systems; N/A=not applicable (e.g., Otto engines and vehicles);
⁵ EMD=engine manufacturer diagnostic system (13 CCR 1971); OBD(F) / (P) / (\$) =full / partial / partial with a line / on-board diagnostic;

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.8; 2) the SET and NTE limits under the applicable California exhaust emission standards and test procedures for heavy-duty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, for this engine family. "Diesel" CO, SET and NTE certification compliance may have been demonstrated by the manufacturer as provided under the applicable Test Procedures in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR 1956.8 are in parentheses.).

In g/bhp-hr	NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET
STD	0.14	0.14	0.20	0.20	*	*	15.5	15.5	0.01	0.01	*	*
FEL	*	*	*	*	*	*	*	*	*	*	*	*
CERT	0.01	0.02	0.06	0.06	*	*	0.3	0.003	0.002	0.01	*	*
NTE	0.21		0.30		*		19.4		0.02		*	

^{*} g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; SET=Supplemental emissions testing; NTE=Not-to-Exceed; STD=standard or emission test cap; FEL=family emission limit; CERT=certification level; NMHC=non-methane hydrocarbon; NOx=oxides of nitrogen; CO=carbon monoxide; PM=particulate matter; HCHO=formaldehyde;

BE IT FURTHER RESOLVED: The manufacturer has demonstrated compliance with the Greenhouse Gas Emission Standards as specified in Title 13 CCR 1956.8 and the incorporated "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" (HDDE Test Procedures) adopted Dec. 12, 2002, as last amended Oct. 21, 2014 using the 2014 model year National Heavy-Duty Engine and Vehicle Greenhouse Gas Program as specified in Section 1036.108 of the HDDE Test Procedures. The manufacturer has submitted the required information and therefore has met the criteria necessary to receive a California Executive Order based on the Environmental Protection Agency's Certificate of Conformity for the above listed engine family.

In g/bhp-hr	EPA CERTIFICATE OF CONFORMITY				PRIMARY INTENDED SERVICE CLASS	
	VPT-ON-HWY-16-01				TRACTOR/VOCATIONAL	
	CO ₂				CH ₄	N ₂ O
	FTP	SET	FTP	SET		
STD	567	475	567	475	0.10	0.10
FCL	548	468	548	468	*	*
FEL	564	482	564	482	0.03	0.06
CERT	547	468	547	468	0.03	0.06

^{*} g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; SET=Supplemental emissions testing; STD = standard or emission test cap; FEL=family emission limit; FCL=family certification level; CERT=certification level; CO₂=carbon dioxide; CH₄=methane; N₂O=nitrous oxide; VOCATIONAL=vocational engine; TRACTOR=tractor engine

BE IT FURTHER RESOLVED: Certification to the FEL(s) / FCL(s) listed above, as applicable, is subject to the following terms, limitations and conditions. The FEL(s) / FCL(s) is the emission level declared by the manufacturer and serves in lieu of an emission standard for certification purposes in any averaging, banking, or trading (ABT) programs. It will be used for determining compliance of any engine in this family and compliance with such ABT programs.

BE IT FURTHER RESOLVED: The listed engine models are conditionally certified. These engine models may be sold and or marketed prior to Volvo updating the engines with the revised SCR strategies approved by the Air Resources Board (ARB). Volvo shall ensure that engine models produced under this conditional Executive Order are reprogrammed in the field by December 31, 2016 to incorporate the ARB approved revised SCR strategies. The aforementioned reprogramming shall be implemented free of charge based upon a plan approved by ARB. No later than May 31, 2016 engine models produced shall incorporate the ARB approved revised SCR strategies. Engine models produced after May 31, 2016 not incorporating the ARB approved SCR strategies will be deemed uncertified and shall be subject to penalties and recall authorized by California laws.

BE IT FURTHER RESOLVED: For the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels), 13 CCR 1971.1 (on-board diagnostic, full or partial compliance) and 13 CCR 2035 et seq. (emission control warranty).

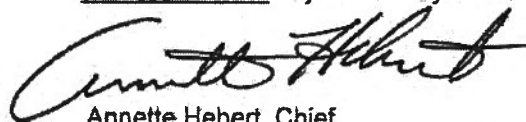
BE IT FURTHER RESOLVED: Except in vehicle applications exempted per 13 CCR 1956.8(a)(6)(B), engines in this engine family certified under 13 CCR 1956.8(a)(6)(C) (30 g/hr NOx) and section 35.B.4 of the incorporated "California Exhaust Emissions Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles" adopted Dec. 12, 2002, as last amended October 21, 2014, shall be provided with an approved "Certified Clean Idle" label that shall be affixed to the vehicle into which the engine is installed.

BE IT FURTHER RESOLVED: The listed engine models are conditionally certified in accordance with 13 CCR Section 1971.1(k) (deficiency and fines provisions for certification of malfunction and diagnostic system) because the heavy-duty on-board diagnostic (HD OBD) system of the listed engine models has been determined to have twelve deficiencies. The listed engine models are approved subject to the manufacturer paying a fine of \$300 per engine for the third through twelfth deficiencies in the listed engine family that is produced and delivered for sale in California. On a quarterly basis, the manufacturer shall submit to the Air Resources Board reports of the number of engines produced and delivered for sale in California and pay the full fine owed for that quarter pursuant to this conditional certification. Payment shall be made payable to the State Treasurer for deposit in the Air Pollution Control Fund no later than thirty (30) days after the end of each calendar quarter during the 2016 model-year production period. Failure to pay the quarterly fine, in full, in the time provided, may be cause for the Executive Officer to rescind this conditional certification, effective from the start of the quarter in question, in which case all engines covered under this conditional certification for that quarter and all future quarters would be deemed uncertified and subject to a civil penalty of up to \$5000 per engine pursuant to HSC Section 43154.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 6 day of January 2016.



Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

Engine Model Summary Template

ATTACHMENT 1 OF 2

A-242-0038

7-7-16

Engine Family	1 Engine Code	2 Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
GVPTH10.8G01	SWrev-01	D11J - 405	405 @ 1900	237.3	150.8	1593 @ 1050	297.2	104.2	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTH10.8G01	SWrev-01	D11J - 385	385 @ 1700	240.0	136.2	1513 @ 1050	279.2	97.9	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTI10.8G01	SWrev-01	D11J - 365	365 @ 1700	220.1	124.9	1393 @ 1000	257.0	85.8	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTH10.8G01	SWrev-01	D11J - 355	355 @ 1700	217.7	123.6	1265 @ 1000	231.3	77.2	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTH10.8G01	SWrev-01	MP7 - 405SE	405 @ 1900	237.3	150.8	1593 @ 1050	297.2	104.2	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTH10.8G01	SWrev-01	MP7 - 355E	355 @ 1800	210.5	126.5	1405 @ 1100	257.0	94.4	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTH10.8G01	SWrev-01	MP7 - 325E	325 @ 1800	195.0	117.2	1317 @ 1100	239.0	87.8	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTH10.8G01	SWrev-01	MP7 - 395C	395 @ 1500	272.0	136.3	1602 @ 1100	297.4	109.2	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTH10.8G01	SWrev-01	MP7 - 365C	365 @ 1450	255.5	123.7	1496 @ 1100	276.0	101.4	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTH10.8G01	SWrev-01	MP7 - 345C	345 @ 1450	241.1	116.7	1404 @ 1100	257.2	94.5	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTH10.8G01	SWrev-01	MP7 - 405M	405 @ 1900	237.7	150.8	1535 @ 1050	282.3	99.0	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTH10.8G01	SWrev-01	MP7 - 365M	365 @ 1900	211.1	133.9	1385 @ 1100	252.8	92.8	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTH10.8G01	SWrev-01	MP7 - 325M	325 @ 1900	186.2	118.1	1244 @ 1100	225.3	82.8	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX

Engine Model Summary Template

ATTACHMENT 2 OF 2

A-242-0088

7-7-16

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1939
GVPTH10.8G01	SWrev-01	MP7 - 345A	345 @ 1500	232.6	116.5	1270 @ 1100	230.0	84.5	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX
GVPTH10.8G01	SWrev-01	MP7 - 345R	345 @ 1700	203.1	115.3	1305 @ 1100	230.0	84.5	TC, CAC, EGR, DDI, ECM, DOC, PTOX, SCR, AMOX



ACX64 Class 8

Grande Truck Center
4562 IH 10 East
San Antonio, TX 78220

Prepared By : Rocky Shoffstall
210-666-7112
rshoffstall@grandetruck.com

Prepared For : LD MCGARITY
CITY OF SAN ANTONIO TX

Tuesday, November 8, 2016 10:41:12 AM EST

Prepared By Rocky Shoffstall
Quote Id : COSA 12LNG 7 ea
Phone : 210-666-7112
Quote Number : Q0027485

Prepared For LD McGarity
City of San Antonio TX

Table of Contents

Customer Checklist	page 3
GAWR, GVWR & Tire Pressure	page 4
Vehicle Specification	page 5
Quote Summary	page 14
Internal Quote Summary	page 16
Dimensions	page 18
Top Speed	page 19

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11/08/2016

Customer Checklist

To ensure timely processing of your vehicle purchase, please complete the following checklist by _____.

____ 1. CREDIT APPLICATION

____ 2. TAX STATEMENTS, LAST THREE YEARS

____ 3. DOWN PAYMENT

____ 4. INSURANCE INFORMATION

AGENCY _____

POLICY NUMBER _____

AGENT (WITH PHONE #) _____

____ 5. TRADE-IN INFORMATION

TITLE _____

REMOVE PERSONAL ITEMS, TOOLS, ETC _____

____ 6. _____

Thank you.

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GAWR, GVWR & Tire Pressure

GVW Rating – 66,000#			
Front GAWR	20,000#	Rear GAWR	46,000#
Front Suspension	20,800#	Rear Suspension	46,000#
Front Wheels	20,000#	Rear Wheels	72,000#
Front Tire Size And Tread	20,400#	Rear Tire Size And Tread	72,700#
Front Brakes	20,000#	Rear Brakes	46,000#
Front Axle	20,000#	Rear Axle	46,000#
PSI			
Front PSI	130.0	Rear PSI	85.0

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11/08/2016

Vehicle Specification

		Description	Front Weight	Rear Weight	Price	
AUTOCAR TRUCKS						
O	ENG0001	ENGINEERING GROUP IDENTIFIER	AUTOCAR ENGINEERING	0	0	0
S	0040002	MODELS	ACX64	10,431	6,154	166,000
O	5000002	CAB SHELL	SINGLE RIGHT HAND DRIVE CAB	0	0	600
O	100U001	CUSTOMER TYPE	MUNICIPAL	0	0	0
VEHICLE ADAPTATION						
S	114010	COUNTRY OF USE	UNITED STATES STD MARKET ADAPTATION	0	0	0
SOLUTION						
O	C04001	BODY COMPANY	HEIL	0	0	0
O	C01003	APPLICATION	REFUSE - LANDFILL	0	0	0
O	C02004	BODY TYPE	AUTOMATED SIDE LOADER	0	0	0
O	C03003	TERRITORY	CENTRAL	0	0	0
O	C06107	BODY STYLE	HEIL DURA PACK PYTHON	0	0	0
O	C05033	TOTAL BODY CAPACITY - BODY/HOPPER	33 YARD	0	0	0
O	C070002	FUEL SYSTEM TYPE	GAS/CNG/BODY MOUNTED TANKS	0	0	0
O	C080001	REAR SUSPENSION TYPE	STD/BEAM TYPE REAR SUSPENSION	0	0	0
O	C090003	AXLE QUANTITY	3 AXLE	0	0	0
O	C001013	TRUCK TYPE	ASL, HEIL, WB 216, NO AUX AXLE, CNG, WITH SERVICE HOIST/SERVICE LIFT/EJECT/DUMP	0	0	0
O	D010200	FRONT GAWR	20000 LBS	0	0	0
O	D020460	REAR GAWR	46000 LBS	0	0	0
O	D100660	GVWR	66000 LBS	0	0	0
ENGINE						
S	1580001	ENGINE VOCATION	COMMERCIAL - DOMESTIC (DOT)	0	0	0
O	1010060	ENGINE ASSY	ISX12-G, 350R / 2100RPM / 1350 FT-LBS , CUMMINS	950	0	20,700
O	4460002	FUEL TYPE	COMPRESSED NATURAL GAS	0	0	0
O	972A002	SPECIAL EMISSION CERTIFICATION LABELS	49 STATE-NO LABEL REQUIRED	0	0	0
ENGINE EQUIP						

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S	128071	ENGINE CONTROL SPECIFICATIONS	DEFAULT SPECS	0	0	0
O	1290003	ENGINE ELECTRONICS	CUMMINS GAS, CM2180A	0	0	0
S	132034	ENGINE PROTECT SYSTEM/WARNINGS	AUDIBLE/VISUAL ALARM/LOP, HT, LWL	0	0	0
O	438998	FILTER-FUEL, CHASSIS MOUNTED	NO ADDITIONAL FUEL FILTER PROVIDED	-3	0	-230
O	170104	FILTER-FUEL, ENGINE MOUNTED	NATURAL GAS FUEL CLEANER	0	0	0
S	1750001	ENGINE OIL	STANDARD ENGINE OIL	0	0	0
S	2000004	RADIATOR	1300 SQ. IN., 2-ROW HIGH CAPACITY ALUMINUM	0	0	0
S	2080001	FAN & DRIVE-ENGINE	2-SPEED FAN	0	0	0
S	2090001	RADIATOR COOLANT	EXTENDED LIFE COOLANT	0	0	0
O	2120003	RADIATOR SURGE TANK	STANDARD SURGE TANK W/ SIGHT GLASS	0	0	0
O	220052	AIR CLEANER	16" TWO STAGE	28	3	305
S	226001	AIR INTAKE RAIN CAP	BLACK, HOOD TYPE	0	0	0
O	230022	MUFFLER SYSTEM	SINGLE VERTICAL RH SIDE	0	0	0
O	231001	EXHAUST SHIELDS	STAINLESS STEEL VERT MUFF SHIELD-SINGLE	0	0	0
S	2320003	EXHAUST STACKS	VERTICAL DIFFUSER, SINGLE STAINLESS STEEL	0	0	0
O	239998	UREA DELIVERY SYSTEM	NO DEF TANK PROVIDED	-30	-4	0
S	5300001	ENGINE/EXHAUST COVER	ALUM TURBO/EXHAUST PIPE DEBRIS SHIELD	0	0	0
S	700026	AIR COMPRESSOR	CUMMINS WABCO 18.7 CFM COMPRESSOR	0	0	0
S	8200003	STARTING MOTOR	DELCO REMY 12V 39 MT W/OCP	0	0	0
S	8020004	ALTERNATOR	DELCO REMY 36SI 12V 160 AMP	13	0	0
S	P010065	VEHICLE GOVERNED SPEED LIMIT	SPEED LIMIT 65MPH	0	0	0
S	P020001	ENGINE IDLE SHUT DOWN	ENGINE IDLE SHUT DOWN ENABLED (5 MINUTES)	0	0	0
O	P030002	CRUISE CONTROL PARAMETER	CRUISE CONTROL DISABLED	0	0	0
S	P110000	PTO REGEN INHIBIT THRESHOLD	PTO REGEN INHIBIT THRESHOLD = 0 MPH	0	0	0
S	P641200	RPM PTO MODE	1200 RPM MAX IN PTO	0	0	0
O	P700950	PTO SET SWITCH	PTO SET SWITCH = 950 RPM	0	0	0
O	P710950	PTO RESUME SWITCH	PTO RESUME SWITCH = 950 RPM	0	0	0
S	P730500	PTO RAMP RATE INCREMENT	PTO RAMP RATE INCREMENT = 500 RPM	0	0	0
S	P830000	IGNORE VSS IN PTO MODE	IGNORE VSS IN PTO MODE = DISABLED	0	0	0

TRANSMISSION

S	2580003	VOCATION	RDS REFUSE - VOC 400-XXX	0	0	0
O	2690019	CONTROL MODULE (ELECT)	REFUSE W/ AUTO-NEUTRAL & SERVICE BRAKE, VP170	0	0	0
O	27A0001	TRANSMISSION RETARDER	ALLISON OUTPUT RETARDER RDS TRANSMISSION	125	25	8,675
S	26A0001	TRANSMISSION SHIFT SCHEDULE	PRIMARY PERFORMANCE / SECONDARY ECONOMY	0	0	0
O	27P0001	TRANSMISSION RETARDER AUDIBLE ALARM	TRANSMISSION RETARDER AUDIBLE ALARM	0	0	0
O	2700028	TRANSMISSION	ALLISON 4500 SERIES,6- SPEED	384	59	13,065
S	284016	TRANSMISSION CONTROLS	ALLISON PUSHBUTTON CONTROLS	0	0	0
S	286005	COOLER-TRANSMISSION OIL	OIL TO WATER TYPE	0	0	0
S	290003	TRANSMISSION OIL FILL/CHECK	OIL FILL TUBE / DIPSTICK W/ LEVEL SENSOR	0	0	0
S	292004	TRANSMISSION LUBRICANT	TRANSYND SYNTHETIC AUTO TRANS FLUID	0	0	0
O	300013	DRIVESHAFT-MAIN	SPICER 1810HD HALF ROUND	5	10	107
O	3170007	PTO-TRANSMISSION MOUNTED	CHELSEA 890 / 897 PTO CLEARANCE (PREP ONLY)	5	0	350

FRONT AXLE

S	3700002	FRONT AXLE	MERITOR MFS-20 STEER AXLE, 20000# CAPACITY	0	0	0
S	3690005	FRONT AXLE POSITION	52.5 INCHES	0	0	0
S	371135	FRONT SUSPENSION	9500 LOW CAMBER FLATLEAF 20,800 GROUND CAPACITY	0	0	0
O	371T01	SUSPENSION, FRONT AUX	AUX LOAD CUSHION	10	0	310
S	373002	SHOCK ABSORBERS- FRONT	DOUBLE ACTING SINGLE - HEAVY DUTY	0	0	0
S	904011	HUBS-FRONT	STEEL HUB PILOTED,285MM BOLT CIRCLE	0	0	0
S	9400001	WHEEL OIL SEALS-FRONT	SCOTSEAL PLUS XL	0	0	0
S	9210001	HUB CAPS - FRONT AXLE	CR ZYTEL HUBCAP	0	0	0
O	374002	FRONT AXLE LUBRICANT	SYNTHETIC,DANA SPICER EP75W90,OR EQUIV	0	0	10
O	7510001	BRAKES-FOUNDATION, FRONT AXLE	MERITOR 16.5X7" QP REFUSE BRAKE	29	0	50
S	754009	BRAKE SLACK ADJUSTERS -FRONT AXLE	MERITOR AUTOMATIC	0	0	0
S	755001	DUST SHIELDS - FRT BRAKES	DUST SHIELDS - FRONT BRAKES	0	0	0
S	901001	BRAKE DRUM-FRONT	CAST IRON	0	0	0

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O	383107	STEERING GEAR	INTEGRAL POWER STEERING W/LEFT HAND RAM	0	0	0
S	387003	POWER STEERING RESERVOIR	FOUR QUART REMOTE MOUNTED	0	0	0

REAR AXLE

O	330444	REAR DRIVE AXLE-SINGLE & TANDEM	MERITOR RT46-160 46,000 LB	0	430	2,775
O	330U001	REAR AXLE LUBE PUMP	DIFFERENTIAL PUMP - MERITOR	0	30	260
O	331538	REAR DRIVE AXLE RATIO	5.38	0	0	0
O	333014	REAR DRIVE AXLE ANTI- SPIN DEVICES	FOUR WHEEL LOCK	0	63	1,250
O	3500004	REAR SUSPENSION	HENDRICKSON HMX-460 SUSP @ 54" AS	0	0	715
S	351013	REAR SUSPENSION BEAMS	54 INCH STEEL RUBBER BUSHED	0	0	0
S	358005	TORQUE RODS	LONGITUDINAL & TRANSVERSE - RUBBER BUSHED	0	0	0
O	359001	SHOCK ABSORBERS-REAR	4 SHOCK ABSORBERS HENDRICKSON SUSPENSION	0	31	202
S	9130001	HUBS-REAR	IRON HUB, HP 10 STUD	0	0	0
S	3400001	REAR AXLE BREATHER	STANDARD AXLE BREATHER	0	0	0
S	9410001	WHEEL OIL SEALS-REAR	SCOTSEAL PLUS XL	0	0	0
O	339002	REAR AXLE LUBRICANT	SYNTHETIC	0	0	130
O	7610001	BRAKES-FOUNDATION, REAR AXLE	MERITOR 16.5X8.62" QP REFUSE BRAKE	0	42	250
S	764013	BRAKE SLACK ADJUSTERS -REAR AXLE	MERITOR AUTOMATIC,TANDEM AXLE	0	0	0
S	765001	DUST SHIELDS - REAR BRAKES	DUST SHIELDS - REAR BRAKES	0	0	0
S	781012	BRAKE CHAMBERS- PARKING, TYPE/VENDOR	CAM TYPE MGM STOPGARD (4)	0	0	0
S	910001	BRAKE DRUM-REAR	CAST IRON	0	0	0

BRAKES

S	729002	AIR LINES-PARKING BRAKE, CHASSIS	AIR LINES CHASSIS PARK BRAKE	0	0	0
S	741047	BRAKE CONTROL SYSTEM	BENDIX ABS 4S/4M	0	0	0

CHASSIS

O	400216	WHEELBASE	216 INCHES	12	14	371
O	402074	FRAME-REAR OVERHANG	74"	42	-150	0
S	403012	FRAME RAILS	3/8" VARIABLE DROP STEEL, EXT B	0	0	0
O	404002	FRAME REINFORCEMENT INNER	.25" LINER, STANDARD LENGTH	131	385	1,705
S	409002	FRAME CROSSMEMBER- CENTER	ALUMINUM	0	0	0

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S	4110002	FRAME CROSSMEMBER- END CLOSING	ALUMINUM MEMBER-IF REQUIRED	0	0	0
S	4120002	FRAME BOLTS	HUCKSPIN RR SUSP & CROSSMEMBERS	0	0	0
S	460001	BUMPER-FRONT	STEEL PAINTED	0	0	0
S	480002	TOWING DEVICE-FRONT	TWO REMOVABLE TOW PINS	0	0	0
O	8742000	WIRING, BODY INTERFACE	RP 170 COMPLIANT	0	0	0
O	430800	FUEL TANK-LEFT	ALTERNATE FUEL ENGINE- NO LH TANK	-29	-59	0
O	431800	FUEL TANK-RIGHT	ALTERNATE FUEL ENGINE- NO RH TANK	0	0	0
O	436023	FUEL LINES	STAINLESS STEEL FOR CNG OR LNG	0	0	0
S	8120005	BATTERY BOX	STEEL BOX, 3 BATTERY, LHS	0	0	0
O	8090003	BATTERY BOX DRILLING	BATTERY BOX LOCATION - SPEC DRIVEN	0	0	0
S	810089	BATTERY	3 JOHNSON CONTROL 31ECL 12V 2250CCA	0	0	0
S	8140002	BATTERY SHUT-OFF SWITCH	SHUTOFF W/ LOCKOUT, NO EMERGENCY JUMPER STUDS	0	0	0
S	7110001	AIR TANK-BRAKE	STEEL AIR TANKS	0	0	0
O	7090003	AIR TANK DRILLING	AIR TANKS LOCATION SPEC DRIVEN	0	0	0
S	715002	WET TANK DRAIN	BENDIX D/V-2 AUTOMATIC	0	0	0
O	715T003	AIR RESERVOIR DRAIN SYSTEM	CENTRAL MANIFOLD W/ PETCOCKS	2	2	70
S	7130001	AIR DRYER	WABCO 1800P	0	0	0
O	7100008	AIR DRYER DRILLING	AIR DRYER MTD OUTSIDE RAIL, RHS, SPEC DRIVEN	0	0	0
S	724001	AIR LINES-CAB	SAE J844 NYLON TUBING	0	0	0
S	728001	AIR LINES-MAIN, CHASSIS	SAE J844 NYLON TUBING	0	0	0
CAB EXTERIOR						
S	4510001	STEP-CAB ACCESS, CAB MOUNTED	DUAL SELF CLEANING CAB ENTRANCE STEPS	0	0	0
S	462004	MUD FLAPS-FRONT WHEEL	FRONT FLAPS	0	0	0
S	502001	CAB DOORS	STEEL	0	0	0
O	502T03	DOOR CHECK STRAPS	L.H. & R.H. DOOR CHECK STRAP	2	0	255
O	5120001	POWER WINDOWS	DUAL INTERNAL REGULATOR POWER WINDOWS	4	0	750
O	620001	SUN VISOR-EXTERIOR	FIBERGLASS, MOUNTED OVER WINDSHIELD	14	-4	875
O	6220017	MIRRORS-DUAL WEST COAST	MIRROR, BLACK, HTD, REMOTE W / LWR HTD CONVEX	0	0	570

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S	6190002	MIRROR ARMS	RETRACTABLE ARMS, STAINLESS STEEL	0	0	0
O	6180002	DOWN VIEW MIRRORS	SINGLE DOWN VIEW MIRROR, LH SIDE	0	0	0
S	6240001	GRAB HANDLES-ENTRY	BRUSHED SS GRAB HANDLES	0	0	0
S	630026	HORN-AIR	TWIN MOUNTED UNDER CAB	0	0	0
S	631001	HORN-ELECTRIC	SINGLE	0	0	0
S	661001	CAB TILT MECHANISM- C.O.E.	HYDRAULIC TILT	0	0	0
S	6720001	GRILLE	AUTOCAR GRILLE	0	0	0
S	675001	BUG SCREENS	BUG SCREEN MOUNTED BEHIND GRILLE	0	0	0
S	6910001	FENDER EXTENSIONS- FRONT	IMPACT RESISTANT POLY FENDER	0	0	0

CAB INTERIOR

S	3800001	STEERING WHEEL	16" DIA. WHEEL, 2 SPOKE	0	0	0
O	3810002	STEERING COLUMN	TILT AND TELESCOPIC STEERING COLUMN	0	0	0
O	5200001	SEAT-DRIVER	BOSTROM 910 HIGH BACK, AIR RIDE	4	0	100
S	521110	SEAT-PASSENGER	FIXED TYPE, LOW BACK	0	0	0
O	5220002	SEAT BELTS-DRIVER	THREE POINT RETRACTABLE, BRIGHT ORANGE COLOR	0	0	15
O	5230002	SEAT BELTS-PASSENGER	THREE POINT RETRACTABLE, BRIGHT ORANGE COLOR	0	0	15
S	526014	SEAT INSERT	BLACK CORDURA	0	0	0
S	538001	CARPET & MAT	MAT WITH FOAM BACK	0	0	0
S	5390001	CAB INTERIOR	AUTOTUFF INTERIOR UPHOLSTERY	0	0	0
S	5500001	CENTER CONSOLE	CENTER CONSOLE	0	0	0
S	5510001	REAR CONSOLE	REAR CONSOLE	0	0	0
S	5930001	ASH TRAY	ASHTRAY MTD IN CONSOLE	0	0	0
O	5950012	CAMERAS	3RD EYE CAMERA PREP (CAB ONLY)	1	0	875
O	8750001	ADDITIONAL ELEC. SWITCHES	2 DASH SWITCHES, WIRED TO POWER	1	0	55
O	5852000	DRIVER MONITORING SYSTEM	DRIVER CAM WIRING PREP OVERHEAD CONSOLE	0	0	90

CAB CLIMATE CONTROL

A	060QXX	CAB TEMPERATURE SYSTEM	DUAL EVAPORATOR A/C WITH HEATER / DEFROSTER WITH ROOF MOUNTED CONDENSER	0	0	7,000
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A	612002	AIR CONDITIONER CONDENSER	ROOF MTD. (DISTRIBUTOR RESPONSIBILITY TO ENSURE CLEARANCE WITH FEL CANOPY)	0	0	0
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GAUGES & INSTRUMENTATION

S	0570002	INSTRUMENTS SALES PKG	STANDARD GAUGES (VOLTAGE AND OIL PRESSURE INCLUDED IN VEHICLE DISPLAY)	0	0	0
S	1430001	TRUCK ELECTRICAL CONTROL MODULE	VEHICLE CONTROL UNIT	0	0	0
S	1362000	TACHOMETER/RPM TACHOGRAPH	ELECTRONIC TACHOMETER	0	0	0
S	1372000	GAUGE-HOURMETER	HOURLMETER INCLUDED IN ON BOARD DISPLAY	0	0	0
O	2250001	AIR INTAKE RESTRICTION INDICATOR	AIR INTAKE RESTRICTION GAUGE IN CAB	0	0	70
O	3190001	PTO CONTROLS	PTO ELECTRIC CONTROL SWITCH	1	0	25
O	4390004	GAUGE-FUEL LEVEL	NG FUEL LEVEL INCLUDED IN ONBOARD DISPLAY (ONLY AVAILABLE WITH AUTOCAR FMM)	0	0	0

LIGHTING

S	8360003	LAMPS-HEAD	LED HEADLAMPS	0	0	0
S	8410002	LAMPS-TURN SIGNAL - FRONT	LED FRONT TURN SIGNALS	0	0	0
S	8440003	SWITCH-TURN SIGNAL & FLASHER	SELF-CANCELING TURN SIGNALS	0	0	0
S	8510002	LAMPS-MARKER	AMBER LED ROOF MARKERS	0	0	0
O	8520001	LAMPS-PARKING	CORNER MARKER LAMP WIRED TO BATTERY SHUT OFF	1	0	75
S	859001	LAMPS-RUNNING	DAYTIME	0	0	0
S	8700001	CIRCUIT PROTECTION DEVICE	AUTO CIRCUIT BREAKERS	0	0	0

RADIO/MISC

O	509002	KEY & LOCK SETS- IGN/DOORS	DOOR & IGNITION SAME - SAME FOR FLEET	0	0	4
O	5900002	RADIO	AM/FM / CD STEREO, ROOF MTD	13	-4	327
O	5910002	ANTENNA/POWER SUPPLY	ANTENNA - ROOF MOUNTED	0	0	0
O	596005	RADIO SPEAKERS	2 DUAL CONE SPEAKERS	0	0	0
S	8730001	WIRING-CAB	RADIO SHUT-OFF IN REVERSE	0	0	0

Prepared By Rocky Shoffstall
 Quote Id : COSA 12L NG 7 ea
 Phone : 210-666-7112
 Quote Number : Q0027485

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O	9620001	FIRE EXTINGUISHER	DUAL 5LB ABC EXTINGUISHERS, ONE UNDER EACH SEAT	5	0	200
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FRONT TIRES / WHEELS

O	905111	WHEELS-DISC FRONT	22.5X9.0" STEEL HP, 5.25" INSET, 5HH, ACCURIDE #29039	0	0	-6
S	905T98	SPARE WHEELS FRONT	NO SPARE FRONT WHEELS	0	0	0
S	930469	TIRE SIZE & LOAD RANGE - FRONT	315/80R22.5L	0	0	0
S	9310039	TIRE MANUFACTURER & TREAD - FRONT	GOODYEAR G289 WHA (RATED TO 10K)	0	0	0
S	931T98	SPARE FRONT TIRE	NO SPARE FRONT TIRES	0	0	0

REAR TIRES / WHEELS

O	914105	WHEELS-DISC REAR	22.5X9.00" STEEL, HP, 5HH, ACCURIDE #29300	0	256	1,064
S	914T98	SPARE WHEELS REAR	NO SPARE REAR WHEELS	0	0	0
O	933469	TIRE SIZE & LOAD RANGE - REAR	315/80R22.5L	0	0	0
O	9340039	TIRE MANUFACTURER & TREAD - REAR	GOODYEAR G289 WHA	0	144	1,272
S	934T98	SPARE REAR TIRE	NO SPARE REAR TIRES	0	0	0

PAINT

S	950001	CAB PAINT SCHEME	SINGLE COLOR PAINT	0	0	0
S	9550001	CAB PAINT TYPE	STANDARD WHITE	0	0	0
S	9801002	CAB COLOR-FIRST	APPROVED -- DPSS-N0007EX -- STANDARD WHITE N0007	0	0	0
S	9861U1	CHASSIS COLOR	BLACK P3036	0	0	0
S	987949	BUMPER COLOR	SAME AS CHASSIS, UNPAINTED ALUM OR CHROME	0	0	0
S	988401	DISC WHEEL OR RIM COLOR	STEEL, E-COAT WHITE / ALUM-UNPAINTED	0	0	0

ADDITIONAL OPTIONS

S	899002	CHASSIS WARRANTY	STANDARD WARRANTY	0	0	0
S	899A200	TRANSMISSION WARRANTY	ALLISON 3YR WARRANTY	0	0	0
S	899B001	ENGINE WARRANTY	CUMMINS STANDARD WARRANTY	0	0	0
S	978015	FLOOR PLAN	15 DAYS FLOORING	0	0	0
O	969V002	ADDITIONAL PRICE ADJUSTMENT	TEMPORARY INFLATION ADJUSTMENT	0	0	0

OTHERS

S	R010999	READY TRUCK SPEC	NO READY SPEC	0	0	0
S	133003	ACCELERATOR PEDAL & LINK	WILLIAMS ACCELERATOR	0	0	0

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O 4230001	FUEL MANAGEMENT MODULE	LH MOUNTED CNG FUEL MANAGEMENT MODULE	30	10	8,000
O 9720005	CERTIFICATION- EMISSIONS	COMPLIES WITH 2013 U.S. EMISSIONS	0	0	0

SUB TOTALS

BASE WEIGHT/PRICE	10,431	6,154	166,000
FACTORY OPTION WEIGHT/PRICE	1,757	1,258	74,099
DISTRIBUTOR OPTION WEIGHT/PRICE	0	0	0

TOTALS

TOTAL PRICE (\$)			240,099
TOTAL WEIGHT (LB)	12,188	7,412	19,600



Prepared For:

Steven Haney City of San Antonio
329 S Frio
San Antonio, TX 78207
(210) 207-2078

Presented By:

MACK TRUCKS, INC.
2100 MACK BOULEVARD
Allentown, Pennsylvania 18105
(800) TNT-MACK
RSHOFFSTALL@GRANDETRUCK.COM

Nov 8, 2016
2018 LR613
Ref#: AITV011018A

Description

List Price

ORDER/CUSTOMER/VEHICLE INFORMATION

INITIAL REGISTRATION LOCATION, UNITED STATES, TEXAS
LANGUAGE, ENGLISH
IDLE EMISSION CERTIFICATION, IDLE EMISSION CERTIFICATION - CARB 08
TYPE OF SERVICE, MUNICIPAL
VEHICLE APPLICATION CLASS, HEAVY VOCATIONAL - Unlimited operation on concrete, asphalt, or maintained gravel/packed dirt with a maximum 3% grade; limited operation on unmaintained surfaces with maximum 5% grade; limited operation on concrete, asphalt, or maintained gravel/packed dirt with maximum 10% grade. (3 AXLES) 78,000 lbs (35,281 kg) MAX GVW. (4 AXLES) 80,000 lbs (36,288 kg) MAX GVW.
CARRIER APPLICATION, WITH CRD150-151, Unlimited miles on 3% grade maintained gravel/packed dirt or paved, Max 15% miles on 10% grade maintained gravel/packed dirt or paved, Max 10% miles on 5% unmaintained, maintained gravel, packed dirt, or paved. 90000# (41000 kg) MAX GCW. (Carrier Code USA-V1)
VEHICLE TYPE, STRAIGHT TRUCK WITHOUT TRAILER
VEHICLE USE AND BODY/TRAILER TYPE, REFUSE, SIDE LOADER. On/Off Hwy
COMMODITIES, REFUSE
FILE STATUS, QUOTE
PRICE BOOK LEVEL, 2018A PRICE BOOK LEVEL
PRODUCT TYPE, PRODUCT TYPE - OL64R TRUCK
PRODUCT CLASS, PRODUCT CLASS 29

BVS/WHEELBASE/PLATFORM

CHASSIS (BASE MODEL), LR603 6-WHEEL TRUCK \$257,453.00
DROP FRAME, W/O DROP FRAME
FRAME RAILS, 13.375" x 3.25" x .375" (340 x 83 x 10mm) STEEL Section Modulus 23.49 cu in/RBM
2,818,800 in lbs per rail.
WHEELBASE, 210" (5334 mm) WB 215" CA (5461 mm)
PLATFORM, 282" LP (7264 mm) 67" AF (1694 mm) USED WITH 210" WB
FRAME REINFORCEMENT - INSIDE, 1/4" STEEL INSIDE CHANNEL REINFORCEMENT \$1,621.00
RUST PREVENTION, W/O RUST PREVENTION

ENGINE/TRANSMISSION/CLUTCH

ENGINE, MACK MP7-355A 355 HP @1500-1800 RPM (PEAK) 1280 LB. FT. MAX. TORQUE @ 1000-1450 RPM \$1,151.00
TRANSMISSION, 6 SPEED AUTOMATIC, ALLISON 4500-RDS-R (4.70/0.67) GEN 5 W/PROGNOSTICS, \$8,906.00
W/OUTPUT RETARDER INCLUDES DIRECT MOUNT OIL COOLER, EXTERNAL OIL COOLER,
INTERNAL FILTER, AND OIL LEVEL SENSOR

EXHAUST/EMISSIONS

DPF, CLEARTECH VV DPF VERTICAL LH SIDE BACK OF CAB W/SCR VERT RH SIDE BOC
EXHAUST AFTER-TREATMENT SYSTEM, EXHAUST AFTER-TREATMENT SYSTEM DIESEL PARTIC
FILTER CERAMIC PASSIVE REGEN
DPF SMART SWITCH, W/O DPF REGENERATION CONTROL SWITCH
EXHAUST, DPF, OUTBOARD, SINGLE (R/S) VERTICAL STRAIGHT EXHAUST STACK PLAIN END, SIDE
OUTLET DIFFUSER

ENGINE EQUIPMENT

13" (330 mm) DIAMETER BEHIND CAB W/SNORKEL, SINGLE ELEMENT DRY TYPE

Description	List Price
PRE-CLEANER (DRY TYPE CLEANER)	
W/O AIR INTAKE HEIGHT OPTION	
ALTERNATOR, DELCO 12V 160A (24si) BRUSH-TYPE	\$114.00
BATTERIES, (3) MACK 12V 760/2280 CCA THREADED STUD TYPE	\$40.00
TEXACO LONG LIFE ENGINE COOLANT #7998 WITH NITRITES (50/50 mix) to -34 degrees F (-37 degrees Celsius)	\$36.00
SPIN ON CANISTER W/O CHEMICAL FOR USE W/TEXACO EXTENDED LIFE COOLANT ONLY	\$39.00
COOLING PERFORMANCE, WITH AUXILIARY COOLING	\$2,913.00
ENGINE BRAKE, W/O ENGINE BRAKE	
ENGINE BLOCK HEATER, 120V 1500 WATT ENGINE BLOCK HEATER	
FAN DRIVE, BEHR FAN AND ELECTRONIC MODULATING FAN DRIVE	
FUEL-WATER SEPARATOR, DAVCO 382, (FLUID HEAT) HEATED FUEL/WATER SEPARATOR WITH VENDOR PRIMARY AND MACK SECONDARY FUEL FILTERS	\$773.00
HOSES - RADIATOR/HEATER, SILICONE W/BREEZE SPRING LOADED CLAMPS FOR BOTH RADIATOR & HEATER	\$134.00
OIL PAN, OIL PAN	
W/O ENGINE COLD START AID	
STARTER, 12 VOLT DELCO MTHD 39	
TETHER DEVICE, PLASTIC COATED CABLE, MOUNTED FRONT OF EACH BATTERY BOX LENGTH TO ALLOW COVER TO SET ON GROUND	
CLUTCH/TRANS EQUIPMENT/DRIVELINES	
SYNTHETIC LUBRICANT - TRANSMISSION, TRANSYND SYNTHETIC LUBE FOR ALLISON TRANS VOCATIONAL PACKAGE - ALLISON, ALLISON GEN 5 PACKAGE #142 (AG) REFUSE WITH AUTO NEUTRAL ONE SELECTOR, TO NEUTRAL W/PARKING BRAKE ENGAGED	
TRANSMISSION OIL MONITORING SYSTEM, W/O TRANSMISSION OIL MONITORING SYSTEM W/O DRIVESHAFT GUARD	
DRIVELINE - MAIN, SPICER 1810 HD W/COATED SPLINES	\$168.00
DRIVELINE - INTERAXLE, SPICER 1710 HD W/COATED SPLINES	\$85.00
CAB (A thru G)	
AIR CONDITIONING, EXTENDED CAB INTEGRAL A/C	
AIR RESTRICTION MONITOR (INTAKE), GRADUATED LOCK UP (AIR CLEANER INTAKE MOUNTED)	
W/O AUX WARNING LIGHT PROVISIONS	
CAB CONFIGURATIONS, RH DRIVE ONLY	
CAB LIFT/TILT, MANUAL TILT PUMP	
CAB - CORNER PROTECTION, CAB CORNER PROTECTION, FRONT	\$430.00
CAMERA - REAR VIEW, PRE-WIRE KIT AWT/3RD EYE ADVANCE VIDEO SAFETY SYSTEM (AVSS) W/DRILLING PROVISION FOR MONITOR	\$1,855.00
CERTIFIED WEIGHT	
ENGINE RUNNING ACTIVATED	
LH FRONT HINGED & RH FRONT HINGED	\$1,857.00
W/O EXHAUST PYROMETER GAUGE	
GAUGES, ENGLISH DISPLAY	
TRANSMISSION GAUGE AND TRANS. OIL HIGH TEMPERATURE LIGHT	
GEAR SHIFT, WITH NEUTRAL-TO-RANGE INHIBIT	
GLASS - CAB WINDOW, TINTED WINDSHIELD SIDE AND REAR WINDOWS	
GRILLE, BLACK	

Description	List Price
CAB (H thru R)	
HEATER WITH INTEGRAL DEFROSTER	
HORN - AIR, (1) TWIN-UNDER CAB TRUMPET W/RH ROOF MOUNTED LANYARD	
HORN - ELECTRIC, DUAL TONE (TWO HORNS)	\$11.00
IDENTIFICATION/CLEARANCE LIGHTS, LED TYPE ROOF MARKER AND CLEARANCE LAMPS	
INTERIOR TRIM - TWO TONE CHARCOAL AND GRAY	
KEYED ALIKE CHASSIS	\$39.00
KEY NUMBER 0002	
MARKER / DIRECTIONAL SIGNAL, FRONT AND SIDE DIRECTION IND & MARKER, LED TYPE	
MIRRORS - EXTERIOR, LH & RH ELECTRIC HEATED & OPERATED, WITHOUT MEMORY	
MIRRORS - CONVEX TYPE, CONVEX MIRRORS	
MIRRORS - PROXIMITY, RECTANGULAR CONVEX ABOVE RH & LH DOOR	\$96.00
MUD FLAPS, 12" FRONT FENDER MOUNTED	
W/O PERSONALIZED NAME PLATE	
AM/FM PREMIUM STEREO, CD-PLAYER, MP3, WEATHERBAND, HANDSFREE INTERFACE, BLUETOOTH	
5-WAY BINDING POSTS FOR CB	
RADIO SHUTOFF, AUTO SHUTOFF FOR RADIO ENTERTAINMENT SYSTEM WHEN VEHICLE IS ENGAGED IN REVERSE	\$94.00
TWO WRAP AROUND HIGH VISIBILITY CAB CORNER WINDOWS	
CAB (S thru Z)	
SEAT - DRIVER, BOSTROM TALLADEGA 910 (MID-BACK) AIR SUSPENSION	(\$39.00)
SEAT - RIDER, MACK SEAT FIXED	(\$177.00)
SEAT COVERING, ALL CLOTH, BLACK, DRIVER & RIDER SEATS	
SEAT BELTS (ORANGE) LAP AND SHOULDER FOR DRIVER AND RIDER SEAT	\$54.00
W/O OPTIONAL ROOF VENT	
(1) STEERING COLUMN, ADJUSTABLE TILT TELESCOPE	
STEERING WHEEL, (1) TWO SPOKE 16" - URETHANE GRIP BLACK SPOKES	\$49.00
W/O REAR WALL STORAGE UNIT	
SUN VISOR - BOTH SIDES	
TURN SIGNAL SWITCH, SELF CANCELLING TURN SIGNALS	
WINDSHIELD PROTECTOR, FURNISH WINDSHIELD PROTECTOR	
WINDSHIELD WIPERS, 2 SPEED ELECTRIC MOTOR W/INTERMITTENT FEATURE	
FRAME EQUIPMENT/FUEL TANKS	
BUMPER - FRONT, PAINTED STEEL LOW PROFILE FRONT BUMPER 65"/1651 mm BBC	
CROSSMEMBERS, STEEL 1/2" PL BOLTED BOC & INTERMDT 1/8" BELOW RAIL, 1ST XMBR BOC RR 38.17" FROM AL LINE	
CROSSMEMBER (BEHIND REAR AXLE), W/O OPTIONAL CROSSMEMBERS BEHIND REAR AXLE/BOGIE	(\$51.00)
100MM FRONT FRAME EXTENSION, BOLTED ON (4")	\$488.00
SKID PLATE UNDER RADIATOR	\$415.00
TOWING DEVICE - FRONT, TOW PIN	
TOWING DEVICE - REAR, W/O REAR TOWING DEVICE	
FUEL TANK - LH, 70 GALLON (265 L) STEEL, 26"x24" RECTANGULAR	\$1,303.00
FUEL TANK - RH, OMIT RH STANDARD	(\$1,130.00)
FUEL TANKS - BRIGHT FINISH, W/O SPECIAL FINISH FUEL TANK	
6.6 GALLON (25 L) 22" DIAMETER TANK LEFT SIDE MTD	

Description	List Price
FUEL DRAW/RETURN SYSTEM, AEROQUIP FIRE RESISTANT FOR LH FUEL TANK INCLUDES SUMP RELOCATE FUEL TANK, LOCATE BEHIND LH FENDER - 5" BELOW TOP RAIL	
FRONT AXLE/EQUIPMENT/TIRES	
FRONT AXLES, 20000# (9072kg) MACK FXL20 WIDE PIVOT CENTER STRAIGHT SPINDLE/UNITIZED BEARINGS	
TIRES BRAND/TYPE - FRONT, BRIDGESTONE - TUBELESS RADIAL PLY, (2) 315/80R22.5 20 L M860A (ALL POS)	
WHEELS - FRONT, STEEL DISC (10-HOLE)	
(2) 22.5x9.0 ACCURIDE 10-HOLE HUB PILOTED (11 1/4"/286mm BC)	(\$135.00)
BRAKES - FRONT, MERITOR EX+ AIR DISC BRAKES 430MM (17") H-TYPE	\$1,306.00
BRAKE DRUMS - FRONT, SOLID ROTORS FOR DISC BRAKES	
DUST SHIELDS - FRONT BRAKE, FURNISH	\$36.00
HUBS - FRONT, BASIC HUB UNITIZED IRON, FRONT	
SHOCK ABSORBERS, FRONT	
SLACK ADJUSTERS - FRONT, AUTOMATIC FOR AIR DISC BRAKES	
SPRINGS - FRONT, MACK TAPERLEAF 20000# (9072kg) GROUND LOAD RATING	
STATIC LOAD CUSHIONS	
STEERING, M100P PLUS RIGHT SIDE ASSIST CYLINDER	
W/O WHEEL LUGWRENCH	
REAR AXLE/EQUIPMENT/TIRES/RATIOS	
REAR AXLE/SUSPENSION, 46000# (20866kg) MACK S462R CAST DUCTILE HOUSING "R" SERIES	\$3,600.00
WHEEL ENDS, S462R MACK mRIDE 46 PARABOLIC 3-LEAF, 46000#	
4S/4M SYSTEM REAR WHEEL END SENSORS	
TIRES BRAND/TYPE - REAR, BRIDGESTONE - TUBELESS RADIAL PLY, (8) 315/80R22.5 20 L M860A (ALL POS)	\$3,200.00
CARRIER/RATIO - REAR AXLE, CRDP150/151, 5.31 RATIO	
WHEELS - REAR, STEEL DISC (10 HOLE)	
(8) 22.5x9.00 (228 mm) ACCURIDE 10-HOLE HUB PILOTED (11 1/4" BOLT CIRCLE)	(\$367.00)
BRAKES - REAR, MERITOR EX+ AIR DISC BRAKES, 430MM (17") - H TYPE	\$4,860.00
BRAKE DIAPHRAGMS, W/O BRAKE DIAPHRAGM OPTION	
BRAKE DRUMS - REAR, SOLID ROTORS FOR AIR DISC BRAKES	
DUST SHIELDS - REAR BRAKE, FURNISH	\$71.00
HUBS - REAR, CONMET IRON HUBS W/PRESET BEARINGS & SEALS	
PREMIUM HUB OIL REAR SEAL	
POWER DIVIDER LOCKOUT W/WARNING LIGHT AND BUZZER (INCLUDES IN CAB MANUAL AIR VALVE)	
HIGH MOUNT REAR BRAKE CHAMBERS (REAR REAR AXLE ONLY)	
SHOCK ABSORBERS - (4), OUTBOARD MOUNTED ON FORWARD AND REAR AXLES EACH SIDE	
W/O SHOCK INSULATORS	
SLACK ADJUSTERS - REAR, AUTOMATIC SLACK ADJUSTERS FOR REAR AIR DISC BRAKES	
SUSPENSION - AXLE SPACING, 54" AXLE SPACING (BOGIE WHEELBASE)	
SPRING BRAKE CHAMBERS - QUANTITY, (4) CHAMBERS	
SPRING BRAKE CHAMBERS - VENDOR, WABCO BRAKE CHAMBERS VENDOR	
REAR SPRING BRAKE CHAMBERS 24/24 TYPE	
SYNTHETIC LUBRICANT - REAR AXLE, 75W - 90 (SYNTHETIC LUBRICANT) - SYNTHETIC	\$220.00

Description	List Price
V-ROD FOR mRIDE SUSPENSION DRIVER CONTROLLED INTER WHEEL DIFFERENTIAL LOCK BOTH RR AXLES, MANUAL AIR VALVE W/WARNING LIGHT. STANDARD WHEEL STUD OPTION	\$1,935.00
NON-DRIVE AXLES	
PUSHER AXLE, W/O PUSHER AXLE TAG AXLE, W/O TAG AXLE	
AIR/BRAKE	
AIR LINES - BODYBUILDER, W/O BODYBUILDER AIR LINES AIR DRYER, MERITOR/WABCO HEATED AIR DRYER, 1800 W/COALESCING OIL FILTER W/O RELOCATED AIR RESERVOIRS AIR RESERVOIRS, STEEL ANTI-LOCK BRAKE SYSTEM, BENDIX ABS AIR CONTROL VALVES - VENDOR, BENDIX SWITCHES AND VALVES WHERE POSSIBLE DRAIN VALVES, AUTO DRAIN VALVE HEATED ON SUPPLY TANKS MANUAL IN MANIFOLD FOR PRIMARY AND SECONDARY TANKS	\$35.00
ELECTRICAL	
BACK-UP ALARM, PRECO, MODEL 1059 BATTERY BOX COVERS, MOLDED PLASTIC BATTERY BOX - MOUNTING, SINGLE BOX 3 BATTERY MAX. PERP TO FRAME 11" FROM NTOF FLAMING RIVER BIG SWITCH WIRED ON POSITIVE SIDE BATTERY SWITCH WARNING LIGHT, FURNISH ON OR NEAR BATTERY BOX (LIGHT ON IN RUN POSITION) CAB WIRING & DASH CONTROL, W/O ROOF MTD LAMP OPTION COMPUTER AND 2-WAY RADIO DEDICATED CIRCUIT ELECTRIC CIRCUIT PROTECTION PACKAGE, 12 VOLT W/CIRCUIT BREAKERS (HEADLAMP CIRCUIT: SAE TYPE I; ALL OTHER CIRCUITS SAE TYPE II) NEGATIVE GROUND SYSTEM CONTROL LINK II REFUSE BODYBUILDER ELECTRICAL CONNECTION SYSTEM HEADLIGHTS, HALOGEN-SINGLE RECTANGLE, SEALED BEAM WITH PROTECTOR REAR LIGHTING, OMIT TAIL LIGHTS PROVISION FOR LOCAL INSTALLATION OF STROBE LIGHTS	\$172.00
\$37.00	
PAINT	
PAINT - CAB EXTERIOR, SINGLE COLOR, MACK WHITE (HIGH GLOSS) PAINT - CHASSIS RUNNING GEAR, MACK BLACK (URETHANE) PAINT - BUMPER, SAME AS CHASSIS RUNNING GEAR PAINT - FUEL TANK, SAME AS CHASSIS RUNNING GEAR PAINT - FRONT SPOKE WHEELS, WITHOUT OPTIONAL SPOKE WHEEL PAINT WITHOUT OPTIONAL SPOKE WHEEL PAINT PRE-FINISHED POWDER COAT WHITE PRE-FINISHED POWDER COAT WHITE	
PAINT PROCESS CODES	
SAME COLOR AS CHASSIS RUNNING GEAR (5ZB-A1X) CHASSIS RUNNING GEAR - STD COLOR (MACK BLACK) (6AB-Z1X) SAME COLOR AS CHASSIS RUNNING GEAR (7HB-A1X) W/O CUSTOM PAINT FOR HUB&DRUM/SPOKES (5YB-Z1X) W/O CUSTOM PAINTED FRONT/REAR RIM/WHEEL (6BB-Z1X)	

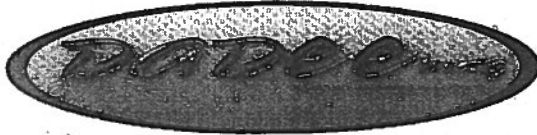
Description	List Price
PTO/SPECIALTY/ADDITIONAL EQUIPMENT	
PTO - CRANKSHAFT ADAPTER, FRONT END PTO-1350 SER FLANGE	
PTO - REAR ENGINE (REPTO), WITHOUT REAR ENGINE POWER TAKE OFF	
PTO - REAR MOUNTED, W/O REAR MTD PTO	
HYDRAULIC PUMP, FURNISH PUMP MTG PROVISIONS - INCLUDE WIRING, SWITCHES, AND INDICATORS AS REQUIRED	
FURNISH TC541 FOR USE W/ALLISON (HD) SERIES WORLD TRANSMISSION W/O WORK BRAKE	
	(\$427.00)
V-MAC IV PROGRAMMABLE PARAMETERS	
CUSTOMER VEHICLE LIMITING SPEED (MPH) 65 mph	
PEDAL ROAD SPEED LIMITER (MPH) 65 mph	
LGVLS FEATURE ACTIVATION Omit	
LOWER GEAR VEHICLE LIMITING SPEED (MPH) 00 mph	
SOFT RSL Omit	
PDLO ENGAGED VLS FEATURE Furnish	
PDLO ENGAGED VEHICLE LIMITING SPEED 25 rpm	
CRUISE CONTROL SETTINGS WITH ALLISON TRANS	
CRUISE CONTROL MAX SET SPEED (MPH) 55 mph	
CRUISE CONTROL MIN SET SPEED (MPH) 10 mph	
CRUISE CONTROL AUTORESUME W/CLUTCH Omit	
CRUISE'N BRAKE ENGAGEMENT DELAY (MPH) 0 mph	
ENGINE OVERSPEED COMPANY LIMIT (RPM) 2200 rpm	
FUELED ENGINE OVERSPEED COMPANY LIMIT (RPM) 2100 rpm	
VEHICLE OVERSPEED COMPANY LIMIT (MPH) 75 mph	
FUELED VEHICLE OVERSPEED COMPANY LIMIT (MPH) 70 mph	
IDLE LOGGING DELAY (MIN) 2	
Monthly Trip Summary	
PERIODIC TRIP HOUR OF DAY 0 (disable)	
PERIODIC TRIP DAY OF WEEK 0 (disable)	
PERIODIC TRIP DAY OF MONTH 1	
EHT MAX ENGINE SET SPEED (RPM)	
2100 rpm	
EHT MIN ENGINE SET SPEED (RPM) 700 rpm	
EHT VEHICLE SPEED RANGE LIMIT (MPH) 10 mph	
EHT RAMP RATE (RPM/Sec)	
EHT SINGLE SPEED CONTROL ACTIVATION Omit	
EHT SINGLE SPEED CONTROL SET SPEED (RPM) 0000 rpm	
EHT JUMP-TO-MIN SET SPEED Omit	
EHT HOLD TO NEAREST RPM 50 rpm	
EHT ACCEL-DECEL BUMP-UP RPM 50 rpm	
EHT ACCEL-DECEL BUMP-DOWN RPM 50 rpm	
ENGINE PROTECTION - OIL PRESSURE SHUTDOWN Furnish	
ENGINE PROTECTION - COOLANT LEVEL SHUTDOWN Furnish	
ENGINE PROTECTION - COOLANT TEMP SHUTDOWN Furnish	
ENGINE PROTECTION - ENGINE OIL TEMP SHUTDOWN Furnish	
ENGINE PROTECTION TRANS OIL TEMP SHUTDOWN Furnish	

Description

List Price

ALLOW FAN OVERRIDE WHEN PARKED Omit
FAN ACTIVATION WITH PTO Omit
GOVERNOR TYPE Min-Max Governor
ENGINE HIGH IDLE SPEED IF STOPPED 0000
ENGINE LOW IDLE SET SPEED (RPM) 700 rpm
DRIVER LOW IDLE ADJUST FEATURE ACTIVATION Omit
SMART IDLE FEATURE ACTIVATION Omit
SMART IDLE ELEVATED IDLE RPM TIME (MINS) 10
IDLE S/D ABS TAMPER CHECK Omit
IDLE COOLDOWN FEATURE ACTIVATION Omit
IDLE SHUTDOWN FEATURE ACTIVATION Furnish
IDLE SHUTDOWN TIME (MINS) 5
IDLE SHUTDOWN WARNING TIME (SECS) 30
IDLE SHUTDOWN WARM-UP TEMPERATURE (DEG F) 100
IDLE SHUTDOWN WARM-UP TIMER (MINS) 5
IDLE S/D OVERRIDE W/EHT Omit
IDLE S/D OVERRIDE W/PTO Furnish
IDLE S/D OVERRIDE W/ENGINE LOAD Furnish
IDLE S/D OVERRIDE % ENGINE LOAD THRESHOLD 20
IDLE S/D CONTROL W/O Idle Shutdown
IDLE S/D OVERRIDE LOWER TEMP. THRESHOLD (DEG F) 60
IDLE S/D OVERRIDE UPPER TEMP. THRESHOLD (DEG F) 80
MAINTENANCE MONITOR FEATURE ACTIVATION Furnish
PTO 1 MAX ENGINE SET SPEED (RPM) 2100 rpm
PTO 1 MIN ENGINE SET SPEED (RPM) 600 rpm
PTO 1 VEHICLE SPEED RANGE LIMIT (MPH) 10 mph
PTO 1 RAMP RATE (RPM/Sec) 100
PTO 1 SINGLE SPEED CONTROL ACTIVATION Omit
PTO 1 SINGLE SPEED CONTROL SET SPEED (RPM) 1000 rpm
PTO 1 SINGLE SPEED CONTROL AUTOSET Omit
PTO 1 JUMP-TO-MIN SET SPEED Omit
PTO 1 VEHICLE LIMITING SPEED (MPH) 60 mph
PTO 1 HOLD TO NEAREST RPM 50 rpm
PTO 1 ACCEL-DECEL BUMP-UP RPM 50 rpm
PTO 1 ACCEL-DECEL BUMP-DOWN RPM 50 rpm
PTO 2 MAX ENGINE SET SPEED (RPM) 2100 rpm
PTO 2 MIN ENGINE SET SPEED (RPM) 600 rpm
PTO 2 VEHICLE SPEED RANGE LIMIT (MPH) 10 mph
PTO 2 RAMP RATE (RPM/Sec) 100
PTO 2 SINGLE SPEED CONTROL ACTIVATION Omit
PTO 2 SINGLE SPEED CONTROL SET SPEED (RPM) 1000 rpm
PTO 2 SINGLE SPEED CONTROL AUTOSET Omit
PTO 2 JUMP-TO-MIN SET SPEED Omit
PTO 2 VEHICLE LIMITING SPEED (MPH) 60 mph
PTO 2 HOLD TO NEAREST RPM 50 rpm
PTO 2 ACCEL-DECEL BUMP-UP RPM

Description	List Price
PTO 2 ACCEL-DECEL BUMP-DOWN RPM 50 rpm SPEED SENSOR TAMPER DETECTION SYSTEM ACTIVATION Furnish SPEED SENSOR TAMPER DETECTION TORQUE LIMIT (%) 50	
DEALER INFORMATION	
ENGINE WARRANTY, 2YR/250,000 MILES ENGINE WARRANTY US10	
PILOT INSPECTION, WITHOUT PILOT INSPECTION	
5 YAER ALLISON WARRANTY	\$1,550.00
STANDARD SHIPPING INSTRUCTIONS	\$2,100.00
PERFORMANCE/GRAPHICS/TECH DATA	
AMBIENT TEMPERATURE, 77F (25.0C)	
BACK OF CAB INTERFERENCES, REAR OF ENGINE 30" (762mm) FROM BACK OF CAB	



1930 W Broadway Rd, Phoenix, AZ 85041

P: (800) 940-7467 F: (602) 276-5470

End
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Ema
Job:

Date: 9/2/2016

Description	Pictures
Body Tailgate Arm - Fuel Type Diesel Only	
31 cubic yard body	
<i>3 axle chassis only</i>	
<i>184" - 194" usable CT</i>	
<i>70" minimum AF</i>	
Gripper (SELECT ONE)	
30-90 Gallon Grippers (Same Day) w/hardware	
Pump Drive Package (REQUIRED OPTION)	
PTO Clutch Shift Dual Vane Hydraulic Pump	
4000 Series	
Controls	
Joystick controls <i>(REQUIRED OPTION)</i>	
Mack cab configuration	
RH Drive	
LST Switch Controls	
RH Door Mount	
Mounting Kit	
Mounting kit	
Rear mud flaps	
<i>(REQUIRED OPTION)</i>	
Center rear mud flap guard over brake pods	
<i>(REQUIRED OPTION)</i>	
Front of rear axle mud flaps	
<i>(REQUIRED OPTION)</i>	
Return line filter pressure switch	
<i>(with cab indicator)</i>	
Camera	
4-color cameras with 7" monitor	
Additional camera to be mounted on RH chassis fender	
Additional camera to be mounted on LH side of truck	
Arm camera trigger	
Backup Object Detection Radar System	
Color	
Custom powder coat color match	
<i>(SAMPLE REQUIRED)</i>	
Fuel Type (SELECT ONE)	
Standard Diesel	
S	
Other Options	
Body:	
Broom, Shovel or Rake Tool Holder (pair)	
<i>(Body Mounted)</i>	
Other	
Cons	
<i>Explain:</i> <u>Electronically Controlled Grip Pressure</u>	
Lighting	
Overhead Oval Dual Flashing Led Strobes	
<i>(REQUIRED OPTION)</i>	

Dual Front Chassis Strobe Lights
 Led Work Light - Hopper
 Led Work Light - Arm, Rh
 Additional
 Tool box 18x18x24 Steel Painted - Black
**body & grabber size may dictate size*
 Toolbox bracket - frame rail mounted
 20 lb. fire extinguisher (mounting bracket included)
 Triangle reflector kit (No mounting bracket)

Warranty & Training

1 year warranty
 3 year cylinder warranty**
 Factory Mechanics and/or operator Training
 Other

Explain: 3 year Hydraulic Pumps and Valves

Customer Defined Options
Metal Sheilding over lighting

Pre Delivery Inspection

Cushioned Grip Cylinder

Number of Units Ordered: 1
 Subtotal of Body & Options Price: \$135,78
 LESS DEALER DISCO
 SALES
 FET (IF APPLICAI



Customer Name (Printed) _____ Customer

Engineer Name (Printed) _____ Engineer

Notes: _____



Quotation

Quote #:
Date:
Expires On:

Q-00674-3
11/8/16
12/8/16

Heil of Texas

503 Pop Gunn
San Antonio, Texas 78219

Ship To
City of San Antonio

Bill To
Grande Truck Center

SALESPERSON	EXT	EMAIL	DELIVERY METHOD	PAYMENT METHOD
John Davis	x	johndavis@heiloftexas.com		

QTY	PART #	PRODUCT NAME	DESCRIPTION
1		DuraPack Python 28 Cubic Yard	Body requires 168" of usable CT with a minimum of 96" of after frame, see layout included.

Standard Options

- 5.2 yd3 hopper
- 108 in. lift reach
- Python Lift - 2-year limited structural warranty
- Lift capacity up to 1,250 lbs.
- Street side access door with step and grab
- Under hopper liquid sump with 2 clean-out doors and steel rake
- Body service props for dump or service hoist models
- Tailgate service props
- Fully automatic Shur-Lock™ tailgate locks
- O.I.G.A.I. front mount tandem vane pump system
- Cushioned up and down with chrome-plated rods
- Chassis frame-mounted oil tank with level/temperature gauge and oil suction shut-off valve
- 3-micron return line filter with magnetic trap and in-cab filter bypass monitor
- 140-micron suction line strainer
- Fabric guard hose protection for all high pressure hoses
- In-cab packing controls, electric/air
- In-cab lift controls, air/electric, joystick
- In-cab hoist controls for dumping models, air
- In-cab controls for eject models, electric/air
- In-cab tailgate controls, air
- Cortex Controller™ with InSight™ diagnostic display
- In-cab function and indicator lights
- Select-O-Pack
- AutoLift™
- Arm rest
- Lift reach warning
- Backup alarm

- Backup and license plate lights
- LED Center mounted brake light
- LED Duplicate high and low mount stop, turn, and tail lights
- LED Mid-body turn signals
- LED FMVSS #108 clearance lights and reflectors
- ICC reflective tape
- Rear mud flaps - anti-sail/anti-splash
- Rear underride guard
- Rear camera bracket and flood lights - reverse activated
- Body undercoating
- Customer's choice of one color finish paint
- Standard 1-year (2,000 hours of operation) warranty
- ANSI Z 245.1-1999 compliant
- Cavity coat and joint sealer
- Remote packer lube kit

- 28yd Python Body
- Full Factory Mount for Eject Models
- Grabber Interlock
- Front Mount PTO
- Hopper and Lift Work Light Kit - Two Lights
- Remote Lift Controls
- Hopper and Body Floor Liner (3/16" 150,000 psi)
- Server Duty Packer Wear Bar Kit
- 3" Hopper Drain
- Mud Flaps Anti-Sail/ Anti-Splash (Front and Rear)
- Hopper Hood
- Manual Hopper Cover use with Hopper Hood
- Single Fire Extinguisher

- Tool Box - ICC Bumper
- Broom and Shovel Kit
- Infinity Series Eject Cylinders
- 3 yr. Complete Body Warranty
- Expanded Metal Light Kit
- Sump Door Hinge from the top
- Follower Arms
- Lube Lines on hopper
- Add Brace for T/G Locks
- Trim at bottom of side door
- Side door stops
- Tamper Proof Cover for Prox-Switches
- Wheel Chocks
- Grip Rite Grabbers
- Audible and Light Alarm – Curbside
- Lube system arm only (Mono Block)

THANK YOU FOR YOUR BUSINESS!

TERMS AND CONDITIONS

1. General

No terms or conditions of Buyer's purchase order which is different from or in additions to Seller's terms and conditions set forth herein shall bind Seller unless expressly agreed to in writing by Seller's duly authorized representative. Buyer's acceptance of any offer made by Seller is expressly limited to the terms and conditions provided herein. Unless otherwise stated, Seller's quotation may be modified or withdrawn prior to acceptance, and in any event, shall expire after 30 days from its date. This order is not binding on TEXAN WASTE EQUIPMENT INC. dba HEIL OF TEXAS unit officially approved. The said machinery, equipment and/or parts are ordered and will be purchased subject to written contract only, and are not affected by any verbal representations of agreements, nor is this order subject to cancellation by the Purchaser without the Seller's consent.

2. Price and Payment

(a) Price quoted herein are exclusive of all taxes. Any taxes levied or which may become due, and other charges or assessments made by any taxing authority in connection with this contract or the sale, except those measured by Seller's net income, shall be expense of the Buyer and shall be payable to Seller at or before such tax or other amount is due. When Buyer is entitled to exemption from any tax, Buyer shall furnish Seller with a tax exemption certificate acceptable to the taxing authorities.

(b) Interest at the rate of one and one-half per cent (1.5%) per month (18% per annum), or the maximum lawful rate allowable, will be charged, whichever is less, on all past due invoices. The undersigned agrees to pay all expenses, charges, costs and fees, including, without limitation, attorney's fees and expenses, of any nature whatsoever paid or incurred by, or on behalf of TEXAN WASTE EQUIPMENT INC. dba HEIL OF TEXS, in connection with any collection action brought hereunder. The invalidity of all or any part of any provision of this Agreement shall not render invalid the remainder of such provision or any other part of this Agreement.

(c) TEXAN WASTE EQUIPMENT dba HEIL OF TEXAS, shall retain ownership of and title to the above machinery, equipment and parts covered by this order until fully paid for in cash and until any note given in evidence of indebtedness, and any renewals thereof, have been fully paid. If any such note is not paid in full at its maturity, all other notes and obligations given in evidence of indebtedness hereof shall at once become due, and the said TEXAN WASTE EQUIPMENT dba HEIL OF TEXAS, shall have the right to take possession of said machinery wheresoever it may be situated and sell the same pursuant to the conditional sales statutes of the State of Texas.

3. Delivery

(a) If within 5 days after receipt of the goods, Buyer fails to notify the Seller in writing of any non-conforming goods, Buyer shall be deemed to have accepted the goods delivered.

(b) Deliveries dates are estimated and not guaranteed by Seller and, in any event are conditioned upon receipt of all specifications and other data required to be furnished by the Buyer.

(c) If shipment or delivery is delayed because of an act or omission of the Buyer, payment shall be due upon notification by Seller that goods are ready for shipment. Buyer shall pay any additional charges including, but not limited to, cost of storage, handling, and insurance.

4. WARRANTY AND LIMITATIONS OF LIABILITY

EXPRESS WRITTEN WARRANTY PROVIDED BY THE MANUFACTURER OF THE EQUIPMENT DESCRIBED IN THIS QUOTATIONS IS GIVEN IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SELLER SHALL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM DEFECTIVE GOODS, SELLER'S NEGLIGENCE, BREACH OF WARRANTY OR CONTRACT, OR CLAIMS BASED UPON STRICT LIABILITY. IN NO EVENT SHALL SELLER BE LIABLE FOR CONSEQUENTIAL DAMAGES COMMERCIAL IN NATURE.

5. Delays

Sellers shall not be liable for the failure or delay in performance of any term, condition, or obligation hereunder due to any cause beyond the Seller's control, including but not limited to Acts of God, acts of the Buyer, war, insurrections or riots, fires, floods, accidents, acts, order or regulations of any government, inability to obtain

necessary materials, services or facilities, strikes or other labor troubles.

6. Development Changes

Changes in design, specifications, construction or materials, may be made at Seller's discretion, and without Buyer's consent, where such changes do not materially affect price, delivery or guaranteed performance (if any) of the goods, or make unusable any other item of goods furnished hereunder.

7. Termination

No order may be terminated without Seller's written consent. Upon any termination Buyer shall pay reasonable termination charges, including but not limited to, manufacturing and sales costs, overhead, cost or goods and profit.

8. Miscellaneous

This agreement shall be binding upon the successors and assigns of the parties. If any provision herein is found to be invalid as a matter of law or by public policy, it shall be considered severed from the remainder of the provisions which shall remain in full force and effect. This agreement shall be governed by the law of the State of Texas.

ALL PRICES SUBJECT TO ANY APPLICABLE FEDERAL OR STATE TAXES AND TITLING FEES. QUOTE SUBJECT TO REVISION AFTER 15 DAYS.

NOTE: Please read carefully. This quote becomes a sales order if signed by customer. Your order will be processed as written! Notify of any changes needed within five (5) days of signing. Financing available, subject to credit approval. I have read and understand the terms and conditions on this Order.

X _____
Customer Approval to Process Order

Date

Thank you for the opportunity to earn your business!



Quotation

Quote #:
Date:
Expires On:

Q-00674-5
11/8/16
12/8/16

Heil of Texas

503 Pop Gunn
San Antonio, Texas 78219

Ship To
City of San Antonio

Bill To
Grande Truck Center

SALESPERSON	EXT	EMAIL	DELIVERY METHOD	PAYMENT METHOD
John Davis	x	johndavis@heiloftexas.com		

QTY	PART #	PRODUCT NAME	DESCRIPTION
1		DuraPack Python 26 Cubic Yard CNG	Body requires 168" of usable CT with a minimum of 96" of after frame, see layout included.

Standard Options

- 5.2 yd3 hopper
- 108 in. lift reach
- Python Lift - 2-year limited structural warranty
- Lift capacity up to 1,250 lbs.
- Street side access door with step and grab
- Under hopper liquid sump with 2 clean-out doors and steel rake
- Body service props for dump or service hoist models
- Tailgate service props
- Fully automatic Shur-Lock™ tailgate locks
- O.I.G.A.I. front mount tandem vane pump system
- Cushioned up and down with chrome-plated rods
- Chassis frame-mounted oil tank with level/temperature gauge and oil suction shut-off valve
- 3-micron return line filter with magnetic trap and in-cab filter bypass monitor
- 140-micron suction line strainer
- Fabric guard hose protection for all high pressure hoses
- In-cab packing controls, electric/air
- In-cab lift controls, air/electric, joystick
- In-cab hoist controls for dumping models, air
- In-cab controls for eject models, electric/air
- In-cab tailgate controls, air
- Cortex Controller™ with InSight™ diagnostic display
- In-cab function and indicator lights
- Select-O-Pack
- AutoLift™
- Arm rest
- Lift reach warning
- Backup alarm

- Backup and license plate lights
- LED Center mounted brake light
- LED Duplicate high and low mount stop, turn, and tail lights
- LED Mid-body turn signals
- LED FMVSS #108 clearance lights and reflectors
- ICC reflective tape
- Rear mud flaps - anti-sail/anti-splash
- Rear under ride guard
- Rear camera bracket and flood lights - reverse activated
- Body undercoating
- Customer's choice of one color finish paint
- Standard 1-year (2,000 hours of operation) warranty
- ANSI Z 245.1-1999 compliant
- Cavity coat and joint sealer
- Remote packer lube kit

- 28yd Python Body
- Full Factory Mount for Eject Models
- Grabber Interlock
- 890 PTO Pump
- Hopper and Lift Work Light Kit - Two Lights
- Remote Lift Controls
- Hopper and Body Floor Liner (3/16" 150,000 psi)
- Server Duty Packer Wear Bar Kit
- 3" Hopper Drain
- Mud Flaps Anti-Sail/ Anti-Splash (Front and Rear)
- Hopper Hood
- Manual Hopper Cover use with Hopper Hood
- Single Fire Extinguisher

- Tool Box - ICC Bumper
- Broom and Shovel Kit
- Infinity Series Eject Cylinders
- 3 yr. Complete Body Warranty
- Expanded Metal Light Kit
- Sump Door Hinge from the top
- Follower Arms
- Lube Lines on hopper
- Add Brace for T/G Locks
- Trim at bottom of side door
- Side door stops
- Tamper Proof Cover for Prox-Switches
- Wheel Chocks
- Grip Rite Grabbers
- Audible and Light Alarm – Curbside
- Lube system arm only (Mono Block)
- 90DGE Tailgate CNG System

THANK YOU FOR YOUR BUSINESS!

TERMS AND CONDITIONS

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(b) Interest at the rate of one and one-half per cent (1.5%) per month (18% per annum), or the maximum lawful rate allowable, will be charged, whichever is less, on all past due invoices. The undersigned agrees to pay all expenses, charges, costs and fees, including, without limitation, attorney's fees and expenses, of any nature whatsoever paid or incurred by, or on behalf of TEXAN WASTE EQUIPMENT INC. dba HEIL OF TEXS, in connection with any collection action brought hereunder. The invalidity of all or any part of any provision of this Agreement shall not render invalid the remainder of such provision or any other part of this Agreement.

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necessary materials, services or facilities, strikes or other labor troubles.

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X _____
Customer Approval to Process Order

Date

Thank you for the opportunity to earn your business!