

## **AGREEMENT**

**THIS AGREEMENT** is made and entered into by and between the **CITY AND COUNTY OF DENVER**, a municipal corporation of the State of Colorado (the “City” or “Customer”) and **RUSH TRUCK CENTERS OF COLORADO, INC.**, a Delaware corporation whose address is 1900 West Littleton Blvd, Littleton, CO 80120 (“Contractor”).

### **RECITALS:**

1. The City desires to obtain 12 2019/2020 Peterbilt 520 W/AMREP MHASLTPO-19 37 Yard ASL-DIESEL Trucks and associated equipment, and Contractor desires to provide that equipment to the City. Delivery of the trucks will be staggered and each truck is priced at \$269,736.10 (the “Individual Purchase Amount”).
2. Payment for the equipment shall be financed through a separate lease-purchase agreement (the “LPA”) between the City and Banc of America Public Capital Corp., (“Financer”).

### **AGREEMENT:**

For and in consideration of the agreements contained, and subject to the terms and conditions stated in this Agreement, the parties incorporate the recitals herein and agree as follows:

1. **FORM OF AGREEMENT**. This Agreement shall consist of the terms and conditions stated in the following numbered Articles, together with those exhibits or attachments that are referenced and incorporated in such Articles. In the event that any conflict between the terms and conditions contained in this document and those contained in any exhibits or attachments shall occur, the terms and conditions of these numbered Articles shall be controlling.

2. **COORDINATION AND LIAISON**: Contractor agrees that during the term of this Agreement it shall fully coordinate the performance of this Agreement with the City, including the Executive Director of Public Works (“Manager”) or as otherwise directed by the City. Contractor understands that the Manager or designee is the City's representative or Project Manager under this Agreement through whom Contractor obligations performed under this Agreement shall be coordinated.

3. **EQUIPMENT AND WARRANTIES TO BE PROVIDED**.

A. Contractor shall provide to the City the equipment and the Manufacturer (as defined in Exhibit A) warranties listed and described on **Exhibit A** attached hereto (hereinafter referred to as the “Equipment” and “Warranties”).

B. It is understood and agreed that the Equipment and Warranties associated with this Agreement that are being provided to the City hereunder are also routinely provided to nongovernmental customers on the same terms and conditions that were offered to the City and are agreed to by the City in this Agreement.

4. **SPECIAL PURCHASING TERMS AND CONDITIONS**: In addition to all other terms and conditions stated in this Agreement, Contractor shall comply with the following special purchasing terms and conditions:

A. Pricing is F.O.B. Denver, CO, delivered to the City at 5440 Roslyn St Denver, Colorado 80216.

B. Contractor agrees to bear all risk of loss, injury, or destruction of goods and materials ordered as a result of this Agreement which occur prior to delivery to the City; and such loss, injury or destruction shall not release Contractor from any obligation hereunder. Thereafter, risk of loss shall pass to the City and Financer as further described in the LPA.

C. Contractor agrees to furnish, upon the written request of the City, any additional information needed to substantiate or clarify the design and/or performance characteristics of the Equipment.

D. Contractor Invoices must include the following:

- (1) City contract control number.
- (2) Items listed individually.
- (3) Invoice number and date.
- (4) Requesting department name and "ship to" address.
- (5) Payment terms.

E. Contractor agrees to deliver at least two trucks by March 15, 2020 and the remainder of the trucks no later than March 15, 2021.

5. **TERM**. The Term of this Agreement shall commence upon July 1, 2019.

6. **COMPENSATION**.

A. It is understood and agreed that the City has elected to lease purchase/finance the Equipment and Warranties through the LPA. The City and Financer shall enter into a third party escrow agreement, that together with the LPA, will provide for payment to the Contractor of the amount stated herein subject to the procedure set out in the LPA. The Contractor's performance under this Agreement is expressly conditioned upon funding of the escrow agreement and proper payment as set out herein.

B. The total compensation payable to Contractor for acquiring and delivering the Equipment together with the Warranties shall not exceed the amount of **THREE MILLION TWO HUNDRED AND THIRTY-SIX THOUSAND EIGHT HUNDRED AND THIRTY THREE DOLLARS** and twenty cents (\$3,236,833.20) (the "Maximum Purchase Amount"), payable to the Contractor by Financer. Delivery of the Equipment to the City shall occur, and title to the Equipment shall vest with Financer, upon payment of each Individual Purchase Amount to Contractor in accordance with the delivery of the Acceptance Certificates. Beneficial use of the Equipment and Warranties shall remain with the City.

C. The total compensation payable by the City to Contractor under this Agreement for the Equipment and Warranties is Zero Dollars (\$0.00) (the "Maximum Contract Amount").

D. The total obligation of the City hereunder shall be limited to funds appropriated for the purposes of this Agreement by the Council of the City and County of Denver, paid into the Treasury of the City and encumbered for the purpose of this Agreement.

7. **TIME IS OF THE ESSENCE**: The parties agree that in the performance of the terms, conditions, and requirements of this Agreement by Contractor, time is of the essence.

8. **STATUS OF CONTRACTOR:** It is understood and agreed by and between the parties that the status of Contractor shall be that of an independent contractor and it is not intended, nor shall it be construed, that Contractor or any employee or subconsultant is an employee, officer, or agent of the City under Chapter 18 of the Denver Revised Municipal Code for purposes of unemployment compensation, workers' compensation, or for any purpose whatsoever.

9. **TERMINATION OF AGREEMENT:** The City may terminate this Agreement at any time on thirty (30) days' notice if Contractor is in breach or default of the Agreement and the breach remains uncured for thirty (30) days after receipt of written notice of the breach or if the underlying project or activity is canceled. The City may also by written Notice of Default to Contractor terminate the whole or part of this Agreement in the event Contractor or any of its officers or employees are convicted, plead nolo contendere, enter into a formal agreement in which they admit guilt, enter a plea of guilty, or otherwise admit culpability to criminal offenses of bribery, kickbacks, collusive bidding, bid-rigging, antitrust, fraud, undue influence, theft, racketeering, extortion or any offense of a similar nature, in connection with Contractor's business. Contractor may terminate this Agreement upon ten (10) days prior written notice if (a) the City breaches this Agreement and the breach remains uncured for thirty (30) days after receipt of written notice of the breach, or (b) Financer fails to honor its obligations under the LPA.

10. **WHEN RIGHTS AND REMEDIES NOT WAIVED:** In no event shall any payment by the City hereunder constitute or be construed to be a waiver by the City of any breach of term, covenant, or condition or any default which may then exist on the part of Contractor, and the making of any such payment when any such breach or default shall exist shall not impair or prejudice any right or remedy available to the City with respect to such breach or default; and no assent, expressed or implied, to any breach of any one or more terms, covenants, or conditions of the Agreement shall be construed as a waiver of any succeeding or other breach.

11. **EXAMINATION OF RECORDS:** Contractor agrees that any duly authorized representative of the City, including the City Auditor or his representative, shall, until the expiration of three (3) years after the final payment under this Agreement, have access to and the right to examine any directly pertinent books, documents, papers and records of Contractor, involving transactions related to this Agreement.

12. **TAXES, PERMITS AND LICENSES:** Contractor agrees to pay promptly all taxes, excises, license fees and permit fees of whatever nature applicable to its operations, and to take out and keep current all required licenses or permits, whether municipal, state or federal, required for the conduct of its business hereunder, and further agrees not to permit any of said taxes, excises or license or permit fees to become delinquent. Contractor further agrees to furnish the City, upon request, duplicate receipts or other satisfactory evidence showing the prompt payment by Contractor of all required licenses and permits and all taxes. Contractor further agrees to pay promptly when due all bills, debts and obligations incurred by it in connection with its operations, and not to permit the same to become delinquent and to suffer no lien, mortgage, judgment or execution to be filed which will in any way impair the rights of the City under this Agreement.

13. **VENUE, GOVERNING LAW:** Each and every term, condition, or covenant herein is subject to and shall be construed in accordance with the provisions of Colorado law, any applicable federal law, the Charter of the City and County of Denver and the ordinances, regulations, and Executive Orders enacted and/or promulgated pursuant thereto. Such applicable law, together with the Charter, Revised Municipal Code, regulations and Executive Orders of the City and County of

Denver, as the same may be amended from time to time, is hereby expressly incorporated into this Agreement as if fully set out herein by this reference. Venue for any action arising hereunder shall be in the Denver County or Denver District Court in the City and County of Denver, Colorado.

14. **USE, POSSESSION OR SALE OF ALCOHOL OR DRUGS:** Contractor, its officers, agents, and employees shall cooperate and comply with the provisions of Executive Order 94 and Attachment A thereto concerning the use, possession or sale of alcohol or drugs. Violation of these provisions or refusal to cooperate with implementation of the policy can result in the City's barring Contractor from City facilities or participating in City operations.

15. **ASSIGNMENT AND SUBCONTRACTING:**

A. Provided that the City shall have accepted the Equipment, the City shall not have the right to and shall not assert against any assignee of Financer or other registered owner of the Equipment any claim, counterclaim or other right the City may have against the Contractor.

B. None of the City's right, title and interest in any portion of the Equipment may be assigned or encumbered by the City for any reason; except that the City may sublease all or part of such Equipment if (a) such sublease is to an agency or department of, or a political subdivision of, the State or (b) the City obtains the prior written consent of Financer and an opinion of nationally recognized counsel in the area of tax exempt municipal obligations satisfactory to Financer that such subleasing will not adversely affect the exclusion of the interest components of the rental payments made to Financer under the lease-purchase transaction referenced herein from gross income for federal income purposes. Any such sublease of all or part of any Equipment shall be subject to the lease-purchase transaction with Financer and the rights of Financer in, to and under such transaction with respect to the Equipment.

C. The City is otherwise not obligated or liable under this Agreement to any party other than the Contractor named herein. Contractor is otherwise not obligated or liable under this Agreement to any party other than the City. Contractor understands and agrees that it shall not assign or subcontract with respect to any of its rights, benefits, obligations or duties under this Agreement except upon prior written consent and approval of the City, which consent or approval may be withheld in the absolute discretion of the City; and in the event any such assignment or subcontracting shall occur, such action shall not be construed to create any contractual relationship between the City and such assignee or subcontractor, and Contractor herein named shall remain fully responsible to the City according to the terms of this Agreement.

16. **NO DISCRIMINATION IN EMPLOYMENT:** In connection with the performance of work under this Agreement, Contractor agrees not to refuse to hire, discharge, promote or demote, or to discriminate in matters of compensation against any person otherwise qualified, solely because of race, color, religion, national origin, gender, age, military status, sexual orientation, gender identity or gender expression, marital status, or physical or mental disability; and Contractor further agrees to insert the foregoing provision in all subcontracts hereunder.

17. **INSURANCE:**

A. **General Conditions:** Contractor agrees to secure, at or before the time of execution of this Agreement, the following insurance covering all operations, goods or services provided pursuant to this Agreement. Contractor shall keep the required insurance coverage in force at all times during the term of the Agreement, or any extension thereof, during any warranty period, and for three (3) years after termination of the Agreement. The required insurance shall be

underwritten by an insurer licensed or authorized to do business in Colorado and rated by A.M. Best Company as "A-"VIII or better. Each policy shall contain a valid provision or endorsement requiring notification to the City in the event any of the required policies be canceled or should any coverage be non-renewed before the expiration date thereof, the issuing company shall send written notice to Denver Risk Management, 201 West Colfax Avenue, Dept. Such written notice shall be sent to the parties identified in the Notices section of this Agreement. Such notice shall reference the City contract number listed on the signature page of this Agreement. Said notice shall be sent thirty (30) days prior to such cancellation or non-renewal unless due to non-payment of premiums for which notice shall be sent ten (10) days prior. If such written notice is unavailable from the insurer, contractor shall provide written notice of cancellation, non-renewal and any reduction in coverage to the parties identified in the Notices section by certified mail, return receipt requested within three (3) business days of such notice by its insurer(s) and referencing the City's contract number. If any policy is in excess of a deductible or self-insured retention, the City must be notified by the Contractor. Contractor shall be responsible for the payment of any deductible or self-insured retention. The insurance coverages specified in this Agreement are the minimum requirements, and these requirements do not lessen or limit the liability of the Contractor. The Contractor shall maintain, at its own expense, any additional kinds or amounts of insurance that it may deem necessary to cover its obligations and liabilities under this Agreement.

**B. Proof of Insurance:** Contractor shall provide a copy of this Agreement to its insurance agent or broker. Contractor may not commence services or work relating to the Agreement prior to placement of coverage. Contractor certifies that the certificate of insurance attached as Exhibit B, preferably an ACORD certificate, complies with all insurance requirements of this Agreement. The City requests that the City's contract number be referenced on the Certificate. The City's acceptance of a certificate of insurance or other proof of insurance that does not comply with all insurance requirements set forth in this Agreement shall not act as a waiver of Contractor's breach of this Agreement or of any of the City's rights or remedies under this Agreement. The City's Risk Management Office may require additional proof of insurance, including but not limited to policies and endorsements.

**C. Additional Insureds:** For Commercial General Liability, and Auto Liability, Contractor and subcontractor's insurer(s) shall name the City and County of Denver, its elected and appointed officials, employees and volunteers as additional insured.

**D. Waiver of Subrogation:** For all coverages, Contractor's insurer shall waive subrogation rights against the City.

**E. Subcontractors and Subconsultants:** All subcontractors and subconsultants (including independent contractors, suppliers or other entities providing goods or services required by this Agreement) shall be subject to all of the requirements herein and shall procure and maintain the same coverages required of the Contractor. Contractor shall include all such subcontractors as additional insured under its policies (with the exception of Workers' Compensation) or shall ensure that all such subcontractors and subconsultants maintain the required coverages. Contractor agrees to provide proof of insurance for all such subcontractors and subconsultants upon request by the City.

**F. Workers' Compensation/Employer's Liability Insurance:** Contractor shall maintain the coverage as required by statute for each work location and shall maintain Employer's Liability insurance with limits of \$100,000 per occurrence for each bodily injury claim, \$100,000 per occurrence for each bodily injury caused by disease claim, and \$500,000 aggregate for all bodily injuries caused by disease claims. Contractor expressly represents to the City, as a material representation upon which the City is relying in entering into this Agreement, that none of the Contractor's officers or employees who may be eligible under any statute or law to reject Workers' Compensation Insurance shall effect such rejection during any part of the term of this Agreement, and that any such rejections previously effected, have been revoked as of the date Contractor executes this Agreement.

**G. Commercial General Liability:** Contractor shall maintain a Commercial General Liability insurance policy with limits of \$1,000,000 for each occurrence, \$1,000,000 for each personal and advertising injury claim, \$2,000,000 products and completed operations aggregate, and \$2,000,000 policy aggregate.

**H. Business Automobile Liability:** Contractor shall maintain Business Automobile Liability with limits of \$1,000,000 combined single limit applicable to all owned, hired and non-owned vehicles used in performing services under this Agreement.

**I. Additional Provisions:**

(a) For Commercial General Liability and Excess Liability, the policies must provide the following:

- (i) That this Agreement is an Insured Contract under the policy;
- (ii) Defense costs are in excess of policy limits;
- (iii) A severability of interests or separation of insureds provision (no insured vs. insured exclusion); and
- (iv) A provision that coverage is primary and non-contributory with other coverage or self-insurance maintained by the City.

(b) For claims-made coverage:

- (i) The retroactive date must be on or before the contract date or the first date when any goods or services were provided to the City, whichever is earlier

(c) Contractor shall advise the City in the event any general aggregate or other aggregate limits are reduced below the required per occurrence limits. At their own expense, and where such general aggregate or other aggregate limits have been reduced below the required per occurrence limit, the Contractor will procure such per occurrence limits and furnish a new certificate of insurance showing such coverage is in force.

**K. City's Insurance.** The City is self-insured pursuant to the Colorado Governmental Immunity Act, C.R.S. §24-10-101 et seq., and shall not be required to obtain any liability, fire, casualty or other insurance as a result of this Agreement. Neither shall any contrary

statement contained in any attachment or exhibit hereto be construed to shift the risk of loss or liability to the City.

**18. DEFENSE AND INDEMNIFICATION:**

**A.** Contractor hereby agrees to defend, indemnify, reimburse and hold harmless City, its appointed and elected officials, agents and employees for, from and against all liabilities, claims, judgments, suits or demands for damages to persons or property arising out of, resulting from, or relating to Contractor's negligence, gross negligence or intentional misconduct in the performance of work performed under this Agreement ("Claims"), unless and to the extent such Claims have been specifically determined by the trier of fact to be attributed to the negligence or willful misconduct of the City. This indemnity shall be interpreted in the broadest possible manner to indemnify City for the above described acts or omissions of Contractor or its subcontractors either passive or active, except to the extent of the negligence or willful misconduct of City.

**B.** Contractor's duty to defend and indemnify City shall arise at the time written notice of the Claim is first provided to City regardless of whether Claimant has filed suit on the Claim. Contractor's duty to defend and indemnify City shall arise even if City is the only party sued by claimant and/or claimant alleges that City's negligence or willful misconduct was the sole cause of claimant's damages.

**C.** Contractor will defend any and all Claims which may be brought or threatened against City and will pay on behalf of City any expenses incurred by reason of such Claims including, but not limited to, court costs and attorney fees incurred in defending and investigating such Claims or seeking to enforce this indemnity obligation. Such payments on behalf of City shall be in addition to any other legal remedies available to City and shall not be considered City's exclusive remedy.

**D.** Insurance coverage requirements specified in this Agreement shall in no way lessen or limit the liability of the Contractor under the terms of this indemnification obligation. The Contractor shall obtain, at its own expense, any additional insurance that it deems necessary for the City's protection.

**E.** This defense and indemnification obligation shall survive the expiration or termination of this Agreement.

**F.** The City agrees that in the event of any claim, litigation, civil action or any other legal or administrative proceeding brought by the City against Contractor, the City shall not be entitled to recover any incidental or consequential damages as defined in the Uniform Commercial Code, including but not limited to indirect or special damages, loss of income or anticipated profits, or down-time, or any punitive damages.

**19. CONFLICT OF INTEREST:**

A. No employee of the City shall have any personal or beneficial interest in the services or property described in the Agreement. The Contractor shall not hire, or contract for services with, any employee or officer of the City that would be in violation of the City's Code of Ethics, D.R.M.C. §2-51, et seq. or the Charter §§ 1.2.8, 1.2.9, and 1.2.12.

B. The Contractor shall not engage in any transaction, activity or conduct that would result in a conflict of interest under the Agreement. The Contractor represents that it has disclosed any and all current or potential conflicts of interest. A conflict of interest shall include transactions, activities or conduct that would affect the judgment, actions or work of the Contractor by placing the Contractor's own interests, or the interests of any party with whom the Contractor has a contractual arrangement, in conflict with those of the City. The City, in its sole discretion, will determine the existence of a conflict of interest and may terminate the Agreement if it determines a conflict exists, after it has given the Contractor written notice describing the conflict.

**20. NO THIRD PARTY BENEFICIARY:** It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to the City and Contractor, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other or third person or entity on such Agreement, including but not limited to subcontractors and suppliers. It is otherwise the express intention of the City and Contractor that any person or entity other than the City or Contractor receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

**21. TRADE SECRETS AND CONFIDENTIAL INFORMATION:**

A. Contractor shall not at any time or in any manner, either directly or indirectly, divulge, disclose or communicate to any person, firm or corporation in any manner whatsoever any information concerning any matters related to this Agreement which are not subject to public disclosure, including without limitation the trade secrets of businesses or entities doing business with the City and other privileged or confidential information.

B. In the event that this Agreement or any exhibit or attachment is the subject of an open records request by a third party under Colorado law, the City will notify Contractor of such request. If Contractor believes that any material furnished to the City under this Agreement is not subject to disclosure, it shall take whatever action it deems necessary or appropriate to obtain a court order from the Denver District Court to preclude such disclosure by the City.

**22. DISPUTES:** All disputes of whatsoever nature between the City and Contractor regarding this Agreement shall be resolved by administrative hearings pursuant to the procedure established by Denver Revised Municipal Code §56-106(b) et. seq. For the purposes of that procedure, the City official rendering a final determination shall be the City representative identified in Article 2 hereof.

**23. TAXES, CHARGES AND PENALTIES:** The City shall not pay or be liable for any claimed interest, late charges, fees, taxes or penalties of any nature, except as required by the City's Revised Municipal Code.

**24. PARAGRAPH HEADINGS:** The captions and headings set forth herein are for convenience of reference only, and shall not be construed so as to define or limit the terms and provisions hereof.



**25. SEVERABILITY:** It is understood and agreed by the parties hereto that if any part, term, or provision of this Agreement, except for the provisions of the Agreement requiring prior appropriation of funds and limiting the total amount payable by the City, is by the courts held to be illegal or in conflict with any law of the State of Colorado, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular part, term, or provision held to be invalid.

**26. SURVIVAL OF CERTAIN AGREEMENT PROVISIONS:** The parties understand and agree that all terms, conditions and covenants of this Agreement, together with the exhibits and attachments hereto, if any, any or all of which, by reasonable implication, contemplate continued performance or compliance beyond the expiration or termination of this Agreement (by expiration of the term or otherwise), shall survive such expiration or termination and shall continue to be enforceable as provided herein. Without limiting the generality of the foregoing, Contractor's obligations for the provision of insurance, for indemnity to the City and for preserving confidentiality of trade secrets and other information shall survive for a period equal to any and all relevant statutes of limitation, plus the time necessary to fully resolve any claims, matters, or actions begun within that period.

**27. AGREEMENT AS COMPLETE INTEGRATION - AMENDMENTS:** This Agreement, together with the LPA, are intended as the complete integration of all understandings between the parties as to the subject matter of this Agreement. No prior or contemporaneous addition, deletion, or other amendment hereto shall have any force or effect whatsoever, unless embodied herein in writing. No subsequent novation, renewal, addition, deletion, or other amendment hereto shall have any force or effect unless embodied in a written amendatory or other Agreement properly executed by the parties. No oral representation by any officer or employee of the City at variance with the terms and conditions of this Agreement or any written amendment to this Agreement shall have any force or effect or bind the City. Amendments to this Agreement will become effective when approved by both parties and executed in the same manner as this Agreement. This Agreement and any amendments shall be binding upon the parties, their successors and assigns.

**28. LEGAL AUTHORITY:**

A. Contractor assures and guarantees that it possesses the legal authority, pursuant to any proper, appropriate and official motion, resolution or action passed or taken, to enter into this Agreement.

B. The person or persons signing and executing this Agreement on behalf of Contractor, do hereby warrant and guarantee that he/she or they have been fully authorized by Contractor to execute this Agreement on behalf of Contractor and to validly and legally bind Contractor to all the terms, performances and provisions herein set forth.

C. The City shall have the right, at its option, to either temporarily suspend or permanently terminate this Agreement, if there is a dispute as to the legal authority of either Contractor or the person signing the Agreement to enter into this Agreement. The City shall not be obligated to pay Contractor for any performance of the provisions of this Agreement after the City has suspended or terminated this Agreement as provided in this Article.

**29. COUNTERPARTS OF THIS AGREEMENT:** This Agreement shall be executed in two (2) counterparts, each of which shall be deemed to be an original of this Agreement.

**30. NO EMPLOYMENT OF ILLEGAL ALIENS TO PERFORM WORK UNDER THE AGREEMENT:**

**A.** This Agreement is subject to Division 5 of Article IV of Chapter 20 of the Denver Revised Municipal Code, and any amendments (the “Certification Ordinance”).

**B.** The Contractor certifies that:

- (1)** At the time of its execution of this Agreement, it does not knowingly employ or contract with an illegal alien who will perform work under this Agreement.
- (2)** It will participate in the E-Verify Program, as defined in § 8-17.5-101(3.7), C.R.S., to confirm the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement.

**C.** The Contractor also agrees and represents that:

- (1)** It shall not knowingly employ or contract with an illegal alien to perform work under the Agreement.
- (2)** It shall not enter into a contract with a sub-consultant or subcontractor that fails to certify to the Contractor that it shall not knowingly employ or contract with an illegal alien to perform work under the Agreement.
- (3)** It has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement, through participation in either the E-Verify Program.
- (4)** It is prohibited from using either the E-Verify Program procedures to undertake pre-employment screening of job applicants while performing its obligations under the Agreement, and that otherwise requires the Contractor to comply with any and all federal requirements related to use of the E-Verify Program including, by way of example, all program requirements related to employee notification and preservation of employee rights.
- (5)** If it obtains actual knowledge that a sub-consultant or subcontractor performing work under the Agreement knowingly employs or contracts with an illegal alien, it will notify such sub-consultant or subcontractor and the City within three (3) days. The Contractor will also then terminate such sub-consultant or subcontractor if within three (3) days after such notice the sub-consultant or subcontractor does not stop employing or contracting with the illegal alien, unless during such three-day period the sub-consultant or subcontractor provides information to establish that the sub-consultant or subcontractor has not knowingly employed or contracted with an illegal alien.
- (6)** It will comply with any reasonable request made in the course of an investigation by the Colorado Department of Labor and

Employment under authority of § 8-17.5-102(5), C.R.S., or the City Auditor, under authority of D.R.M.C. 20-90.3.

**D.** The Contractor is liable for any violations as provided in the Certification Ordinance. If Contractor violates any provision of this section or the Certification Ordinance, the City may terminate this Agreement for a breach of the Agreement. If the Agreement is so terminated, the Contractor shall be liable for actual and consequential damages to the City. Any such termination of a contract due to a violation of this section or the Certification Ordinance may also, at the discretion of the City, constitute grounds for disqualifying Contractor from submitting bids or proposals for future contracts with the City.

**31. ELECTRONIC SIGNATURES AND ELECTRONIC RECORDS:** Contractor consents to the use of electronic signatures by the City. The Agreement, and any other documents requiring a signature hereunder, may be signed electronically by the City in the manner specified by the City. The Parties agree not to deny the legal effect or enforceability of the Agreement solely because it is in electronic form or because an electronic record was used in its formation. The Parties agree not to object to the admissibility of the Agreement in the form of an electronic record, or a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.

**32. NOTICES:** All notices required by the terms of the Agreement must be hand delivered, sent by overnight courier service, mailed by certified mail, return receipt requested, or mailed via United States mail, postage prepaid, if to Contractor at the address first above written, with a copy of any such notice to:

Rush Enterprises, Inc.  
555 IH35 South, Suite 500  
New Braunfels, TX 78130  
Attn: Legal Department

and if to the City at:

Manager of Public Works or Designee  
201 West Colfax Avenue, Dept.608  
Denver, Colorado 80202

With a copy of any such notice to:

Denver City Attorney's Office  
1437 Bannock St., Room 353  
Denver, Colorado 80202

Notices hand delivered or sent by overnight courier are effective upon delivery. Notices sent by certified mail are effective upon receipt. Notices sent by mail are effective upon deposit with the U.S. Postal Service. The parties may designate substitute addresses where or persons to whom notices are to be mailed or delivered. However, these substitutions will not become effective until actual receipt of written notification.

**33. COMPLIANCE WITH ALL LAWS:** All services provided by Contractor shall be performed by Contractor in full compliance with all applicable laws, rules, regulations and codes of the United States, the State of Colorado; and with the Charter, ordinances, rules, regulations and Executive Orders of the City and County of Denver.

**34. NO CONSTRUCTION AGAINST DRAFTING PARTY:** The parties and their respective counsel have had the opportunity to review the Agreement, and the Agreement will not be construed against any party merely because any provisions of the Agreement were prepared by a particular party.

**35. ADVERTISING AND PUBLIC DISCLOSURE:** The Contractor shall not include any reference to the Agreement or to services performed pursuant to the Agreement in any of the Contractor's advertising or public relations materials without first obtaining the written approval of the Manager. Any oral presentation or written materials related to services performed under the Agreement will be limited to services that have been accepted by the City. The Contractor shall notify the Manager in advance of the date and time of any presentation. Nothing in this provision precludes the transmittal of any information to City officials.

**36. CITY EXECUTION OF AGREEMENT:** The Agreement will not be effective or binding on the City until it has been fully executed by all required signatories of the City and County of Denver, and if required by Charter, approved by the City Council.

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**EXHIBIT A**

**EQUIPMENT PURCHASED**

<u>Quantity</u>	<u>Item</u>	<u>Price</u>
12	Peterbilt 520 W/AMREP MHASLTPO-19 37 Yard ASL-DIESEL Truck	\$269,736.10
<b>TOTAL PURCHASE AMOUNT:</b>		<b>\$3,236,833.20</b>

Specifications of equipment, training, and warranties to be provided by Contractor are set out on the attached pages, which together with this cover sheet constitute **Exhibit A**.

## Warranties

Equipment - Notwithstanding anything else in this Agreement or Exhibit A to the contrary, any warranties on the Equipment are limited only to any printed Manufacturers' warranties provided by the applicable Equipment Manufacturer. "Manufacturer" means the entity or entities that manufactured the Equipment, it being understood by the City that Contractor is not a Manufacturer or agent of a Manufacturer. EXCEPT FOR ANY SUCH WARRANTIES MADE BY MANUFACTURERS', WHICH ARE NOT BEING DISCLAIMED HEREBY, THE EQUIPMENT IS SOLD WITHOUT ANY OTHER WARRANTIES OF THE CONTRACTOR, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS EXPRESSLY DISCLAIMED.

Services - Contractor warrants that all services performed by Contractor for the City in conjunction with the sale of the Equipment, including if applicable installation, upfitting and conversion services ("Services"), will be performed in a good and workmanlike manner ("Services Warranty"). The Services Warranty is valid for a period of ninety (90) days from the date the Equipment is delivered to the City or the City's agent. The City's sole and exclusive remedy, and Contractor's entire liability, under the Services Warranty is the repair of any nonconforming portion of the Services. CONTRACTOR PROVIDES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, CONCERNING ITS SERVICES. The Services Warranty is strictly limited to Services performed by Contractor for the City. Contractor does not warrant any services provided by any third-party, including but not limited to installation, upfitting or conversion services; warranties are solely those that are provided by the third-party service provider in such instances.

## EXHIBIT A

3/8/2019

Reference Numbers: Original/Revised/2019/Final

**CITY AND COUNTY OF DENVER**  
**Technical Specifications and Bid Items**  
**For a**  
**Recycle/Trash Barrel Loader Truck**

**1.0 General Description**

A new current model year heavy-duty automated recycle/trash barrel loader truck. The truck shall be a cab over engine with as low of entry as possible right seated right-hand drive to accommodate as primary use the automated barrel loading of either residential recycle materials or residential trash. The truck shall be powered by a turbo-charged diesel engine, a 66,000 GVWR (plate certified) with 30-yard automated barrel loader body. The truck shall be single right-hand drive with left side passenger seat. Collection operations shall be conducted from the right side seated position. The truck shall be suitable for a minimum of 6 years' service (1,000 pick-ups/day, 5 days/week) by Solid Waste Management in mixed material (paper, cardboard, mixed containers including glass, aluminum and steel containers) automated barrel recycle operations and also in automated barrel loading of residential trash. The trucks recycle/ trash body shall operate at maximum efficiency and speed when the truck engine is at "low idle" approximately 800-rpm or less, revving engine shall not increase pick up or compaction speed /efficiency. **The truck shall be a hydraulic push-out trash eject type, no tip to dump ejection systems.** The truck shall be fully equipped and road ready, easily capable of transporting a fully packed minimum 30-yard load over the road into automated recycling systems in recycling stations and, into trash transfer facilities or into landfills.

**1.1 Standard Factory Equipment**

All standard factory equipment shall be included with the vehicle/equipment; no deletions of standard factory equipment will be permitted unless specifically superseded in these specifications. Accessories not specifically mentioned herein but necessary to furnish a complete unit ready for use shall also be included.

**1.2 Government Requirements (where applicable)**

The vehicle/equipment shall be built to, and perform in accordance with, all the requirements of the latest edition of the following standards and specifications:

- FHWA, Federal Highway Administration
- SAE, Society of Automotive Engineers Specifications
- FMVSS, Federal Motor Vehicle Safety Standards
- DOT, Department of Transportation Regulations
- AWS, American Welding Society Standards
- PUC, Public Utilities Commission (Colorado)
- NFPA, National Fire Prevention Association

**1.3 Workmanship and Durability**

Workmanship throughout the vehicle/equipment shall conform to the highest standards. Durability shall be sufficient to allow safe and efficient operation of the equipment/vehicle.

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**1.4 Completion of Bid Items and Alternates**

Vendor shall complete each line item in "Offered Equipment" and "Cost" columns in the following manner:

- A. Provide vehicle/equipment's technical information: in "Offered Equipment" provide technical information as requested and provide cost of item in "Cost" column.
- B. Included Standard Equipment: in "Offered Equipment" column provide technical information as requested for standard equipment in, "Cost" column write NC for "No Charge".
- C. Differences: in "RED" ink in "Offered Equipment" column adjacent to Description of Equipment provide information on the item being offered, in "Cost" column provide cost if there is a bid item cost.
- D. Vendors shall break out and list costs for each specification section. Failure to break out proposed costs may cause proposal to be non-responsive. Breakout costs will be used for comparisons clarifying cost issues and if deletions to the specifications need to be made.
- E. Failure to enter information into any column could result in the proposal being considered non-responsive.

**1.5 Major Areas of Concern**

	Description of Concern
A.	Right Side Operator Cab Area to include: <ol style="list-style-type: none"> <li>1. Steering wheel belly room.</li> <li>2. Shoulder leg and hip room.</li> <li>3. Head room'</li> <li>4. Operator's vision.</li> <li>5. Floor height and step distances.</li> <li>6. Ergonomic layout of vehicle and recycle body controls.</li> <li>7. Ease and speed of operation of collection and packing functions.</li> <li>8. Visibility from the driver's seats (Blind Spots Minimized)</li> </ol>
B.	Maneuverability: The ability of the truck to effectively, safely and efficiently maneuver in Denver's tight alleys, transverse alley-to-street drainage depressions and make tight turns either into or out of alleys from narrow high crowned streets with vehicles parked in the streets
C.	Ability to efficiently load <ol style="list-style-type: none"> <li>1. Plastic barrels/carts</li> <li>2. Loading width for tight alleys</li> <li>3. Loading height and barrel/cart travel to avoid overhead utility lines/wires and private property.</li> </ol>
D.	Mirror width for use in narrow and obstructed areas to include: <ol style="list-style-type: none"> <li>1. Overall extended mirror width.</li> <li>2. Minimum mirror width.</li> <li>3. Ability for mirrors to be hit by obstructions (branches etc) and absorb the hit without damage.</li> <li>4. Ability for mirrors to be reset or adjusted into position without operator leaving operator's station.</li> </ol>
E.	Warranty: <ol style="list-style-type: none"> <li>1. Ability and cost to obtain a 5-year warranty on cab and chassis.</li> </ol>



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	Description of Concern
	2. Ability and cost to obtain a 5-year warranty on barrel loader body, barrel pick up arm, hydraulic pump, hydraulic motors, hydraulic cylinders and controls.
	3. Location of warranty providers.
F.	Service Ability: 1. Ability to easily service cab and chassis items that require regular (yearly or less) servicing and maintenance 2. Ability to easily service barrel loader body components/items that require regular (yearly or less) adjusting, servicing and maintenance.

**2.0 Build Status of Vehicles:****2.1 Contractor and all sub vendors after receipt of the City's purchase order shall:**

The primary Contractor (prime vendor) shall be responsible for providing within 15 business days to the City a "Preliminary Build Status Plan" to include but not limited to:

1. The "Build Status Plan" shall include sufficient detail to assure that the ordered units will meet specifications and be built to the highest quality standards and be delivered on time.
2. Placement date of initial order with the cab and chassis manufacture.
3. Cab and chassis manufacturer's date of order acceptance. Written order confirmation is required.
4. Placement date of initial order with the body manufacture.
5. Body manufacturer's date of order acceptance. Written order confirmation is required.
6. Build date for cab and chassis to include start date and completion date.
7. Build date for body to include start date and completion date.
8. Delivery date of the cab and chassis to the sub vendor's body manufacturer.
9. Beginning and completion dates for installation of the body on the cab and chassis.
10. Ship date for the completed vehicle (cab and chassis with body) from sub vendor's body manufacturer to Denver and which location shipped to.
11. Contractor and sub vendors local vehicle preparation time.
12. Delivery of a completed vehicle meeting specifications to the City.
13. Beginning and completion dates for installation of the CNG system on the vehicle (if applicable).

**2.2 The Contractor shall contact all sub vendors:**

The Contractor shall contact all sub-contractors providing accessories and equipment for the vehicle (s) and provide the sub-contractors with a list of all accessories and equipment, manufacturer's order confirmation, order number, vehicle specifications, build date and delivery date to dealer from the vehicle manufacturer on the ordered vehicle. It is the primary selling dealer's responsibility to assure that the sub-contractors orders the accessories and equipment and has the items in stock and is prepared to install the accessories and equipment items when the vehicle arrives at the dealership.

**3.0 Basic Requirements or Approved Equal.**

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When a brand/model is referenced in the specifications unless it is stated as "No Approved Equal" it is only a statement of expected quality, information on alternative products shall be provided with the bid so a full technical comparison can be made of the product submitted as an "approved equal".

3.1 Basic Vehicle or Approved Equal

	Description of Equipment	Offered Equipment	Cost
A.	Low floor height cab over engine with, front hinged doors with electric roll up/down windows, 1. Tandem axle 66,000 lb. GVWR (plate certified), 2. Wheelbase approximate 223 inches, to accommodate the new exhaust after treatment devices. 3. Effective (clean) cab to axle approximate 210-inch, 4. After frame 60" and 5. Front tire cut angle 50° 6. Wall-to-Wall turning diameter 81 ft. 7. Both the cab and chassis and body vendors shall verify wheelbase is appropriate for truck and specified body and as short as possible. 8. The right-side operator position shall accommodate operators of various physical sizes providing good visibility, steering wheel/belly clearance, and shoulder width room. Also, all the controls for operating the attached equipment shall be in ergonomic layout that promotes minimal operator movement, operator comfort and operating efficiency.	Make: <u>PETERBILT</u> Model: <u>520</u>  Rating: <u>66,000</u> lbs Wheelbase: <u>210</u> "  C to A: <u>192</u> " A F: <u>60</u> " Cut Angle: Left _____ ° Right _____ ° Turn Dia. : Left <u>73.8</u> ft Right <u>79.4</u> ft	\$ <u>119,318.10</u>
B.	Frame: 1. Rating 66,000-lbs. GVWR minimum, 2. Heavy-duty 110,000-psi full channel heat-treated steel, with main frame 2,086,000 in-lb. RBM and deep frame section 3,235,000 in-lb. minimum.	Frame Rating: <u>66,000</u> -lbs Yield Strength: <u>120,000</u> psi Section Modulus/rail: <u>128</u> in <sup>3</sup> Frame RBM/rail: <u>2,136,000</u> lbf-in	\$ <u>INC</u>
C.	All components that require regular servicing shall be easy to access and be located as much as possible to protect the components from road splash. Access to rear engine mounts or transmission removal should not require the removal of electrical wiring, hydraulic hoses, air tanks or air dryers. Air dryer shall be easy and quick to access for servicing.	Yes No	\$ <u>INC</u>
D.	Towing Provisions: A. Tow hooks, two front and two rear, frame mounted. B. Air brake 3/8" female quick-connect hook up system on right front of the vehicle for wrecker air brake connection. Quick-connectors shall be easily accessible and protected behind the bumper and	Yes No Make: <u>QUICK-CONNECT</u> Model: <u>3/8"</u>	\$ <u>INC</u>



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	Description of Equipment	Offered Equipment	Cost
	8. Brass Oil Sample Valve. Titan Labs part #0D1014 (No approved Equal). Sample Valve must be easily accessible and located in a position that technicians can easily find.	Yes      No  Titan Model OD1014	\$ <u>inc</u>
B.	Power Take Off (PTO) 1. Transmission direct mounted Chelsea 890 series with hydraulic pumps direct mounted to Chelsea 890 PTO at rear of the transmission – left side 8 o'clock position. 2. PTO control electrically actuated from inside cab. 3. PTO speed limiter shall be connected to the engine computer not to an external overspeed box (EOS). 4. PTO shall efficiently operate all hydraulic systems at engine "low idle" 800 rpm or less. Increasing engine speed above 800 rpm shall not improve hydraulic operations except when ejecting the trash load. 5. PTO shaft equipped with a grease zerk and easily accessible for lubricating purpose.	Make: <u>Chelsea</u> Model: <u>890</u> Location: <u>body builder decision</u>  Yes      No Yes      No  Yes      No PTO Idle rpm: <u>750</u>  Yes      No	\$ <u>inc</u>  \$ <u>inc</u> \$ <u>inc</u>  \$ <u>inc</u>
C.	Filtration: 1. Oil: Fleetguard LF3000 full flow/bypass oil filter. 2. Fuel: Racor 690RP12 fuel/water separator with thermostatically controlled fuel line heater.	Make: <u>Fleet Guard</u> Model: <u>LF3000</u> Make: <u>DAVCO</u> Model: <u>382</u>	\$ <u>standard</u> \$ <u>inc</u>
D.	Engine Air Intake: 1. The air intake shall be on the far left side of the vehicle at cab height. 2. The air intake shall be positioned so that it cannot draw in exhaust gases. 3. Air filter dual element dry type with air inlet restriction indicator located in cab	Yes      No  Yes      No  Make: <u>Donaldson</u> Model: <u>2020 engine</u>	\$ <u>standard</u>
E.	Exhaust Meeting 2018 EPA Standards: 1. Exhaust discharge shall be on the right side of the vehicle 2. The exhaust after treatment device shall be horizontally mounted above the engine so as to not obstruct maintenance/repairs underneath the truck. 3. Maximum exhaust system height shall not be higher than the highest point on the body. 4. Horizontal with a vertical chrome stack and stainless-steel exhaust guard that will easily fit up to Denver's exhaust gas evacuation system.	Trap Make: <u>PACCAR</u> Model: <u>MX-11</u> Location: <u>left hand top of engine</u>  Yes      No  Yes      No  Yes      No	\$ <u>385</u>

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	Description of Equipment	Offered Equipment	Cost
	5. Exhaust discharge shall be above roofline and exhaust gases shall not discolor the body or be drawn into the operator's cab. 6. Exhaust "90-degree chrome elbow" directed toward outside of body.		
F.	<b>Fuel Tank:</b> 1. Fuel tank 80 gallons minimum, 2. The tank shall frame mounted. 3. Fuel tank may be combined with body supplier's hydraulic tank.	Size: <u>80</u> gallons Location: <u>left hand back of cab</u>	\$ <u>inc</u>
G.	<b>Diesel Enhancement Fluid Tank:</b> 1. Location behind fuel tank 2. Size 6-gallons minimum 3. Tank fill opening shall be easily identified as "DEF Fluid Only" and shall not accept the entrance of a standard diesel fuel nozzle.	Location: <u>left hand under exhaust system</u> DEF Tank Volume: <u>11</u> gallons <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>inc</u>
H.	<b>Coolant Hoses:</b> 1. Gates Blue Stripe hoses 2. With constant torque hose clamps.	Make: <u>Gates</u> Model: <u>blue stripe</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>inc</u>
I.	<b>Fan:</b> 1. Fan clutch heavy-service-duty with automatic fan control. 2. The fan shall operate off of engine coolant and transmission coolant temperature.	Make: <u>Horton</u> Model: <u>2 speed</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>inc</u>
J.	<b>Air System:</b> 1. Air compressor Bendix 18.7-cfm Tu-Flo minimum 2. Air tanks mounted horizontal inside frame. 3. Air drain valves shall be ¼-turn brass with "Flag" style handle and air blast routed away from the person operating the valve. 4. The drain valves shall be installed under battery box, left side, in an easy to access and operate position. 5. The valve bracket shall be permanently labeled (engraved): "Drain Air Tanks Daily" ½" font size "Air Valve 1"    "Air Valve 2"    "Air Valve 3"    ¼" font size 6. Air lines shall be color-coded nylon type.	Make: <u>Bendix</u> Model: <u>Tu-flo</u> Capacity: <u>18.7</u> cfm Location: <u>left ahnd engine compartment</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>inc</u>   \$ <u>inc</u>
K.	<b>Cold weather starting aids on truck engine. (no approved equal)</b> 1. Block heater, Phillips "Zero-Start" 120vAC, 1500 Watt, engine coolant temperature controlled to: <ol style="list-style-type: none"> <li>Turn "on" at 32°F engine coolant temperature.</li> <li>Turn "off" at 40°F engine coolant temperature.</li> </ol> 2. The plug-in station shall have 2 LED indicator lights to: <ol style="list-style-type: none"> <li>Light when plugged into "hot line" to show "hot line is energized.</li> </ol>	Make: <u>Phillips</u> Model: <u>Zero start</u>  On Temperature: <u>40 degrees</u> Off Temperature: <u>50 degrees</u>  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>inc</u>   \$ <u>inc</u>

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Description of Equipment	Offered Equipment	Cost
b. Light when engine coolant drops below 40°F.	Yes No	
3. Plug-in shall be mounted next to the driver's door, protected from mechanical and weather damage. Heater plug shall be a male standard grounded 15 amp rated plug. Location to be mutually agreed to at installation.	Location: <u>under left hand driver door</u>	\$ <u>inc</u>
4. A decal or information plate shall be provided describing how the system functions. The decal/plate shall be heavy-duty UV protected and capable of withstanding pressure washing and other normal vehicle functions.	Yes No	\$ <u>inc</u>
5. Cold weather starting assist (no either allowed).	Type: <u>Thermo recirculation valve</u>	\$ <u>inc</u>

**3.3 Transmission and Drivetrain or Approved Equal**

Description of Equipment	Offered Equipment	Cost
A. Transmission: Transmission shall be an Allison New World HD4560-RDS-P, wide ratio, set up for 6-speeds with the following components:	Make: <u>Allison</u> Model: <u>4500 RDS-P</u> Speeds: <u>6</u>	\$ <u>16,708</u>
1. Transmission and rear differential gearing shall be optimized for "Best" fuel economy.	Yes No	\$ <u>n/a</u>
2. The shift point calibrations both primary and secondary shall be factory S-1 set for reducing the shift point below maximum governed speed but the engine shall not drop below the peak torque point. On engines with 2,100 rpm full-load governed speed the shift point is reduced 200 rpm. For engines with higher or lower full-load governed speeds the shift point will need to be determined on a case-by-case basis.	Yes No	\$ <u>n/a</u>
3. Transmission interface wiring for Allison MD/HD transmission.	Yes No	\$ <u>n/a</u>
4. Electric push-button transmission controls shall be located on the "dog house" not under the joystick armrest. Location to be mutually agreed upon.	Yes No	\$ <u>n/a</u>
5. TranSynd TES 295 automatic transmission fluid.	Yes No	\$ <u>n/a</u>
6. Allison High-Capacity filters for extended drain interval of 75,000 miles or 36 months.	Yes No	\$ <u>n/a</u>
7. Transmission water-to-oil cooler.	Yes No	\$ <u>n/a</u>
8. Remote mounted transmission filter.	Yes No	\$ <u>n/a</u>
9. Magnetic drain plug.	Yes No	\$ <u>n/a</u>
B. Manual Work Brake Hold Activated with:		\$ <u>inc</u>
1. Service brake automatically applies when the lift arm is activated.	Yes No	
C. Rear Axles:	Yes No	\$ <u>standard</u>

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	Description of Equipment	Offered Equipment	Cost
	1. Eaton single reduction, capacity 46,000-lbs. 2. Driver controlled main power divider locking differential. 3. Oil pump. 4. Axle temperature sensor. 5. Axle ratio for approximate 60-mph top speed. 6. Oil seals, Union 76 Triton EP 75W-90 synthetic gear lubricant. 7. Magnetic drain plug.	Make: <u>Dana Spicer</u> Model: <u>D46-170</u> Gear ratio: <u>4.56</u> Yes No Yes No Top Speed: <u>60</u> mph level Yes No Yes No	
D.	Front Axle: 1. Eaton, capacity 20,000-lbs. minimum with oil seals and Union 76 Triton EP 75W-90 synthetic gear lubricant.	Make: <u>Dana Spicer</u> Model: <u>D2000F</u> Capacity: <u>20,000</u>	\$ <u>standard</u>
E.	Springs: 1. Front leaf with graphite impregnated spring pin bushings. Front: capacity 20,000-lbs. minimum. 2. Rear Hendrickson HMX-460 Haulmax variate spring system. Rear: capacity 46,000-lbs. minimum.	Make: <u>Peterbilt</u> Model: <u>tapered leaf</u> Capacity: <u>20,000</u> - lbs Make: <u>Hendrickson</u> Model: <u>haulmax</u> Capacity: <u>46,000</u> - lbs	\$ <u>standard</u> \$ <u>560</u>
F.	Brakes: 1. Bendix, 17" disc front, model ADB22x extended service brakes with non-asbestos brake pads. 2. Bendix, 17" disc rear, model ADB225 extended service brakes with non-asbestos brake pads. 3. High Temp/Heavy duty pads installed upon delivery 4. Brake chambers type 2824, size 24 chamber.	Front Make: <u>Bendix</u> Model: <u>ABD22X</u> Disc Size: <u>17</u> in Rear Make: <u>Bendix</u> Model: <u>ABD225</u> Front Chamber: <u>meets</u> Rear Chamber: <u>meets</u>	\$ <u>standard</u>
G.	Anti-Lock Brake System / Automatic Traction Control system: 1. Anti-Lock Brake System (ABS): Eaton 6S/6M with ATC, 6-channel with (6 sensors & 6 modulators) and 5-9 psi crack pressure relay valve. 2. Automatic Traction Control (ATC) shall work in conjunction with the Eaton ABS brake system in low traction situations limiting torque to least loaded tire allowing most loaded tire to receive torque and pull the vehicle. The ATC system in conjunction with the Interaxle Driveline Lock shall provide traction control very similar to the Driver Controlled Differential Lock system. 3. Interaxle Driveline Lock (IADL) to lock front and rear drive axles together. The interaxle differential lock shall be automatically locked via the ATC or manually locked by the driver. The IADL switch shall activate a flashing LED warning light. 4. Air lines shall be color-coded nylon type.	Make: <u>Eaton</u> Model: <u>6S/6M</u> Yes No Yes No Yes No	\$ <u>inc</u> \$ <u>inc</u> \$ <u>inc</u> \$ <u>inc</u>
H.	Air Dryer, (No Approved Equals)	Make: <u>Bendix</u> Model: <u>AD-IP</u>	\$ <u>inc</u>

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	Description of Equipment	Offered Equipment	Cost
	1. Bendix AD-IP with heated steel reservoir, automatic moisture ejector and cable operated air tank drain valves accessible from outside of vehicle. . 2. Air dryer shall be installed on the outside of the frame rail in a location that is easy access and does not exceed 15-minutes to service unit.	Yes      No	\$ <u>inc</u>
I.	Driveline: 1. Eaton Permalube type U-joints.	Make: <u>Dana Spicer</u> Model: <u>1810</u>	\$ <u>std</u>
J.	Power Steering: 1. TRW with 2-qt. reservoir.	Make: <u>Shepard</u> Model: <u>SD110</u> Reservoir Size: _____	\$ <u>inc</u>

**3.4 Electrical System or Approved Equal**

	Description of Equipment	Offered Equipment	Cost
A.	Alternator: 1. Alternator shall be a heavy duty, internally regulated, output 160-amp minimum.	Make: <u>PACCAR</u> Model: <u>160 amp</u>	\$ <u>inc</u>
B.	Batteries: 1. Three Group 31 "maintenance free" batteries with a total CCA of 1950 minimum. 2. Battery location frame mounted left hand side. 3. Battery shut-off switch easy to see and access 4. Jump start provision easy to access. 5. Battery cables (00) stranded copper minimum. 6. Battery Parallel Charger (PulseTech XC)	Make: <u>PACCAR</u> Model: <u>premium</u> Quantity: <u>3</u> CCA's: <u>2190</u> Location: <u>left hand behind cab</u> Yes      No Yes      No Cable Size: <u>00</u>	\$ <u>std</u> \$ <u>inc</u> \$ <u>inc</u> \$ <u>inc</u> \$ <u>600</u>
C.	Circuit protection: 1. Circuit breakers with manual reset, no fuses. 2. Circuit breaker panel shall be easy to access. 3. Circuit breaker panel shall be clearly labeled for easy identification.	Type Protection: <u>circuit breaker</u> Yes      No	\$ <u>inc</u>
D.	Wiring: 1. Wiring shall be color coded with hot stamped wire numbers. 2. All wiring shall be run in sealed wiring looms to reduce corrosion from magnesium chloride products	Yes      No Yes      No	\$ <u>inc</u>
E.	Body Builders Junction Box: 1. Body builder's junction box shall be mounted behind the cab 2. Terminal shall be marked for easy identification.	Location: <u>back of cab strapped to frame</u> Yes      No	\$ <u>inc</u>
F.	Back Up Alarm:	yes	\$ <u>inc</u>



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	Description of Equipment	Offered Equipment	Cost
	1. Back up alarm 107 dB, SAE type B, fully sealed, back-up alarm system wired into vehicle's backup light system using OEM plug-in adapter. 2. The alarm shall be mounted out of the vehicle's rear wheel splash area.	dBa rating: <u>107</u>  Yes      No	
G.	Cab and Chassis Lights: 1. Halogen sealed beam headlights, 12v. 2. Daytime running lights. 3. Wiring shall be sealed modular plug-in type. 4. Marker lights LED type.	Yes      No Yes      No Yes      No Yes      No      Type: <u>LED</u>	\$ <u>inc</u>

3.5 Cooling System or Approved Equal

	Description of Equipment	Offered Equipment	Cost
A.	Cooling system with coolant recovery tank capable of maintaining engine manufacturer's recommended operating temperatures at an elevation of 6,800' in 120° F low humidity ambient conditions shall be provided.	Yes      No	\$ <u>inc</u>
B.	Coolant protection shall be -34° F.	Protection Level: <u>-39</u> °	\$ <u>wtd</u>
C.	Fleetguard coolant filter WF2071.	Make: <u>fleet guard</u> Model: <u>WF2071</u>	\$ <u>std</u>

3.6 Tires and Wheels or Approved Equal

	Description of Equipment	Offered Equipment	Cost
A.	Tires: 1. Tires 315/80R22.5, tubeless, 20-ply, load range L. 2. Front: Bridgestone M860A, Steer Tires 10,000lb rated @ 120psig 3. Rear dual: Bridgestone M843 Snow/Aggressive Grip – 10,000lb rated @ 120psig	Make: <u>Bridgestone</u> Model: <u>M860A</u> Make: <u>TOYO</u> Model: <u>M920S M&amp;S</u>	\$ <u>inc</u> \$ <u>2,339.00</u>
B.	Wheels: A. Disc, 10-hole, Hub piloted type, Single nut, Meets ISO Standard 4107. B. Aluminum Wheels all Axles C. Front 22.5" x 9". D. Rear 22.5" x 9"	Make: <u>Accuride</u> Model: <u>22.5X9</u>  Yes      No Size: <u>22.5</u> x <u>9</u> Size: <u>22.5</u> x <u>9</u>	\$ <u>1,231.00</u>
C.	Wheel offset shall limit tire exposure beyond/outside the refuse body. Tire exposure outside of body shall be no more than 2".	Yes      No	

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3.7 Interior or Approved Equal

	Description of Equipment	Offered Equipment	Cost
A.	<p>Right Side Operating Controls:</p> <ol style="list-style-type: none"> <li>1. Vehicle operation shall be only from right side of vehicle.</li> <li>2. Right side driver's controls shall be ergonomically laid out for maximum driver efficiency-in-operating the automated collection body in either recycle material of residential trash pick up.</li> <li>3. Since the vehicle will be used in automated recycle and residential trash collection with a "operate at idle" hydraulic system and a ergonomic multi-position joystick the transmission shifter location needs to be in a location the driver can easily access but not in the conventional location directly adjacent to the driver where it will be covered by the automated body's joystick control. With an "operate at idle" hydraulic system the driver will not be required to shift the vehicle into "neutral" at each collection and after collection back into "drive" to proceed to next stop.</li> <li>4. Doors:                             <ol style="list-style-type: none"> <li>a. Left and right doors shall be front hinged.</li> <li>b. Left and right doors shall have electric full roll up/down windows.</li> </ol> </li> </ol>	<p>Location: <u>right side</u>                      Yes      No</p> <p>Shifter Obstructed:    Yes      No                      Shifter Location: <u>on side of dog house</u></p> <p>Joystick Location: <u>builder descretion</u></p> <p>Yes      No                      Yes      No</p>	<p>\$ <u>715</u></p> <p>\$ <u>inc</u></p> <p>\$ <u>inc</u></p>
B.	<p>Driver Viewing Environment/Area:</p> <ol style="list-style-type: none"> <li>1. Requested SAE J1750 and SAE J1050a "Target Evaluation" method operator view area information must be submitted with bid for evaluation.</li> <li>2. Failure to submit the requested information may make bid non-responsive.</li> <li>3. Vendor using the "Target Evaluation" method shall provide with bid, top view drawings with dimensions of the visibility values from the operator's seat at eye level for operators of the following percent quartile sizes:                             <ol style="list-style-type: none"> <li>a. 5<sup>th</sup> % male height 1554 mm or 61.18"</li> <li>b. 50<sup>th</sup> % male height 1668 mm or 65.67"</li> <li>c. 95<sup>th</sup> % male height 1783 mm or 70.20"</li> </ol> </li> <li>4. Drawings shall be on 11" x 17" paper ("B" size drawing paper) for easier reading.</li> <li>5. Good operator exterior visibility is a major safety concern and increasing operator viewing area and eliminating "blind spots" is beneficial to the City</li> </ol>	<p>Drawings Provided:    Yes      No</p> <p>Paper Size: <u>11</u> " X <u>17</u> "</p>	<p>\$ <u>inc</u></p>
C.	<p>Required Submittals with Bid:</p>	<p>Provide Materials: <u>SAE J1750</u></p>	

	Description of Equipment	Offered Equipment	Cost
	<ol style="list-style-type: none"> <li>1. Requested information must be submitted with bid for evaluation. Failure to submit the requested information may make bid non-responsive.</li> <li>2. Vendor shall provide with bid, drawings with dimensions and photographs of the proposed cab interior for review.</li> <li>3. Interior dimensions measured:                             <ol style="list-style-type: none"> <li>a. Belly Room: seat back to steering wheel.</li> <li>b. Leg Room: seat front edge to brake pedal.</li> <li>c. Head Room: seat cushion to ceiling.</li> <li>d. Torso Room: Width from door to doghouse or other obstruction.</li> <li>e. Seat fore/aft travel:</li> <li>f. Seat height travel:</li> <li>g. Steering Wheel Knuckle Clearance: distance to closest object</li> <li>h. Floor Height: measured ground to cab floor.</li> <li>i. Cab Step Heights: measured from ground.</li> <li>j. Steering Wheel Tilt and Telescoping:</li> </ol> </li> <li>4. Location of transmission shifter: should not be obstructed by automated barrel loader's joystick.</li> </ol>	Seat full forward: <u>11</u> "    Seat full back: <u>18</u> " Seat full forward: <u>6</u> "    Seat full back: <u>12</u> " Seat full lowered: <u>43</u> "    Seat full raised: <u>38</u> " Smallest measurement: <u>23</u> " Travel: <u>3</u> " Travel: <u>2</u> " Clearance: <u>6</u> " Height: <u>35</u> " 1 <sup>st</sup> Step: <u>15</u> "    2 <sup>nd</sup> Step: <u>26.5</u> " Tilt: <u>5</u> °    Telescoping distance: <u>0</u> " <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
D.	<b>Engine Cover "Doghouse"</b> <ol style="list-style-type: none"> <li>1. The engine cover "doghouse" shall be recessed to accommodate the ergonomic positioning of the automated barrel loader controls.</li> <li>2. The vehicle manufacturer shall work with the body supplier to assure that the controls are the most ergonomic possible to assure operator comfort and reduce repetitive motion injuries.</li> <li>3. The transmission shifter shall not be obstructed by the automated barrel loader joystick. The transmission shifter should be located in a location convenient to the operator but not directly adjacent to the driver's side. Since the vehicle has "operate at idle" hydraulic system the transmission does not require shifting into and out of "neutral" at each stop.</li> <li>4. The City has operators of varying statures and adjustable controls will minimize on-the-job related physical problems.</li> <li>5. The City, body vendor and the vehicle supplier shall mutually determine control locations after Contract award.</li> </ol>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>Std</u>
E.	<b>Upfitter's Switch Panel:</b> <ol style="list-style-type: none"> <li>1. The vehicle manufacturer shall provide for the automated body manufacture an upfitter's switch panel for automated body control switches.</li> </ol>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>Inc</u>

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	Description of Equipment	Offered Equipment	Cost
	2. The panel location shall be in an ergonomic location and shall not require more than 30° head movement and be within easy reach of driver's of various sizes and physiques. 3. The switch panel shall have permanently labeled and lighted rocker switches for all optional sundries equipment and lights etc.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
F.	Seats: 1. Driver's right seat shall be air suspension Bostrom, high back driver's seat, gray vinyl with cloth insert and armrests. 2. Left side be spring suspension Bostrom, mid-back seat, gray vinyl with cloth insert and armrests 3. Seat belts (all) will be orange in color.	Make: <u>  Peterbilt  </u> Model: <u>  High back  </u> Make: <u>  Peterbilt  </u> Model: <u>  low back  </u>	\$ <u>  128  </u> \$ <u>  inc  </u>
G.	Instrumentation: 1. Instrumentation shall include speedometer, engine hour meter, tachometer, voltmeter, coolant temperature, oil temperature, oil pressure, fuel level and air pressure with low-pressure alarms (light, audible).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>  Inc  </u>
H.	Floor Covering: 1. Floor covering shall be heavy-duty black rubber/vinyl flooring.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>  Std  </u>
I.	Steering: 1. Steering tilt and telescoping easy to adjust, to accommodate operators with large variations in sizes. 2. Steering tilt easy to adjust 3. Telescoping easy to adjust	Tilt: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Telescoping: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Steering: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>  Std  </u> \$ <u>  Std  </u> \$ <u>  Std  </u>
J.	Air Conditioning: 1. Factory installed cab R134A air conditioning 2. Cab shall be insulated to include floor, firewall, roof and walls.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>  Inc  </u>
K.	Radio: 1. Radio AM/FM stereo with two speakers.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>  Inc  </u>
L.	Fire extinguisher, 5 lb. ABC dry type body mount on fender location labeled with 1" letters on outside of cab	Type <u>  ABC  </u> Location <u>  Driver side rear fender  </u>	\$ <u>  Inc  </u>
M.	Grab Handles: 1. One each on exterior of cab for operator and passenger assist and one interior for passenger. 2. Grab handles shall provide adequate clearance to other objects to provide easy access and clearance to prevent pinch or other hazards.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>  Inc  </u>

3.8 Exterior or Approved Equal:

	Description of Equipment	Offered Equipment	Cost
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A.	Vendor shall provide with bid drawings with dimensions and photographs of the proposed cab exterior including mirrors for review. Failure to submit the requested information may make bid non-responsive.	Provide Materials: _____ _____ _____	\$ Std
B.	Cab Design: 1. Heavy-duty or severe-duty type with steel or aluminum body. 2. High visibility tilt forward design. 3. Front hinged doors. 4. Low floor cab over with steps mounted to body. 5. Maximum step height 15".	Body Rating: <u>Aluminum</u> Body Material: <u>Aluminum</u> Yes No Yes No Step Height: <u>15</u> in	\$ Std
C.	Front Bumper: 1. The front bumper shall straight and fit as close to the front of the cab as possible with adequate reinforcing to not allow the bumper to be driven back into the cab with minor impacts. 2. The bumper shall be chrome	Bumper Type: <u>Steel</u> Reinforced on outside corners: Yes No Bumper Finish: <u>Chrome</u>	\$ Std \$ 295
D.	Engine Accessibility: 1. Engine fully accessible and serviceable, 2. Cab shall tilt forward for access 3. Tilt shall be by easily operated momentary switch and 12v DC electric pump located on right side of vehicle.	Yes No	\$
E.	Splash/Spray Suppression: 1. Spray suppression skirting, Fleet Engineering Inc. 4" brush filament P/N 997-70174, black polyethylene, (800.333.7890) 2. Local distributor: Fleetpride 7725 Dahlia St Commerce City CO (303.288.1166) 3. Skirting shall be installed on the front steer axle wheel housing to reduce road spray from being thrown up onto the truck's rearview mirrors.	Brand: <u>Fleet Pride</u> P/N: <u>997-70144</u>  Yes No	\$ Std
F.	Paint: 1. Polyurethane paint equal to DuPont Imron 5000, Color "Bright White", 2 coats applied to all non-stainless steel components following manufactures procedures to include: 2. Preparation to include: 3. Removing all mill scale and slag. 4. Variprime 615S self-etching primer or approved equal. 5. Treating bare metal with manufacturer's conditioners and conversion coatings or approved equal. 6. Paint to be applied with all body members painted.	Make: <u>Axalta</u> Type: <u>2 stage</u> Color: _____ Yes No Yes No Yes No Yes No	\$ Std
G.	Mirrors: "No Approved Equal"	Overall mirror full extended width: <u>110</u> inches	\$ Inc

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	1. Rear view mirrors to be Velvac, V Max, Dual Pane with Top Hat (Chrome). RS part # 717454, LS part # 717455, remote operated, heated, left and right mounted on the door. 2. Overall cab width including mirrors 112" maximum.	Overall mirror width with left side mirror folded in: 104 inches  Make: Peterbilt Model: Velvac V max	\$ Inc _____
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**VEHICLE SUB TOTAL COST** | \$142,279.10

**4.0 Dealer Provided Optional Equipment**

**4.1 Electrical Systems:**

- A. All non-factory wire connections (splices, connectors, etc.) shall be soldered and shrink tube insulated with adhesive/meltable sealant, thick wall polyolefin shrink tubing (3M EPS-300 or equal). No non-factory crimp connections allowed. No cutting or splicing into the factory wiring harnesses allowed.
- B. All accessories (strobe lights, operator controls, light bar, etc.) shall be wired through a 12-vDC constant-duty solenoid and controlled by bus bar mounted and permanently labeled auto-resetting circuit breakers. The solenoid shall be wired to the key switch.
- C. All dealer/vendor installed items, which require connecting into the vehicle's electrical system shall be done using an OEM factory modified wiring kit whenever possible.
- D. All non-factory wiring shall be encased in a totally sealed wiring harness (no plastic split loom) to prevent corrosion from magnesium chloride. The wiring harness shall be well secured to the truck with neoprene aircraft stainless steel tubing clamps. Rubber grommets shall be used at all areas where the wiring passes through areas that could damage the wiring. Unprotected wiring in any application is unacceptable.
- E. Electrical cables and wiring harnesses shall be neatly run and clamped with neoprene aircraft stainless steel tubing clamps. Clamp spacing shall not exceed 18-inches.
- F. Dielectric grease shall be applied to all electrical plug terminals and connections to reduce corrosion.

**4.2 Fasteners:**

- A. Grade 5 (SAE or USS) or 8.8 (metric) minimum, bolts, nuts, washers minimum. Vendor shall use Grade 8 or 10.9 for all critical areas or where good engineering practice suggests.
- B. All fasteners shall be zinc plated to prevent corrosion.
- C. Anti-Seize: all fasteners shall have Fel Pro C5A Anti-Seize compound applied before assembly to prevent corrosion, rusting, galling and aid in equipment servicing and repair.
- D. All fasteners shall be of appropriate length, diameter and strength (grade) for the application.
- E. Bolts and screws shall extend a minimum of 1-1/2 threads beyond the nut and maximum of 6 threads past the nut.
- F. Flat washers shall be used under bolt heads and nuts.
- G. Lock nuts (nylon insert, metal, slotted, castle nuts) shall be used lock-washers are not acceptable.

**4.3 Hydraulic Systems:**

- A. All hydraulic circuits shall be pressure relief protected.

- B. Hydraulic hoses shall be Parker ST 451 (tight bend radius) 2-wire braid hose meeting SAE-100R17 specifications where the hose meets operational criteria or approved equal.
- C. Hydraulic hoses shall have swivel fittings on both ends. Hose ends shall be located to facilitate easy component replacement.
- D. High-pressure hydraulic hose shall not be used for suction lines.
- E. Close/tight radius 90° elbow fittings shall not be used if short, medium or long drop steel stem 90° elbow fittings can be used. Over use of 90° elbows shall not be permitted.
- F. Hydraulic hoses and rigid lines shall be run parallel where possible; routing shall look neat and well planned.
- G. Rubber cushioned metal hydraulic clamps shall be used on all hydraulic ridged lines and hoses at proper intervals for supporting the line/hose 36" maximum distance. Clamps shall be securely mounted to the equipment.
- H. Hydraulic hoses and lines shall not be routed near exhaust, close to rotating components or over, around or through sharp edges. Rubber grommets shall be used at all areas where the hydraulic lines through areas that could damage the lines.
- I. Galvanized fittings and thread tape shall not be used.
- J. Hydraulic hoses shall be covered with protective spiral nylon anti-chaffing wrap or sock type protective sleeves at all areas where chafing/rubbing could cause premature wear/failure.
- K. Hydraulic oil tanks shall magnetic drain plug, oil level and temperature gauge.
- L. Hydraulic hoses over 4' long shall be labeled on both ends for easy identification.
- M. Shut off valves ¼-turn on each side of filter.

**4.4 All fabricated parts, brackets etc. shall have all sharp corners, edges etc. radiused or rounded for safety.**

**4.5 Welds:**

- A. All welds shall meet AWS (American Welding Society) standards for the type weld, material joined and welding method.
- B. Weld joints shall have proper design and fit for the application.
- C. Welds joints shall have proper penetration and be smooth in appearance with no undercuts or overlaps at edge of weld.
- D. Weld joints shall be properly prepared with cut ends ground to remove all slag, create a smooth surface with no porosity and beveled end.
- E. Welds shall be full length to prevent "rust bleed" from non-welded seams.

**4.6 Compactor Barrel Loader Body or Approved Equal**

**When a brand/model is referenced in the specifications unless it is stated as "No Approved Equal" it is only a statement of expected quality, information on alternative products shall be provided with the bid so a full technical comparison can be made of the product submitted as an "approved equal".**

	Description of Equipment	Offered Equipment	Cost
A.	<b>Manufacturer Qualifications:</b> 1. Units shall be completely assembled, mounted and ready for operation. Parts not detailed shall be constructed in accordance with the best standard practice of the industry at the time of construction.	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Yes <input type="checkbox"/> No	

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	Description of Equipment	Offered Equipment	Cost
	<p>2. Only new models in current production, which are catalogued by the manufacturer and for which printed literature and specifications are available, will be accepted.</p> <p>3. The loader body shall be the product of a manufacturer actively engaged in the production of automated side loading refuse collection vehicles of this size and capacity as specified.</p> <p>4. The City will consider only those bidders who can demonstrate that a minimum of 100 units have been manufactured and have been in use for (1) year.</p> <p>5. Name (s) of users and contact personnel shall be supplied with bid.</p> <p>6. All accessories not specifically mentioned herein, but necessary to furnish a complete unit ready for use shall also be included.</p>	<p><input checked="" type="checkbox"/> Yes    No</p> <p><input checked="" type="checkbox"/> Yes    No</p> <p><input checked="" type="checkbox"/> Yes    No</p> <p><input checked="" type="checkbox"/> Yes    No</p>	
B.	A current year, new automated recycle/trash barrel side loader refuse body meeting ANSI Safety Standard Z245.1 standards of at least 30-cubic yard capacity, with push-out full ejection of trash loads and a low-height lift, non-kick out trash barrel lift for use in narrow alleys with many side and overhead obstructions or approved equal, installed with the following equipment:	<p>Make: <u>Amrep Inc</u>      Model: <u>AMHASLTPO-19</u></p> <p>Body Capacity: <u>37</u> yds<sup>3</sup></p> <p>Tailgate Capacity: <u>3</u> yds<sup>3</sup></p> <p>Trash expulsion Method: <u>full push out no kick out</u> can lift</p>	\$ <u>N/A</u>
C.	<b>Vendors shall within 45 days of contract award submit drawings to the City showing that the truck will have no interference problems associated with the placement of all major components to include but not be limited to: System, body lift cylinders, front/rear bumpers, air filter, exhaust system, air dryer, air tanks, fuel tank, battery box, daily fluid checks/fills, hopper, hopper cover, tailgate drip pan, elevator, carriage, hydraulic tank, hydraulic valves, steps/ladders, electrical junction box, access doors, tool holders etc.</b>	<input checked="" type="checkbox"/> Yes    No	
D.	<p>The compactor body shall be:</p> <p>1. Capacity, 27.5 cu yds excluding loading hopper, approximate</p> <p>2. Body design, rounded rectangular shape curved sides mounted length wise on the truck chassis-setup for right side barrel loading.</p> <p>3. Hopper floor shall be level with the main body floor to allow full ejection of all materials.</p> <p>4. Material:</p> <p>    a. Body Dimensions,</p> <p>        1) Hopper capacity, 5 cubic yards, approximate</p> <p>        2) Maximum width of the body and pick up arm in down pick up position shall not exceed 102" width. No portion of the arm in down pick up position shall stick out past</p>	<p><b>Accurate Data Must Be Provided</b></p> <p>Body Capacity: <u>29.5</u> yds<sup>3</sup></p> <p>Body Shape: <u>rounded rectangle</u></p> <hr/> <p>Level Floor: <input checked="" type="checkbox"/> Yes    No</p> <p>Hopper Capacity: <u>5.5</u> yds<sup>3</sup></p> <p>Body Width: <u>102</u> in</p> <p>Total Width in Down Pick Up Position: <u>102"</u></p>	



Description of Equipment	Offered Equipment	Cost
<p>the truck or trash body. The pick up arm shall be "zero grab" capable, pick up barrels at the side of the truck without extending the pick up arm.</p> <ol style="list-style-type: none"> <li>3) Length of body, hopper and arm, 267", approximate</li> <li>4) Body height above ground, 12' 6" maximum</li> <li>5) Height lift arm dump 30-90-gal. above ground, shall not exceed 14'-0" or 168".</li> <li>6) Lift arm reach, 0" to 109" (9'-1") full extension to center of barrel.</li> <li>7) The grabber shall grip containers at a height of 24" from bottom of the barrel</li> </ol> <p>b. Body Materials (minimum requirements)</p> <ol style="list-style-type: none"> <li>1) Hopper Floor: 1/4" Hardox 450 steel 145,000 psi yield.</li> <li>2) Hopper Sidewall: 4 mm Hardox 450 steel 145,000 psi yield.</li> <li>3) Body Floor: 3/16" Hardox 450 steel 145,000 psi yield.</li> <li>4) Body Sidewalls: 1/8" Hardox 450 steel 145,000 psi yield.</li> <li>5) Body Roof: 1/8" Hardox 450 steel 145,000 psi yield.</li> <li>6) Tailgate: 1/8" Hardox 450 steel 145,000 psi yield...</li> <li>7) Body Posts: 2" x 2" x 1/4" formed steel, 2 required, 1 at front of the body/hopper and 1 at rear of body/door</li> <li>8) Longitudinal Member: 8" x 2" x 0.180" wall structural steel tube, 2 required, 1 each on lower side of body extending from front to rear body posts</li> <li>9) Cross Members: 5 required minimum                     <ol style="list-style-type: none"> <li>a. 2 members: 6" x 2" x 3/16",</li> <li>b. 1 member: 8" x 2" x 3/16"</li> <li>c. 2 members: 2" x 2" x 3/16"</li> <li>d. Cross members shall be on lower side of body extending from front to rear body posts and full body width</li> <li>e. Cross members shall be fully and continuously welded to the hopper and body floors</li> </ol> </li> </ol>	<p>Body Length : <u>276</u> in                      Body Height <u>146</u> in                      Max 90 gallon barrel dump height: <u>168</u> in</p> <p>Maximum arm reach: <u>109</u> in</p> <p>Grab Height: <u>12-21</u> in</p> <p>Steel Specs:</p> <p>Steel Type: <u>hardox AR450</u> Thickness: <u>1/4"</u>                      Yield: <u>145,000</u> psi</p> <p>Steel Type: <u>hardox AR450</u> Thickness: <u>4mm</u>                      Yield: <u>145,000</u> psi</p> <p>Steel Type: <u>hardox AR450</u> Thickness: <u>3/8"</u>                      Steel Type: <u>hardox AR450</u> Thickness: <u>1/8"</u>                      Yield: <u>145,000</u> psi</p> <p>Steel Type: <u>hardox AR450</u> Thickness: <u>1/8"</u>                      Yield: <u>145,000</u> psi</p> <p>Steel Type: <u>hardox AR450</u> Thickness: <u>1/8"</u>                      Yield: <u>145,000</u> psi</p> <p>Steel Type: <u>formed</u> Thickness: <u>1/4"</u>                      Yield: <u>80,000</u> psi</p> <p>Steel Type: <u>structural tubing</u> Thickness: <u>1/4"</u>                      Yield: <u>58,000</u> psi</p> <p>Steel Type: <u>structural tubing A500 grade B</u>                      Size: <u>6"</u> x <u>2"</u> x <u>3/16"</u>                      Size: <u>8"</u> x <u>2"</u> x <u>3/16"</u>                      Size: <u>2"</u> x <u>2"</u> x <u>3/16"</u></p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p>	

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	Description of Equipment	Offered Equipment	Cost
	10) The body design and construction shall ensure that "No" body or component distortion occurs when the body is repeatedly packed at full rated capacity.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
E.	Hopper: 1. The hopper capacity shall be approximately 5 yds <sup>3</sup> 2. Hopper floor shall be flat 3. The hopper floor rear section (entrance into body) shall extend out into the main body approximately 18" past the vertical front wall to provide additional wear resistance. 4. Hopper Sump: a. The hopper on its front side shall have a transverse sump to allow cleaning out of debris that accumulates behind the packer blade and collect liquids. b. Clean-out doors on both sides of the body c. Hopper sump doors shall be approximately 14" x 13" d. Hopper sump door hinges shall be hinged and corrosion resistant e. Doors shall be sealed to prevent liquids from leaking. f. The door latches shall be easy and quick to operate. g. A clean out tool with easy to use and access storage brackets shall be provided. Exact location shall be mutually determined at installation	Hopper Capacity: <u>5.5</u> yds <sup>3</sup> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Floor Distance into Body: <u>24</u> in  Sump Size: <u>10"</u> x <u>4"</u> Sump Volume: <u>16</u> gallons  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Clean Out Door Size: <u>10"</u> x <u>36"</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    Material: <u>12 gauge mild steel</u>  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Latch Type: <u>over center 2 rubber tension straps</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
F.	Hopper Cover: 1. A hopper cover shall be provided that seals the hopper/body area and prevents loose material from being sucked out of the hopper/body when the trash truck is traveling along roads at City or highway speeds. 2. The hopper shall hydraulically fold out of the hopper front wall to seal the hopper area. 3. The hopper cover shall be metal and the cover needs to be easy to change out/repair in case of damage 4. When the hopper cover is in the down/hopper covered position the loading functions shall be disabled to prevent dumping on top of the hopper cover.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Describe Function: <u>  folds out of hopper wall  </u>  Material: <u>  12 guage steel skin over steel frame  </u>  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
G.	Packing and Ejection Mechanism: 1. Packer plate shall be actuated by horizontally opposed and crossed telescopic hydraulic cylinders.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Description of Equipment	Offered Equipment	Cost
<p>2. Pack panel shall have an auto-pack that is actuated with a completed cycle of the pick up arm.</p> <p>3. The auto-pack shall be able to be easily set on the main control panel for:</p> <p>a. Pack every pick up cycle</p> <p>b. Pack every 3rd pick up cycle</p> <p>4. A container dump lock out shall prevent dumping behind the packer plate.</p> <p>5. The pack panel shall:</p> <p>a. The packer panel face and top surface shall be ¼" AR400 minimum for wear resistance.</p> <p>b. The packing panel shall exert 70,000-lb force minimum across its entire face to highly compact the load.</p> <p>c. For packing the panel shall travel into the main body a sufficient distance for proper packing and to prevent trash fall-back into the hopper.</p> <p>6. Packer panel follower plate shall be:</p> <p>a. Multi-piece folding design that retracts/stores inside the hopper on the front wall of the hopper.</p> <p>b. The follower plate shall utilize heavy-duty greaseless piano type hinges between the follower plates</p> <p>c. Constructed with a steel frame, 10-gauge steel, 50,000 psi yield minimum.</p> <p>d. The cover sheet shall be 10-gauge steel, 50,000 psi yield minimum and easy to replace when damaged.</p> <p>e. The follower panel plates shall run inside wall mounted tracks and a center support using permanently lubricated rollers for reduced maintenance.</p> <p>f. The packer follower plate shall have a protective shield that will keep trash from bypassing between the packer panel and the follower plate, get in front of the pack panel where the compaction cylinders are housed.</p> <p>7. Hydraulic cylinders that are in a location where they can be in contact with the trash or are subject to mechanical damage shall have nitrated piston rods with a positive-contact M2 tool steel scraper blade to shave off burrs, trash and other materials that could damage the cylinder seals, packing or other cylinder components, or "approved equal design"</p> <p>8. Cylinders shall be single stage, with packing force as follows:</p>	<p>Switch Location: <u>main control panel</u></p> <p><input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No  <input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Follower panel with rubber scraper</p> <p>Material: <u>Hardox AR450</u> Thickness: <u>1/4"</u></p> <p>Packing Force: <u>70,000</u> lbs/in<sup>2</sup></p> <p>Pack Distance into the Hopper: <u>24</u> in</p> <p>Number of Panels: <u>2</u></p> <p>Storage Location: <u>inside hopper</u></p> <p>Hinge Type: <u>piano type</u></p> <p>Lubrication Required:    <input type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p>Thickness: <u>3/8</u>      Yield: <u>50,000</u></p> <p>Thickness: <u>3/8</u>      Yield: <u>50,000</u></p> <p>How Fastened: <u>studs in blade, plate bolted down</u></p> <p>Roller Type: <u>steel</u>      Roller Number: <u>2</u></p> <p>Size: <u>2"</u> dia x <u>6"</u> w</p> <p>Permanently Lubricated:    <input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No  <input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p>Shield Material: <u>rubber wiper</u></p> <p>Make: <u>Amrep</u>      Model: <u>509-2362</u></p> <p>Cylinder Warranty: <u>2 yr based on approval from Amrep</u></p> <p>Rod Material: <u>Chrome plated steel rod</u></p> <p>Scraper Blade Material: <u>dual floating bronze</u></p> <p>Force: <u>70,000</u> psi-lb force @ <u>2,000</u> psi  <input checked="" type="checkbox"/> Yes      <input type="checkbox"/> No</p>	

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	Description of Equipment	Offered Equipment	Cost
	<p>1<sup>st</sup> stage: 70,000 lbs minimum.</p> <p>9. Packing mechanism shall be designed so that no contact to the tailgate can occur during loading or ejecting of refuse.</p> <p>10. The packing panel shall be reinforced with formed cross members so no distortion occurs during operation.</p> <p>11. Packer Panel Track:</p> <p>a. The pack panel shall ride on 1/4" AR500 abrasion resistance steel for wear resistance from constant packing.</p> <p>b. The wear strips shall be easily replaceable.</p>	<p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p>Material: <u>AR500</u>    Thickness: <u>1/4" top</u></p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p>How Replaced: <u>torch and weld</u></p>	
H.	<p>Compacted Trash Ejection System:</p> <p>1. Load ejection shall be a combination of the packer panel and the ejection panel working together in an efficient manner to fully eject the load to include:</p> <p>a. Truck engine increases rpm to approximately 1,200 rpm for ejection cycle only.</p> <p>b. The packer panel cycling thru 2 full pack cycles and stopping in the full rear position to help block compacted trash from falling back into the hopper.</p> <p>c. The ejection panel traveling rearward approximately 1/3 of body distance to make partial load ejection.</p> <p>d. Truck pulls forward sufficient distance to provide a clear dump area behind the truck for a second ejection push.</p> <p>e. The ejection panel traveling approximately 2/3 of body distance to make a 2<sup>nd</sup> partial load ejection.</p> <p>f. Truck pulls forward sufficient distance to provide a clear dump area behind the truck for a second ejection push.</p> <p>g. The ejection panel traveling full body length to make final and complete load ejection.</p> <p>h. Ejection panel and packer panel retract to home or ready to use position</p> <p>2. Ejection cylinders shall have three stages, with packing force as follows:</p> <p>a. 1<sup>st</sup> stage: 119,000 lbs.</p> <p>b. 2<sup>nd</sup> stage: 97,000 lbs.</p> <p>c. 3<sup>rd</sup> stage: 76,000 lbs.</p>	<p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p>Describe Ejection Cycle: <u>2 sweeps of packer panel and 3 sweeps of ejection panel minimal</u></p> <p>Truck Engine Speed @ Ejection: <u>1,200</u> rpm</p> <p>1<sup>st</sup> Stage Force: <u>47,492</u> psi-lb force @ <u>1,800</u> psi</p> <p>2<sup>nd</sup> Stage Force: <u>31,792</u> psi-lb force @ <u>1,800</u> psi</p> <p>3<sup>rd</sup> Stage Force: <u>19,232</u> psi-lb force @ <u>1,800</u> psi</p>	
I.	Tailgate:	<p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p>	

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	Description of Equipment	Offered Equipment	Cost
	<ol style="list-style-type: none"> <li>1. Operation, lock/unlock, raise and lowered using two hydraulic cylinders, minimum. In open position, tailgate maximum height not to be greater than 19'11". License plate mounted on tailgate</li> <li>2. Hydraulic operated locks :               <ol style="list-style-type: none"> <li>a. Locks at 9 tailgate point's minimum shall secure tailgate door lock.</li> <li>b. Outside of body tailgate locks: 2 required</li> <li>c. Inside body side locks 4 required, 2 per side</li> <li>d. Bottom tailgate locks 3 required</li> <li>e. Locks shall automatically actuate when rear door lift cylinders are actuated.</li> </ol> </li> <li>3. Tailgate shall be strong enough not to deform or crack during use.</li> <li>4. Tailgate shall have an easy to replace one-piece rubber gasket. The gasket shall extend across the entire bottom and up the sides a minimum of 24".</li> <li>5. Tailgate trough/catch basin shall be provided to catch liquid leakage.               <ol style="list-style-type: none"> <li>a. The trough shall self empty when the tailgate is raised for load ejection.</li> <li>b. A 2" NPT dia bung shall be provided for draining liquids without raising the tailgate.</li> </ol> </li> <li>6. Tailgate unlatched alarm; light/buzzer shall indicate when door is unlatched.</li> <li>7. Tailgate safety prop rods shall be provided to hold the tailgate manually open.</li> <li>8. Tailgate hydraulic lines shall have restrictors to prevent sudden tailgate descent.</li> <li>9. Underride protection, shall be bolt on type, DOT approved.</li> <li>10. All tailgate hinge points shall be easily greaseable from the ground.</li> <li>11. Center mounted Truck Lite LED brake light shall be provided.</li> <li>12. Whelen Model L360 Super LED 360° beacon with branch guard L360BGB, (1) required shall be mounted on top of tailgate.</li> <li>13. Tailgate mounted safety lights sides shall be               <ol style="list-style-type: none"> <li>a. Whelen IONSMC -Wide Angle LED color (Amber) safety lights (4 required).</li> <li>b. The lights shall be located 1/3rd and 2/3rd up the tailgate just inside the outer edge of the tailgate on each side</li> </ol> </li> </ol>	<p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Make: <u>truck lite</u> Model: <u>91 (7" LED)</u>            Make: <u>Whelen</u> Model: <u>L360</u></p> <p>Make: <u>Whelen</u> Model: <u>IONSMC-LED</u></p> <p>Location: <u>outer edge, side of TG 1/3 &amp; 1/2 up side of tailgate</u></p>	
J.	Container Loading System:		

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Description of Equipment	Offered Equipment	Cost
<p>1. Orientation, right or curb side of body.</p> <p>2. Loading arm system shall consist primarily of an extension/retraction arm, a container gripping system and a tracked lift/lower and dump track system or an approved equal with zero (negligible) barrel kick out. The truck will pick up in very narrow alleys with close obstructions on sides and overhead.</p> <p>3. A drawing showing the full sweep arc for a 90-gallon plastic barrel shall accompany the bid. The drawing shall show the sweep of all corners of the plastic barrel. <b>Failure to provide an adequate drawing may make the bid non-responsive</b></p> <p>4. Performance:</p> <p>a. Cycle time</p> <p>    1) Retracted zero reach: 8 to 10 seconds, from pick-up through raise, dump, lower, and release.</p> <p>    2) Full 84" reach: 15 seconds, from pick-up through raise, dump, lower, and release.</p> <p>b. Container grippers shall pick up all City used 32, 60, standard City 95 -gallon and 110-gallon plastic containers with a 36" clearance circle around the container.</p> <p>c. The container dump movement shall keep the trash barrel essentially level with no bottom end of container kick out that could damage adjacent property (zero clearance). The truck will pick up in very narrow alleys with close obstructions on sides and overhead</p> <p>d. The pick up arm shall be "zero grab" capable, pick up barrels at the side of the truck without extending the pick up arm.</p> <p>e. Hydraulic inhibitor shall prevent dumping on top of the hopper cover.</p> <p>5. Lift/Lower system shall:</p> <p>a. Track system for vertical lift of containers or approved equal design.</p> <p>b. Hydraulic Lift System/Cart assembly is to be driven by a chain connected to hydraulic cylinders on the rear side of the elevator ramp. Lifting/Loading mechanism must not require adjustment.</p> <p>c. Lifting capacity, 750 lbs (constant through lifts) at full extension.</p> <p>d. Barrel lift system shall have a brake system capable of stopping a full load (750 lbs) in any part of the lift/dump cycle and holding the weight without any settling.</p>	<p>Orientation Side: <u>Curb side</u></p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p>Retracted Cycle Time: <u>8-10</u> seconds</p> <p>Full Reach Cycle Time: <u>8-15</u> seconds</p> <p>Container Sizes Grippers will safely and efficiently <u>32, 60, 95, 110</u> gallon</p> <p>Clear Radius Required: <u>36</u> inches</p> <p>Kick Out: <u>zero</u> inches</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p>Lifting Capacity: <u>750</u> lbs</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p>	<p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p>

	Description of Equipment	Offered Equipment	Cost
6.	Loader arm shall pick up, dump, and return to ground 32, 60, standard City 95 –gallon and 110-gallon plastic containers. Operation shall be preformed without the operator leaving the cab.		
7.	Loader Arm Construction:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
a.	The loader arm to vertical mast shall be fully welded on all sides with chamfered weld joints to assure full and deep penetration at all joints.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
b.	The connection between the slide-out roller tube and mast shall have all heavy-duty bearing attachment points heavily braced/reinforced to prevent cracking/failure due to flexure.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
c.	Loader arm to be constructed of a one piece 112"x8"x20" "C" channel.		
8.	Loader arm shall be actuated by 8 hydraulic cylinders	Extension Distance: <u>84</u> inches	
a.	Cart Dump cylinder (2ea) – 3"bore x1.25"rod x10"stroke	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
b.	Cart Lift/Lower cylinders (2ea) 2.5" bore x 1.25" rod x24" stroke	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
c.	Cart Leveling Cylinders (2ea) – 4.5" bore x4" stroke x 1.25" rod	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
d.	Carriage ext/retract cylinder (1ea) - 2" bore x 1.25 rod x52" stroke	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
e.	Barrel Grabber Cylinder (1ea) 2.5 bore x 1.25" rod x 5" stroke	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
f.	Loader arm shall incorporate an interlock to prevent dumping outside of the hopper or releasing the container.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
g.	The arm when fully retracted shall have a pneumatic lock that holds the arm docked preventing inadvertent drift out of the arm with PTO "ON" or "Off"	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
9.	Loader arm shall have a spill shield to direct container spillage into the hopper and not on to the ground during dumping.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
10.	Loader arm in-and-out travel shall be roller mounted.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
a.	Rollers shall travel on hardened steel wear strips and be mounted on eccentric mounts for wear adjustment. Wear adjustment shall be easy and quick to accomplish.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    (no adjustment)	\$ <u>N/A</u>
b.	The loader arm support rollers-shall be 1-piece full width to fully support the loader arm on its outer perpendicular walls and prevent tube crushing and adjustment problems.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
c.	Bearing adjustment shall be locked with castle nuts and cotter keys.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    self locking nylon nuts	\$ <u>N/A</u>
d.	Rollers shall be permanently lubricated.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    front C-clip & pins in rear	\$ <u>N/A</u>
11.	Lift arm manifold for hand/manual lubrication system shall be provided. The system shall be easy to access from the ground.		
K.	Gripper Mechanism:		

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	Description of Equipment	Offered Equipment	Cost
	<ol style="list-style-type: none"> <li>1. The container gripper shall have an adjustable hydraulic circuit limiting the radial force applied to the container.</li> <li>2. The grippers in down ready fully retracted ready position shall not increase the overall truck with past the 102" wide limit</li> <li>3. Gripper shall be a heavy-duty high-friction rubber contact point that will not damage containers.</li> <li>4. The grippers design shall be radiused (rounder) to match the City's barrel radius have zero finger overlap for increased loading clearance to reduce damage to City trash, recycle barrels and property</li> <li>5. Self-leveling to keep containers-level through compete travel of the outer boom.</li> <li>6. The standard grippers shall be provided and capable of handling the City's round 32, 60 and standard City 95-gallon and 110-gallon containers.</li> <li>7. Grippers shall grip the container at approximately 24" above the bottom of the barrel</li> <li>8. The grippers shall rotate on tapered roller bearings.</li> <li>9. Grippers shall not release the container during the dumping process and re-grip at the beginning of the dump process</li> <li>10. Gripper Mechanism hydraulic hoses that protrude outside of Gripper Mechanism must be shielded from damage.</li> </ol>	<p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p>Truck Width Grippers @ Ready: <u>102</u> inches</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p>Barrel Grip Height: <u>10-21</u> inches</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p>	
L.	<p>Service Hoist System:</p> <ol style="list-style-type: none"> <li>1. The service hoist lift system shall provide excellent access to truck components located under the trash body</li> <li>2. The service hoist system shall lift the front of the body up above the truck frame rail approximately 36" minimum for access</li> <li>3. The hoist system shall be powered by a 12vDC hydraulic pump with sufficient power to raise a fully loaded trash body.</li> <li>4. The system shall use hydraulic oil from the main hydraulic oil tank.</li> <li>5. A trash body anti-lowering safety pins or legs shall be provided:               <ol style="list-style-type: none"> <li>a. The pin/legs shall lock the trash body preventing lowering of the body.</li> <li>b. The pin/legs shall be sufficient to support 3X's the fully loaded weight of the body incase truck maintenance is required and the trash load cannot be ejected</li> <li>c. Pin storage in a sleeve, that the pin cannot fall/vibrate etc. out of shall be provided.</li> </ol> </li> </ol>	<p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p>Lift Height @ front: <u>36</u> inches</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p>Safety Factor: <u>3x s</u></p>	<p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p>



	Description of Equipment	Offered Equipment	Cost
	d. The pin shall be attached to the hoist/trash body/chassis with chain/cable to prevent loss. e. Safety legs shall rest in a saddle to prevent bouncing around.		
M.	Hydraulic system: Operate at Standard Low Idle. 1. Hydraulic pumps 2 required (body, arm) PTO "hot shift" driven thru a Chelsea 890 series direct drive off the transmission, 8 o'clock position. The gear pumps shall have an automatic pump oil bypass system in normal bypass mode when the hydraulic system is not energized. 2. Hydraulic system shall be Parker Hannifin Corporation designed and certified and use as many as possible Parker components to assure compatibility of the system and 3 year Parker warranty for using a complete Parker system. Hydraulic components shall be warranted in Denver CO by a local Denver Parker representative. 3. Hydraulic system shall operate all hydraulic functions except load ejection at engine low idle speed (800 rpm) and shall not require shifting transmission out of "Drive" gear or applying "Parking" brake. Increasing engine speed shall not increase system speed or pressures. For ejecting the trash load the engine rpm may increase to 1,200 rpm, (ejection function only not load packing) 4. The hydraulic gear pump circuits shall be split into 2 separate hydraulic circuits with independent valve bodies (no cross feed). a. Larger gear pump circuit shall control the pack and ejection circuit b. Small gear pump circuit shall control the arm circuits 5. Operating pressure, a. Body: 2,500 psig maximum. b. Grabber arm: 2,500 psig maximum 6. Hydraulic valves shall have LED lights on valve coils to aid in troubleshooting the system. 7. Hydraulic Cylinders shall: a. Be properly sized to efficiently and continuously perform their function without any cylinder degradation. b. The trash ejection cylinders, tailgate cylinders and any other cylinders that are in a location where they can be in contact with the trash or are subject to mechanical damage shall have nitrated piston rods with a positive-contact M2 tool steel scraper blade to shave off burrs, trash and other materials that	Number of Pumps: <u>2</u> Transmission Direct Drive: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Make: <u>Chelsea</u> Model: <u>890</u> Oil Bypass: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Parker Hannifin Corp. Certification and 3-Year Warranty shall be provided with bid. No certification or warranty info may make bid non-compliant Local Denver Parker Warranty <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Local Parker Warranty Vendor: <u>Hardline Equipment</u> Pump Operating Speed: <u>750</u> rpm Pump Output: <u>20-29</u> gpm @ <u>750</u> rpm  Does System Require Higher Ejection rpm <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Maximum Flow Rate: <u>29</u> gpm Maximum Flow Rate: <u>20</u> gpm <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Hydraulic Operating Pressure: <u>1,800</u> psig  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Make: <u>Amrep</u> Model: <u>All manufactured</u> List Cylinders and Provide Cylinder Cost: 1) <u>pack-single stage</u> \$ <u>1,280.64</u> 2) <u>Eject-3 stage</u> \$ <u>4,565.28</u> 3) <u>extension</u> \$ <u>518.65</u> 4) <u>gripper</u> \$ <u>474.47</u> 5) <u>tail gate</u> \$ <u>851.57</u>  Location: <u>left side frame mount</u>	\$ <u>N/A</u> \$ <u>N/A</u> \$ <u>N/A</u> \$ <u>N/A</u> \$ <u>N/A</u> \$ <u>N/A</u> \$ <u>N/A</u> \$ <u>N/A</u> \$ <u>N/A</u> \$ <u>N/A</u> \$ <u>N/A</u> \$ <u>8,986.58</u> Total Cylinder Cost

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	Description of Equipment	Offered Equipment	Cost
	could damage the cylinder seals, packing or other cylinder components.		
8.	Hydraulic reservoir located on left side front body in front of tires	Hydraulic Reservoir Size: <u>60</u> gallons	\$ <u>N/A</u>
9.	Hydraulic Reservoir:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
a.	Capacity 55-gallons minimum.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
b.	Oil level and temperature gauge,	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
c.	Suction and pressure shut-off valves very easy to access and operate.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
d.	Shut Off Valves	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
e.	Magnetic drain plug.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
f.	Bung for Future Hydraulic Oil Pre-heater System		
1)	Possible future installation bung for an Arctic Fox Hydra Liner H-4000 hydraulic fluid warmer.		
2)	Tank bung shall be schedule 80 2" NPT female thread coupling.		
3)	Bung shall be welded to 0.250" thick 8" dia steel tank reinforcing ring.		
4)	The bottom edge of the-tread section of the bung and hydraulic oil pre-heater shall be 1 1/2" off the bottom of the tank.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5)	The baffles shall be suitable to accept a 24" long heater element and provide a 1" clearance all the way around the element.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10.	Hydraulic oil shall be ISO Grade 32 multi-viscosity with a -40°F pour point.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
11.	Hydraulic system shall maintain oil temperature at no more than 90°F above ambient temperature.	Filter Size: <u>5</u> microns Make: <u>parker</u> Model: <u>WPF4</u>	\$ <u>N/A</u>
12.	Hydraulic Filtration,		\$ <u>N/A</u>
a.	Pressure line Parker model: WPF 7,000 psig rated with 7-micron absolute tandem type (2 required, 1 per pump)	Filter Size: <u>5</u> microns Make: <u>Parker</u> Model: <u>KLS/KLT</u>	\$ <u>N/A</u>
b.	Return line replaceable Parker 7-micron absolute with bypass mode indicator light, easy to access for replacement.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>
c.	Suction strainer 100-micron.		\$ <u>N/A</u>
13.	The hydraulic pump suction line shall be steel tubing with hydraulic hose sections at both the pump and tank end for vibration isolation. The suction line shall be routed for maximum ground clearance and damage protection. Hose swivel ends shall be used on all connections.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>N/A</u>

	Description of Equipment	Offered Equipment	Cost
	<p>14. Hydraulic system test ports shall be provided for each circuit. Test port connections shall be compatible with the Parker Hannifin PD type connector.</p> <p>15. All hydraulic hoses shall be Parker series ST 451 extra-high-abrasion resistant hoses to reduce hose failure from hose cover damage. Hydraulic hoses shall have swivel ends on each end.</p> <p>16. All hydraulic hoses and tubing shall be neatly routed, shielded and secured/supported to prevent chaffing under truck.</p> <p>17. A hydraulic oil recirculation filter system connection system shall be provided with the following:</p> <p>a. The suction and return tubes shall be 1" ID and be installed on the tank top side on each tank end (cross flow) approximately 4" inside the end caps and extending to within 1/4" off the tank bottom at the lowest point.</p> <p>b. The hydraulic connections shall be 1" Parker FF male (flat face) fittings and orientated so they face to the inside (each other).</p> <p>c. The suction and return lines shall be 1" ID with a 60° cut on the bottom to assure adequate hydraulic oil flow.</p> <p>d. The suction and return lines shall be interchangeable in use so it does not matter which hydraulic tank fitting the filter system suction and return lines are connected to.</p>	<p>Make: <u>Parker</u> Model: <u>451 "TC"</u></p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p>Tubing Size: <u>1" ID</u> inches Distance of Tank Bottom: <u>1/4</u> inches</p> <p>Make: <u>Parker</u> Type: <u>flat face</u></p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p>	<p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p>
N.	<p>Electrical:</p> <p>1. All remote electrical inter face connections shall be terminated on stud-type terminal strips or with plug type connectors in a waterproof junction box.</p> <p>2. Connectors/wires shall be permanently and individually labeled.</p> <p>3. Permanently laminated electrical schematics shall be affixed inside the cover of the electrical junction box.</p> <p>4. Dielectric grease shall be applied to all terminals and connectors to prevent corrosion if connector is not waterproof.</p>	<p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p>	<p>\$ <u>N/a</u></p> <p>\$ <u>N/A</u> \$ <u>N/A</u></p> <p>\$ <u>N/A</u></p>
O.	<p>Control System:</p> <p>1. Cab mounted controls shall all be in ergonomic and natural easy to reach locations. The City has operators of varying statures and adjustable controls will minimize on-the-job related physical problems and improve efficiency. Control locations shall be mutually determined after Contract award.</p> <p>2. Two (2) separate loader arm control systems shall be provided with following:</p> <p>a. Joystick controls</p>	<p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p>Photos or drawings shall be provided with the bid for review. Failure to submit information may make the bid non-compliant</p>	<p>\$ <u>N/A</u></p>

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Description of Equipment	Offered Equipment	Cost
<p>b. Fingertip controls</p> <p>c. Both systems shall work together or separately without physically switching an operation program or switch</p> <p>3. Linear joy stick with short handle and short throw movement arm control to include:</p> <p>a. Deadman button/trigger (stop arm movement when released)</p> <p>b. Dump-up/down.</p> <p>c. Grip-squeeze/release</p> <p>d. Arm-extend/retract</p> <p>4. Finger control switches to include: Momentary 3-position rocker switches (3 required) located on right door with arm rest pad.</p> <p>a. Door switches shall not operate above engine idle speed.</p> <p>b. Dump-up/neutral/down (outer closest to window).</p> <p>c. Grip-squeeze/neutral/release (middle)</p> <p>d. Arm-extend/neutral/retract (inner switch)</p> <p>e. Each switch shall have a permanent engraved symbol on front side of the switch bracket showing the switch function</p> <p>f. The armrest pad shall be approximately 4" wide with a high-density 1/2" thick closed cell foam pad for operator comfort and support</p> <p>g. The armrest and switch assembly shall be easily operator adjustable fore and aft and up/down for operator comfort</p> <p>5. Console control shall be mounted into an easy to see and access location with out turning the head more than 30° to side and without physical stretching to reach. Console shall not obstruct the vision to left side of vehicles for shorter operators seated in the right side operator's position. Console location shall be mutually agreed upon. Console controls and switches shall be in an ergonomic, easy to view and operate position Console controls to include:</p> <p>a. E-stop.</p> <p>b. Packer cycle.</p> <p>c. Automatic packer cycle on/off switch and 1 or 3 cycles.</p> <p>d. Container dump cycle counter.</p> <p>e. Tailgate latch.</p> <p>f. The main panel shall have self-diagnostic troubleshooting capabilities.</p> <p>g. Transmission shifter control.</p> <p>h. Tailgate open/close.</p>	<p>Yes No</p> <p>Make: <u>H&amp;M</u> Model: <u>AE-73IJ</u></p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Location: <u>right hand door door mounted</u></p> <hr/> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Armrest Size: <u>4"</u> x <u>6"</u></p> <p>Adjustment Range UP/Down: <u>4</u> inches</p> <p>Adjustment Range Fore/Aft: <u>5.5</u> inches</p> <p>Head Turn Angle: <u>30</u> °</p> <p>Control Console Size: <u>7.5</u> " x <u>8</u> " x <u>3.5</u> "</p> <hr/> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p>	<p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p>

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	Description of Equipment	Offered Equipment	Cost
	i. Master power.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	j. Work lights.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	k. Strobe lights.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	6. The barrel grabber arm controls shall be heavy-duty short height, short throw (approximately 15°) "joystick" type with an armrest. The grabber arm controls/armrest shall be multi-position adjustable (up/down, forward/back and in/out) within easy reach of the operator. The City has operators of varying statures and adjustable control will minimize on-the-job related physical problems. Control locations shall be mutually determined after Contract award.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Joystick Throw Angle: <u>15</u> ° Make: <u>H&amp;M</u> Model: <u>AE-73IJ</u>	\$ <u>N/A</u>
	7. Control system shall be manufactures standard electric over hydraulic.	Control System Type: <u>electric over air over hydraulic</u>	\$ <u>N/A</u>
	8. Cab Mounted Controls:		\$ <u>N/A</u>
	a. Cab mounted controls shall all be in ergonomic and natural, easy to reach locations.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	b. Controls shall be designed to comfortably and efficiently accommodate an operator making 1,200 dumping operations per day, 6 days per week.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	c. Controls shall have a life cycle of 5,000,000 cycles minimum.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	d. Controls shall utilize light touch and short throw devices.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	e. Controls shall be multi-positional to accommodate a variety of operators. The City has operators of varying statures and adjustable controls will minimize on-the-job related physical problems. Control placement shall accommodate operators from 5'-2" to 6'-4" tall and from slender to large physics.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	f. The controls shall be easy and quick for the operator to securely position without the use of tools for comfort and efficiency.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	g. Studies suggest that long periods of repetitive motion coupled with an improper work environment and incorrect operator position may be linked to certain types of physical discomfort or injury. These include Carpal Tunnel Syndrome (CTS), Cumulative Stress Disorder (CSD), Tendonitis and Tenosynovitis.		
	h. To help avoid the conditions listed in Section 4.10.O.8.g the City is providing information sites where ergonomic information is available to help in the proper layout of operator controls.		
	1) Ergonomist Certifying Organizations include:		
	a) Oxford Research Institute: 301-865-4506		

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	Description of Equipment	Offered Equipment	Cost
	<p>b) Board of Certified Professional Ergonomists: 360-671- 7601</p> <p>9. Main control panel shall be solid state design with LED function indicators. Rocker switches shall be back lighted type for easy identification at night.</p> <p>10. Controls shall be permanently labeled and lighted for easy night viewing.</p> <p>11. Vendor shall provide:</p> <p>a. The City preliminary drawings of the control layout and how the controls are positioned inside the truck cab within 45 days of the contract award.</p> <p>b. Within 120 days of the Contract award the vendor shall provide a preliminary mock up set of controls for review by the City.</p> <p>c. Vendor shall deliver the first article for review, testing and approval before shipping remaining units from the factory.</p>	<p><input checked="" type="checkbox"/> Yes    No</p> <p><input checked="" type="checkbox"/> Yes    No</p> <p><input checked="" type="checkbox"/> Yes    No</p>	<p>\$ <u>  N/A  </u></p> <p>\$ <u>  N/A  </u></p> <p>\$ <u>  N/A  </u></p> <p>\$ <u>  N/A  </u></p> <p>\$ <u>  N/A  </u></p>
P.	<p>Fire Extinguisher:</p> <p>1. Extinguisher ABC, 5-lb. dry type rechargeable</p> <p>2. Heavy Duty Mount installed on the refuse body (front), driver's side</p> <p>3. Location labeled with 1" letters</p>	<p>Type: <u>ABC dry type</u></p> <p>Location: <u>driver side rear fender w/ heavy duty bracket</u></p>	<p>\$ <u>  N/A  </u></p>
Q.	<p>Branch Protection:</p> <p>1. The body shall have tree branch deflector plates to provide protection for:</p> <p>a. Grabber arm hoses.</p> <p>b. Rear tailgate hydraulic hoses/lines, wiring and for the grease lines.</p> <p>c. Grabber Arm Side hydraulic hoses and steel plumbing.</p> <p>d. Lights and switches.</p> <p>e. Side sign boards both front and back sides.</p> <p>f. All other components that is vulnerable to damage from tree branches.</p>	<p><input checked="" type="checkbox"/> Yes    No</p> <p><input checked="" type="checkbox"/> Yes    No</p> <p><input checked="" type="checkbox"/> Yes    No</p> <p><input checked="" type="checkbox"/> Yes    No</p> <p><input checked="" type="checkbox"/> Yes    No</p> <p><input checked="" type="checkbox"/> Yes    No</p>	<p>\$ <u>  N/A  </u></p> <p>\$ <u>  N/A  </u></p> <p>\$ <u>  N/A  </u></p> <p>\$ <u>  N/A  </u></p> <p>\$ <u>  N/A  </u></p> <p>\$ <u>  N/A  </u></p>
R.	<p>Vehicle Rear Lights: (No Approved Equals)</p> <p>1. All lights shall be Truck-Lite "Lifetime Warranty" 12vDC, LED type, flush mount, sealed lexan body, grommet insulated with Fit' N Forget multi-pin plugs where possible.</p> <p>2. Integral Stop/Turn/Tail/ lights mounted in the rear corner post of the dump body model Super 44 P/N 44302R or model 60 P/N 60250R.</p> <p>3. Third Brake Light use the same used light used for Stop/Turn/Tail light and disable the Turn and Tail light sections.</p>	<p>Make: <u>truck lite</u>    Model: <u>LED</u></p> <p>Make: <u>truck lite</u>    Model: <u>super 44 or 60</u></p> <p>Make: <u>truck lite</u>    Model: <u>super 44 or 60</u></p> <p>Make: <u>truck lite</u>    Model: <u>44</u></p>	<p>\$ <u>  N/A  </u></p> <p>\$ <u>  N/A  </u></p> <p>\$ <u>  N/A  </u></p> <p>\$ <u>  N/A  </u></p>

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	Description of Equipment	Offered Equipment	Cost
	<ol style="list-style-type: none"> <li>4. Back up lights Truck-Lite LED, flush mount, sealed lexan body, grommet insulated, multi-pin units model 44 P/N 44206C.</li> <li>5. Marker lights Truck-Lite LED 3 per side model 10 P/N 10250R or 10250Y or model 30 P/N 30250R or 30250Y.</li> <li>6. Rear ID bar Truck-Lite LED model 35 P/N 35741R or 35740R.</li> <li>7. License plate light, Truck-Lite model 15 P/N 15040</li> <li>8. Work lights Two (2) Hopper and gripper arm mount LED work lights with lighted on dash mounted control switch.</li> <li>9. Wiring shall be sealed Fit' N Forget modular plug-in type where possible.</li> <li>10. Dielectric grease shall be applied to all plug connections and terminals to prevent corrosion.</li> </ol>	<p>Make: <u>truck lite</u> Model: <u>10 or 30</u></p> <p>Make: <u>truck lite</u> Model: <u>35</u></p> <p>Make: <u>truck lite</u> Model: <u>15</u></p> <p>Make: <u>truck lite</u> Model: <u>81280</u></p> <p>Make: <u>truck lite</u> Model: <u>Fit-n-forget</u></p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p>	<p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ _____</p> <p>\$ <u>N/A</u></p>
<p>S.</p>	<p>Paint Main Body:</p> <ol style="list-style-type: none"> <li>1. Polyurethane paint equal to DuPont Imron 5000, Color "Bright White", 2 coats applied to all non-stainless steel components following manufactures procedures to include:</li> <li>2. Preparation to include:</li> <li>3. Removing all mill scale and slag.</li> <li>4. Variprime 615S self-etching primer or approved equal.</li> <li>5. Treating bare metal with manufacturer's conditioners and conversion coatings or approved equal.</li> <li>6. Paint to be applied with all body members painted.</li> </ol>	<p>Make: <u>Sikens</u> Type: <u>Polyurethane</u></p> <p>Color: <u>bright white to match cab</u></p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p>	<p>\$ <u>N/A</u></p>
<p>T.</p>	<p>Special Tailgate Paint:</p> <ol style="list-style-type: none"> <li>1. Polyurethane paint equal to DuPont Imron 5000, Color:             <ol style="list-style-type: none"> <li>a. Top ½ of tailgate "Bright White",</li> <li>b. Lower ½ of tailgate "Safety Yellow" with:                 <ol style="list-style-type: none"> <li>1) Alternating "Safety Yellow" paint 8" wide and 2" wide "White" tape.</li> <li>2) Tape 2" wide 3M Scotchlite "White" DOT reflective conspicuity tape applied from center out in a "Chevron Pattern" with a top horizontal tape separating the tailgate's White and Safety Yellow paint.</li> </ol> </li> </ol> </li> <li>2. Preparation to include:</li> <li>3. Removing all mill scale and slag.</li> <li>4. Variprime 615S self-etching primer or approved equal.</li> <li>5. Treating bare metal with manufacturer's conditioners and conversion coatings or approved equal.</li> <li>6. Paint to be applied with all body members painted.</li> </ol>	<p>Color: <u>Bright white to match cab</u></p> <p>Color: <u>Safety yellow</u></p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes    <input type="checkbox"/> No</p>	<p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p>

2/8/2018

	2. Tape shall be on both lower sides and rear of the body. 3. Tape shall be applied in symmetrical pattern from middle of panel outward.	<u>AMREP Fleet.</u> _____ _____ _____	
C.	Mud flaps: 1. Mud flaps shall be heavy-duty anti-sail type 2. Installed front and rear on rear wheels.	Provide specs: <u>Antisail to match front and rear current</u> <u>AMREP fleet.</u>	\$ <u>INC</u> \$ <u>INC</u>
D.	Toolbox: 1. The toolbox shall be easily accessible for storage of the flairs, triangles, tire chains and other small tools. 2. Mounted underneath and attached to the right side of the body. The exact location shall be mutually agreed upon at installation. 3. Size 36" long x 18" high x 18" deep heavy-duty steel with powder coat "black" finish. 4. The door shall be side-mounted bottom hinged. 5. The box shall have a flush mount latch/lock assemble.	Make: <u>AMREP</u> Model: _____ Location: <u>Left side frame rail</u> Size: <u>15" deep x 15" tall x 24" wide</u> Yes No Yes No	\$ <u>INC</u>
E.	Tool Holders: 1. Two shovel/broom holders mounted on curbside of body. 2. Brooms and shovels shall be easy to access, remove and replace in the brackets.	Yes No Yes No	\$ <u>INC</u>
F.	Spill Kit: 1. A Brady (Sorbert Products Co.) 20-gallon lab pack oil only spill kit PN SKO-20 shall be provided. 2. The 20-gallon "Safety Yellow" polyethylene spill container shall be UN approved for both water and chemical resistance with a screw type top cover. 3. The oil spill kit shall contain the following minimum: a. 15" x 19" absorbent pads, 12 required b. 3" x 12' SOCs, 3 required c. 18" x 18" pillows, 2 required d. Nitrile gloves, 1 pair required e. Disposal bags, 3 required f. Goggles, 1 pair required g. Emergency response handbook, 1 book required 4. The spill kit shall be installed on the truck frame's right/curb side in a mutually agreed upon location at installation. 5. The spill kit mount shall secure the spill kit to the mounting frame so that the kit cannot dislodge during operation and shall have a provision for securing the kit with a standard padlock.	Make: <u>Brady</u> Model: <u>SKO-20</u> Yes No Yes No Yes No Yes No Yes No Yes No Yes No Yes No Yes No	\$ <u>INC</u>



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	b. 3" x 12' SOC's, 3 required c. 18" x 18" pillows, 2 required d. Nitrile gloves, 1 pair required e. Disposal bags, 3 required f. Goggles, 1 pair required g. Emergency response handbook, 1 book required	Yes Yes Yes Yes Yes	No No No No No	
	4. The spill kit shall be installed on the truck frame's right/curb side in a mutually agreed upon location at installation. 5. The spill kit mount shall secure the spill kit to the mounting frame so that the kit cannot dislodge during operation and shall have a provision for securing the kit with a standard padlock. 6. The mount system shall not have any sharp corners/areas that could rub thru the spill container during operation.	Yes Yes Yes	No No No	
G.	Tire Chain Holders: 1. Special brackets for storing drive wheel tire chains during winter season shall be provided 2. The chain holders shall be close to the drive wheels and easy to lift tire chains onto/off the brackets 3. Exact location shall be mutually agreed upon at installation	Yes	No	\$ <u>Inc</u>
H.				
<b>Sundries Equipment SUB TOTAL COST</b>				\$ <u>N/A</u>

**4.8 Optional Equipment**

Do not include Optional Equipment in the total price of the vehicle; however an equipment price must be provided. The City will determine if the equipment is to be purchased.

When a brand/model is referenced in the specifications unless it is stated as "No Approved Equal" it is only a statement of expected quality, information on alternative products shall be provided with the bid so a full technical comparison can be made of the product submitted as an "approved equal".

	Description of Equipment	Offered Equipment	Cost
A.	Retarder System:		

<p>1. The retarder system shall provide effective vehicle slowing/retardation to a speed of 3 mph or below. The retarder system shall provide at minimum a 50% increase in vehicle foundation brake life. Provide the information for the type of retardation system being offered.</p> <p>2. Transmission output shaft retarder.</p> <p>3. Electric driveline retarder</p> <p>4. Engine and exhaust/turbo brake combination that does not raise exhaust noise (no Jacobs brakes).</p> <p>5. Retardation shall be activated into 1<sup>st</sup> stage when the driver removes their foot from the throttle pedal. Stages 2, 3 and 4 shall be progressively activated by the brake pedal before the foundations brakes are engaged.</p> <p>6. Retarded control switches dash mounted with easy access for the driver.</p> <p>a On/Off switch.</p> <p>b High/Low retardation range.</p>	<p>Allison with no retarder</p> <p>Make: <u>engine brake</u> Model: <u>4500 RDS-R</u></p> <p>Provide Brake Horsepower: _____</p> <p>Provide lowest speed retarder is effective: _____</p> <p>Make: <u>Telma</u> Model: <u>AD72-45</u></p> <p>Provide Brake Horsepower: <u>110% of engine HP</u></p> <p>Provide lowest speed retarder is effective: <u>Intire</u> vehicle operating speed range</p> <p>Make: _____ Model: _____</p> <p>Provide Brake Horsepower: _____</p> <p>Provide lowest speed retarder is effective: _____</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p>	<p>\$ <u>9,961.00</u></p> <p>\$ <u>11,500</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p>
<p>B. CNG Fuel System: Engine Option:</p> <p>1. Cummins ISL-G, 8.9 liter, VGT turbocharged natural gas engine, rated at 320 hp @ 2,000 rpm, torque 1,000 lb/ft @ 1,300 rpm, 2,200 rpm governed</p> <p>2. The CNG engine shall meet all required EPA on-highway emissions standards</p> <p>3. Fuel Tank:</p> <p>a Fuel tank shall meet or exceed</p> <p>1) NFPA 52 standards</p> <p>2) US-DOT/FMVSS304</p> <p>3) ISO 11439</p> <p>b Tank Manufacturer</p> <p>c Tank Information</p> <p>1) Tank Construction Type: composite</p>	<p>Make: _____ Model: _____</p> <p>HP: _____ @ _____ rpm</p> <p>Torque: _____ @ _____ rpm</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Make: _____ Model: _____</p> <p>Material: _____</p>	<p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p>

<p>2) Service Life Years: 20 years                  3) Recertification Period: 8 years                  4) Type of Recertification-Inspection Required                  5) Tank Service Pressure Full: 3,600 psig @ 70°F (21°C)                  6) Each CNG fuel tank shall have a ¼-turn ball stainless steel shutoff valve mounted at the tank inlet.</p> <p>d Tank Installation Locations:</p> <p>1) Top of Body</p> <p>a) Total vehicle height shall not exceed 12'-6"                  b) Tank Size: provide diameter x length                  c) Tank Weight each: Empty                  d) Quantity of Tanks for 75 gallon DGE                  e) Weight All Tanks: Empty                  f) Weight All Tanks: Full CNG                  g) Tank Enclosure Width, Length, Height                  h) Tank enclosure shall be 12 gauge steel minimum                  i) Decrease in body volume</p> <p>2) Behind Cab Location:</p> <p>a) Increase in Truck wheel base required                  b) Tank Size: provide diameter x length                  c) Tank Weight each: Empty                  d) Quantity of Tanks for 75 gallon DGE                  e) Weight All Tanks: Empty                  f) Weight All Tanks: Full CNG                  g) Tank Enclosure Width, Length, Height; 2" clearance all sides                  h) Tank enclosure shall be 16 gauge steel minimum</p> <p>3) Alternate Location:</p> <p>a) Location of Tankage</p> <p>b) Tank Size: provide diameter x length                  c) Tank Weight each: Empty                  d) Quantity of Tanks for 75 gallon DGE                  e) Weight All Tanks: Empty                  i) Weight All Tanks: Full CNG                  f) Tank Enclosure Width, Length, Height                  g) Tank Enclosure Material: Steel/Gauge</p> <p>e Tank Mounting:</p>	<p>Service Life: _____ yrs                  Recertification: _____ yrs                  Inspection Type: _____                  Service Pressure: _____ psig                  Yes No</p> <p>Height of Body/Tank System: _____                  Size: _____ dia x _____ long DEG Net _____ gal                  Tank Weight: _____ lbs                  # of Tanks: _____ DEG Net _____ gal                  Weight all tanks and brackets etc: _____ lbs                  Weight All Tanks Full CNG: _____ lbs                  Enclosure Size: _____ x _____ x _____                  Material: _____ Gauge: _____                  Volume Decrease: _____ yds<sup>3</sup></p> <p>Wheel Base Increase : _____ ins                  Size: _____ dia x _____ long DEG Net _____ gal                  Size: _____ dia x _____ long                  # of Tanks: _____ DEG Net _____ gal                  Weight all tanks and brackets etc: _____ lbs                  Weight All Tanks Full CNG: _____ lbs                  Enclosure Size: _____ x _____ x _____                  Material: _____ Gauge: _____</p> <p>Location: _____                  Size: _____ dia x _____ long DEG Net _____ gal                  Tank Weight: _____ lbs                  # of Tanks: _____ DEG Net _____ gal                  Weight all tanks and brackets etc: _____ lbs                  Weight All Tanks Full CNG: _____ lbs                  Enclosure Size: _____ x _____ x _____                  Material: _____ Gauge: _____</p> <p>Yes No</p>	<p>\$ N/A                  \$ n/a                  \$ n/a                  \$ n/a                  \$ n/a                  \$ n/a                  \$ n/a                  \$ n/a</p>
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<p>1) End/dome/ boss, 2-piece saddle mounts on each tank end. The tanks shall be installed inside a steel tank mounting frame. The frame shall be 3" x 1 1/2" x 3/16" tubing. The frame shall be powder coat finished for durability.</p> <p>2) CNG tank manufacturer 2-point band type CNG bracket with rubber cushion between tank and bracket to prevent slippage and eliminate chaffing, accommodate tank growth by changes in internal pressure.</p> <p>f The primary tank relief valve (PRD) shall be vented up and away from the vehicle and any ignition sources. The vent shall be protected from rain or vehicle wash water from entering the vent line. The vent line shall be 1/2" diameter minimum.</p> <p>4. CNG Pressure Reducing Regulator System:</p> <p>a The pressure reducing regulator system shall be mounted inside a protective steel enclosure no more than 6 ft from the CNG fuel tank.</p> <p>b From the CNG fuel tank to the regulator the tubing shall be 1/2" od x 0.049" wall 300 series stainless steel minimum.</p> <p>c The pressure reducing regulator system shall have 2 pressure gauges installed in the system.</p> <p>1) High Pressure gauge 0-to-5,000 psi installed on tank side to show tank system pressure.</p> <p>2) Low pressure gauge 0-to-250 psi to show engine downstream fuel delivery pressure to the engine.</p> <p>3) Gauges shall be stainless steel glycerin filled.</p> <p>d The engine coolant flow to the pressure reducing regulator shall be minimum of 1 gallon/minute of 180°F coolant per 50 hp of engine output. For coolant flow the heat exchanger for the engine shall be rated at 450 hp to cover engine rating increases after the truck is delivered.</p> <p>e Engine coolant flow and CNG fuel supply shall enter the regulator on the same side of the regulator.</p> <p>f Coolant ports shall be oriented vertical (up) in horizontal regulators to prevent air from becoming trapped in the regulator.</p> <p>g The pressure reducing regulator shall not under any circumstance be installed in series with the truck cab heater system.</p> <p>5. Automatic Fuel Shut Off:</p>	<p>Frame Size: _____ x _____ x _____</p> <p>Yes No</p> <p>PRD Pressure Release: _____ psig</p> <p>Yes No</p> <p>Tubing Size: _____</p> <p>Yes No</p> <p>Tubing Size: _____ x _____ Type: _____</p> <p>Pressure Range: _____ to _____ psi</p> <p>Pressure Range: _____ to _____ psi</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p>	<p>\$ <u> n/a </u></p> <p>\$ <u> n/a </u></p> <p>\$ <u> n/a </u></p> <p>\$ <u> n/a </u></p> <p>\$ <u> n/a </u></p> <p>\$ <u> n/a </u></p> <p>\$ <u> n/a </u></p> <p>\$ <u> n/a </u></p> <p>\$ <u> n/a </u></p> <p>\$ <u> n/a </u></p> <p>\$ <u> n/a </u></p> <p>\$ <u> n/a </u></p>
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	<p>a The automatic fuel shut off valve shall be plumbed directly to the exit/warm side of the engine coolant heated pressure reducing regulator.</p> <p>b The automatic fuel shut off valve shall have its weight supported by a mounting bracket.</p> <p>c The automatic fuel valve shall have a Cv of 2.0 minimum to assure adequate fuel flow.</p> <p>d The automatic fuel shut off shall be a NC (normally closed) valve when the ignition is in "Off" position.</p> <p>6. Fuel Lines:</p> <p>a All high pressure shall be ½" od x 0.049" wall stainless steel 316L tubing appropriate for the application.</p> <p>b Stainless steel lines shall have thermal expansion/contraction loops for smaller diameter lines and S-bend expansion joints for larger diameter lines.</p> <p>c All CNG lines shall be supported with stainless steel rubber bushed aircraft P-type clamps. The maximum distance between clamps shall no more than 24".</p> <p>d Fitting for the CNG fuel system shall be:</p> <ol style="list-style-type: none"> <li>1) Stainless steel tube fittings shall be Swagelok or Parker A-lok with thread sealant.</li> <li>2) Special NPTF pipe fittings shall be stainless steel with thread sealant.</li> </ol> <p>e All NPT fitting shall be installed on male pipe threads using proper thread sealants.</p> <ol style="list-style-type: none"> <li>1) Thread sealant and anti-seize shall be a nickel impregnated or nickel coated Teflon tape.</li> <li>2) Teflon tape shall start at 2nd thread.</li> <li>3) On ½" and under use 2 wraps of tape</li> <li>4) On 5/8" to 1" use 3 wraps of tape.</li> <li>5) Assure last section of tape is pulled down tight against the threads.</li> <li>6) Do not use sealant on compression threads</li> </ol> <p>f Post heat exchanger hoses and lines may be Parker 929 heavy-wall PTFE hose exceeding SAE100R14A or stainless steel tubing.</p> <p>7. Fuel Fill System:</p> <p>a The fuel receptacle and fuel fill system shall be rated for both "fast fill" and "slow fill" with a minimum ½" od x 0.049" wall 300 series stainless steel.</p>	<p>Yes No</p> <p>Valve Cv: _____</p> <p>Yes No</p> <p>Make: _____ Type: _____</p> <p>Yes No</p> <p>Yes No</p> <p>Make: _____ Type: _____</p> <p>Yes No</p> <p>Yes No</p> <p>Sealant Type: _____</p> <p>Make: _____ Type: _____</p> <p>Yes No</p> <p>Tubing Size: _____</p>	<p>\$ n/a</p> <p>\$ n/a</p> <p>\$ n/a</p> <p>\$ n/a</p> <p>\$ n/a</p> <p>\$ n/a</p> <p>\$ n/a</p> <p>\$ n/a</p>
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<p>b The fuel fill nozzle:</p> <ol style="list-style-type: none"> <li>1) Shall be a male NGV1 OPW with rubber protective cover boot</li> <li>2) Fuel Fill locations (2/vehicle). One at front bumper driver's side and one at tank fill enclosure driver's side of the vehicle. Both Fuel fill locations require ample clearance for both "Fast Fill" and "Slow Fill " receptacles and hook-up.</li> <li>3) The fuel filler line shall be plumbed to the CNG tank bank.</li> </ol> <p>c The tank fill enclosure shall have:</p> <ol style="list-style-type: none"> <li>1) A high pressure line/tank pressure gauge 0-to-5,000 psi</li> <li>2) A low pressure fuel to engine pressure gauge 0-to-250 psi</li> <li>3) An OPW male NGV1 fuel fill receptacle with easy access and excellent clearance for both "fast fill" and "slow fill" receptacles.</li> <li>4) An emergency ¼-turn shut off valve for shutting down the system in case of a fueling emergency.</li> </ol> <p>d The fuel fill access shall be easy to access and easy for the operator to see for fueling and to prevent drive-off with fuel hose attached.</p> <p>e The fill receptacle shall have an easy to remove/reinstall fuel fill cover to protect the fill port from contamination during truck operation.</p> <p>8. CNG Filtration:</p> <ol style="list-style-type: none"> <li>a High pressure, on the fuel tank(s) fill line to clean the CNG before it enters the fuel tank storage system.</li> <li>b Low Pressure, on the downstream "low pressure" post regulator engine delivery side. The "low pressure" filter shall be a Fleetguard spin-on NG5900 with liquid drain or approved equal.</li> </ol> <p>9. Fuel Gauge:</p> <ol style="list-style-type: none"> <li>a An electric fuel gauge shall be provided with easy to see vehicle dash gauge to show fuel tank volume.</li> <li>b The fuel sender shall be a sealed unit mounted to the high-pressure tank system</li> <li>c A sealed 3-pin Weatherpak connector with a 1-amp fast blow automotive fuse shall connect the sender to the gauge.</li> <li>d Pins are:             <ol style="list-style-type: none"> <li>1) Red = power</li> <li>2) Green = signal</li> <li>3) Black = ground</li> </ol> </li> </ol>	<p>Make: _____ Model: _____</p> <p>Fill Location: _____ Yes No</p> <p>Pressure Range: _____ to _____ psi Pressure Range: _____ to _____ psi Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Make: _____ Model: _____</p> <p>Make: _____ Model: _____</p> <p>Fuel Gauge Type: _____ Make: _____ Model: _____</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p>	<p>\$ <u>n/a</u></p> <p>\$ <u>n/a</u></p> <p>\$ <u>n/a</u></p> <p>\$ <u>n/a</u></p> <p>\$ <u>n/a</u></p> <p>\$ <u>n/a</u></p> <p>\$ <u>n/a</u></p> <p>\$ <u>n/a</u></p> <p>\$ <u>n/a</u></p>
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C.	Remote High-Quality Color Safety 5 Camera System:		
	1. Camera, color, Brigade – BN360-100C, 360 degree camera kit system with camera view selection on the TV monitor face (No Approved Equal:	Make: <u>Brigade</u> Model: <u>SE-770-1004804C</u>	\$ <u>1,995.84</u>
	a. Rear of vehicle mounted camera wired into vehicle reverse circuit to automatically turn ON when vehicle is shifted into reverse or ON when vehicle ignition is on or in a forward gear:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>Camera Price Required</b>	\$ <u>n/c</u>
	b. Front, rear, left and right side ultra-wide viewing camera system to serve as an auxiliary rear view mirror function (blind spot view) to augment the rear-view mirrors. The cameras shall be normally ON viewing all sides of the vehicle including blind spot. It shall automatically switch to rear of vehicle view when the transmission reverse gear function is activated. An override to keep the left side camera on shall be provided for special situation use. Camera shall be as small as possible and protected from tree branch damage.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>Camera Price Required</b>	\$ <u>n/c</u>
	c. Hopper camera to provide viewing of trash in the hopper and packing operation. Hopper camera shall be fully protected from physical damage and dirt build up on the lens. The camera shall be positioned for easy lens cleaning. The hopper camera shall automatically switch ON when the barrel pick up arm is activated for pick up operations	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>Camera Price Required</b>	\$ <u>n/c</u>
	2. Camera (rear and hopper) color Brigade 360 System Kit with automatic shutter (2) required:	Make: <u>Brigade</u> Model: <u>VBV-701C-2575</u>	<u>107.45</u>
	a. Camera shall be in water proof cast aluminum housing. Housing shall be able to be pressure washed when washing vehicle.	Quantity: <u>2</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>n/c</u>
	b. Camera shall have built in safety audio system that will pick up and broad cast normal conversation to monitor.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	c. Camera shall be automatically heated for cold weather operation.	Resolution: <u>800x480</u> lines	\$ <u>193.51</u>
	d. Resolution 380 TV lines horizontal.		
e. Signal to noise ratio 44dB minimum.			
3. Camera (Left Side) Brigade 360 System Kit	Make: <u>Brigade</u> Model: <u>VBV-321C-4615</u>		
a. Left camera shall be mounted on the left front corner of the truck	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
4. Monitor LCD, 7" Flat Screen Brigade VBV-77FM	Make: <u>Brigade</u> Model: <u>VBV-77FM</u>		
a. Monitor shall be in a very easy to see location that requires as little as possible head movement and also with a little as	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

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	<p>possible front windshield obstruction. The monitor location shall be mutually agreed upon.</p> <p>b. Camera view selection switches on the TV monitor and trigger wires via power cable.</p> <p>c. Automatic day/night dimmer sensor</p> <p>d. Resolution 291,000 pixels or better.</p> <p>e. Picture control to include brightness, contrast and image.</p> <p>f. Speaker system to broadcast sound from camera.</p> <p>g. Picture shall be crisp and clear at all times.</p> <p>h. Anti-glare sun shield and hood</p> <p>i. Swivel mounting bracket.</p> <p>j. Automatic dimmer sensor to adjust for day and night viewing.</p> <p>k. Monitor capable of accommodating 360 degree 5 camera system.</p> <p>5. All wiring shall be totally sealed with sealed locking connections to prevent corrosion.</p> <p>6. All wiring shall be routed to prevent damage to the wiring.</p> <p>7. Warranty 2 years with replacement of failed components with new components shipped UPS "Next Day" upon notification of problem.</p> <p>8. Additional 5 Year Warranty</p>	<p>Pixels: _____</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Make: <u>Brigade</u> Model: <u>VBV-770FM-4982</u></p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Warranty: <u>2</u> years</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Yes No</p> <p>Warranty: <u>2</u> years</p> <p>Yes No NDA-ground only</p> <p>Yes No as long as registered with Brigade</p>	<p>\$ <u>513.46</u></p> <p>\$ <u>0.00</u></p> <p>\$ <u>n/a</u></p>
<p>D.</p>	<p>Automatic Lubrication System to include: Lube Core or approved equal.</p> <p>1. The system shall automatically lubricate the slide-out carriage system and plastic barrel pick up system and other high wear areas.</p> <p>2. The automatic lubrication system shall be designed for the particular application and to maximum durability of the lubrication lines and installed by the trash body manufacturer. Poorly thought out or routed lubrication lines will not be accepted.</p> <p>3. Grease pump/reservoirs, control unit, distribution manifolds and grease hoses/lines shall be located/routed for maximum durability ease of access and protection from damage. The automatic lubrication system shall be well thought out and the system shall be designed into the trash system</p> <p>4. Grease pump/reservoir shall be a 3-liter grease capacity minimum.</p>	<p>Make: <u>Lubecore</u> Model: <u>EP2 Pneumatic</u></p> <p>Items that will be automatically lubricated: <u>complete body,</u></p> <p>Number of Automatic Lubrication Points: <u>40</u></p> <p>Yes No</p> <p>Yes No</p> <p>System Pressure: <u>500-3,000</u> psi</p> <p>Grease Line Material: <u>Korilla line</u></p> <p>Grease Reservoir Size: <u>GKG</u></p>	<p>\$ <u>10,609.10</u></p>
<p>E.</p>	<p>Cab Heater:</p> <p>1. The cabin heater shall be a Webasto Air Top 2000ST.</p>	<p>Make: _____ Model: _____</p>	<p>\$ <u>N/A</u></p>



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	<ol style="list-style-type: none"> <li>2. Heat Value 3,100 to 7,000 Btu/hou</li> <li>3. Air Flow 37 cfm</li> <li>4. Size: 12 1/4' x 4 3/4" x 5" approximate</li> <li>5. Electrical 12vDC @1.2 amps</li> <li>6. Diesel Fuel Usage 0.03 to 0.06 gallons/hour</li> </ol>	Btu's: _____/hr Air Flow: _____ cfm Size: _____ x _____ x _____  Fuel Usage: _____ gal/hr	
F.	Hydraulic Oil and Engine Coolant Heater: <ol style="list-style-type: none"> <li>1. Heater for hydraulic oil and engine coolant shall be a Wabasto Thermo 90ST</li> <li>2. Heat Value 6,100 to 26,000 Btu/hour</li> <li>3. Water Flow 7.3 gallons/minute @ 2.2 psi</li> <li>4. Size: 15 3/4" x 7 1/2" x 14" approximate</li> <li>5. Electrical 12vDC @ 3 amps</li> <li>6. Diesel Fuel Usage 0.06 to 0.24gallons/hour</li> <li>7. Hydraulic oil heater Arctic Fox H-4000 series maximum length for hydraulic tank. Baffle may need to have pass-thru opening</li> </ol>	Make: _____ Model: _____  Btu's: _____/hr Water Flow: _____ gpm Size: _____ x _____ x _____  Fuel Usage: _____ gal/hr Make: _____ Model: _____ Length: _____	\$ <u>N/A</u>
G.	1.		
H.	Sign Boards, Two body mounted Roadway Displays Inc. (909.587.0207) mobile display systems shall be provided to include: <ol style="list-style-type: none"> <li>1. Frame model SS315955 95-1/2" long x 31-1/2" high x 2-1/4" frame width with .025" aluminum backing.</li> <li>2. Frame material, 6463-T6 aluminum extrusions with satin anodize.</li> <li>3. Sign panel size 93-3/16" x 29-3/16" x .060" high impact styrene. View size 91" x 27".</li> <li>4. Sign frame shall be securely mounted to body yet be easy to remove and replace.</li> <li>5. The sign frame shall have branch deflectors on the front and rear edges to prevent damage to the sign frame.</li> </ol>	Make: <u>Amrep</u> Model: _____  <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	\$ <u>inc</u>
I.	Spare Parts for Refuse Body: <ol style="list-style-type: none"> <li>1. Joystick controller (1) required.</li> <li>2. Door rocker switch platform complete with switches and armrest</li> </ol>		\$ <u>1,268.23</u> \$ <u>195.00</u>
J.	Spare Tire and Wheel: <ol style="list-style-type: none"> <li>1. Tire and wheel assembly: 1 per vehicle.</li> <li>2. Tire: Bridgestone M860A, Steer Tire.</li> <li>3. Tire: Bridgestone M843, Rear Tire</li> <li>4. Wheel: Size 22.5" x 9", disc, 10-hole, hub piloted type, single nut, meeting ISO Standard 4107.</li> <li>5. Aluminum</li> </ol>	Make: _____ Model: _____ Make: _____ Model: _____	\$ <u>N/A</u>
K.	Inspection Trip:	Provide information:	

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<ol style="list-style-type: none"> <li>1. The City and County of Denver reserves the right to inspect at the cab and chassis and body fabricating plant during the construction of the first (1st) article prior to paint and delivery.</li> <li>2. Where the fabricating plant is located further than 200 road-miles from the City and County of Denver, the bidder shall include in the bid price all travel expenses to the fabrication plant for the inspection.</li> <li>3. The City may select to send from 2 representatives to inspect the 1<sup>st</sup> article. The provided costs shall be based on one (1) person per day and the City will determine how many representatives the inspection will require and how many days the inspection will require.</li> <li>4. Inspection Trip Costs to include:             <ol style="list-style-type: none"> <li>a. Air fare per person:</li> <li>b. Surface transportation costs:</li> <li>c. Lodging per person per day:</li> <li>d. Meals per person per day:</li> </ol> </li> <li>5. Total cost per person for 1st article inspection trip:</li> </ol>	Distance to fabrication plant: _____ miles Plant Location: _____  Air Fare: \$ _____, Airline: _____ \$ <u>  N/A  </u> Surface Transportation: \$ _____, Mode: _____ \$ <u>  N/A  </u> Lodging / day: \$ _____, \$ <u>  N/A  </u> Hotel: _____ Meals / day: \$ _____ \$ <u>  N/A  </u>
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**Safety Vision System & Equipment SUB TOTAL COST** | \$   N/A  

**5.0 Manuals/Equipment**

Item	Description of Equipment	Offered Equipment	Cost
<b>Training Video</b>	One DVD or CD demonstrating and explaining the safe and proper use of the vehicle/equipment. 1. Cab and chassis. 2. Equipment and Body.	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	\$ <u>  N/A  </u> \$ _____
<b>Operators Manual Paper</b>	One book per vehicle/equipment with "safe equipment operation" section for each component. 1. Cab and Chassis. 2. Equipment and Body.		\$ <u>  Inc  </u> \$ <u>  Inc  </u>
<b>Service/Repair/Maintenance Manual Paper</b>	Two complete sets per Contract (not per vehicle); binder required, A. Manuals shall be provided for: 1) Cab and chassis	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	\$ <u>  Inc  </u>

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	<p>2) Equipment and body</p> <p>B. Manuals shall include complete and detailed information for maintenance of the equipment, including general information, specifications, troubleshooting guide, lubrication and required adjustments.</p> <p>C. The hydraulic and electrical sections of the manuals shall be provided in a separate electrical/hydraulic binder. Both the hydraulic and electrical circuits shall have separate color coded schematics for each equipment function to show the flow of both electrical current and hydraulic oil.</p>	<p>Yes No Yes No</p> <p>Yes No</p>	<p>\$ _____</p>
<p><b>Service/ Repair/ Maintenance Manual on CD rom or DVD</b></p>	<p>One complete set; per Contract (not per vehicle)</p> <p>1. Manuals shall be provided for:</p> <p>1) Cab and chassis</p> <p>2) Equipment and body</p> <p>2. Manuals shall include complete and detailed information for maintenance of the equipment, including general information, specifications, troubleshooting guide, lubrication and required adjustments.</p> <p>3. The hydraulic and electrical sections of the manuals shall be provided in a separate electrical/hydraulic binder. Both the hydraulic and electrical circuits shall have separate color coded schematics for each equipment function to show the flow of both electrical current and hydraulic oil.</p> <p>4. New CD roms or DVDs shall be provided when information is updated, superseded or changed.</p>	<p>Yes No Yes No Yes No</p> <p>Yes No</p> <p>Yes No</p>	<p>\$ _____ \$ _____ \$ _____</p>
<p><b>Service/ Repair/ Maintenance Manual on Internet Access, or Other Electronic Media</b></p>	<p>One complete set; per Contract (not per vehicle)</p> <p>1. Vendor shall provide access to the site for the length of time that the City owns the vehicle/equipment at a one time up front cost to the City.</p> <p>2. Internet information shall include complete and detailed information for maintenance of the equipment, including general information,</p>	<p>Yes No E-portal for the chassis Davie for the paccar engine</p> <p>Yes No If other Specify: _____</p>	<p>\$ _____ Inc _____</p>

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	<p>specifications, troubleshooting guide, lubrication and required adjustments.</p> <p>3. The hydraulic and electrical sections of the manuals shall be provided in a separate electrical/hydraulic binder. Both the hydraulic and electrical circuits shall have separate color coded schematics for each equipment function to show the flow of both electrical current and hydraulic oil.</p>	<p>Yes <input type="radio"/> No <input checked="" type="radio"/></p>	
<p><b>Parts Manual Paper</b></p>	<p>Two complete sets, per Contract (not per vehicle) binders required,</p> <p>1. Manuals shall be provided for:                      A. Cab and chassis                      B. Equipment and body</p> <p>2. Illustrated parts book shall be furnished containing data so that part numbers can be readily found for each system.</p>	<p>Yes <input checked="" type="radio"/> No <input type="radio"/>                      Yes <input checked="" type="radio"/> No <input type="radio"/>                      Yes <input checked="" type="radio"/> No <input type="radio"/></p>	<p>\$ <u>    </u> Inc <u>    </u>                      \$ <u>    </u></p>
<p><b>Parts Manual on CD rom or DVD</b></p>	<p>One complete set, per Contract (not per vehicle) illustrated parts book shall be furnished containing data so that part numbers can be readily found for each system.</p> <p>1. Information shall be provided for:                      A. Cab and chassis                      B. Equipment and body</p> <p>2. Parts manuals shall include complete and detailed information for replacement parts for the equipment, including general information, specifications ordering guide lines and superseded parts information.</p> <p>3. New CD roms or DVDs shall be provided when information is updated, superseded or changed.</p>	<p>Yes <input checked="" type="radio"/> No <input type="radio"/>                      Yes <input checked="" type="radio"/> No <input type="radio"/>                      Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>Yes <input type="radio"/> No <input type="radio"/></p>	<p>\$ <u>    </u> Inc <u>    </u>                      \$ <u>    </u></p>
<p><b>Parts Manual on Internet Access, or Other Electronic Media</b></p>	<p>One complete subscription; per Contract (not per vehicle)</p> <p>1. Internet information shall allow the City 24 hour 7 days/week including holidays access from its main maintenance facility and all its satellite maintenance facilities.</p> <p>2. Internet information shall include complete and detailed information for parts for the:</p>	<p>Access Information:                      7 days/week including holidays <input checked="" type="radio"/> Yes <input type="radio"/> No</p>	

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	A. Cab and Chassis B. Equipment and Body 3. Internet information shall cover vehicle/equipment, shall include general parts information, parts specifications, ordering guide lines and superseded parts information. 4. Vendor shall provide access to the site for the length of time that the City owns the vehicle/equipment at a one time up front cost to the City. 5. Parts manuals shall include complete and detailed information for replacement parts for the equipment, including general information, specifications ordering guide lines and superseded parts information.	Yes No Yes No Yes No  Yes No If other Specify: _____ _____ eportal for parts _____ Yes No	\$ Inc \$ _____
<b>New Equipment Check-in Form:</b>	The successful vendor shall complete the City's "New Equipment Check-in Form" completely and accurately with all requested information.	_____	\$ Inc

**5.1 Operator and Mechanics Training**

Item	Description of Equipment	Offered Equipment	Cost
<b>On Site Equipment Manufacturers Training</b>	On site the vendor shall insure that the equipment manufacturers training representative, after delivery of the equipment Contacts Fleet Maintenances training manager to coordinate equipment training.	_____ Per request from Rush Truck Center service _____ Hardline Equipment per request _____	\$ Inc
<b>Fleet Maintenance Training Manager</b>	Mr. Charlie Pletcher, Telephone: 720.865.3951 Contact time: 8:00 am to 3:00 pm M-F	_____	
<b>Training Requirements</b>	Training shall consist of factory training materials, classroom and actual field training on the equipment for the equipment operators and supervisors.	_____	\$ Inc
<b>On Site Mechanics Training</b>	On site mechanics training shall be 2 classes, approximately 8 hours, 2 shifts total provided at City facilities. The training shall cover maintenance and service procedures, trouble shooting and use of manuals.	_____	\$ Inc

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**6.0 Repair Parts Delivery**

<b>Repair Parts delivery</b>		<b>Complies (Y or N/A)</b>
A.	Prime Vendor is to indicate current Master Purchase Order (MPO) agreement(s) in place with the City. (Example 06670108)  If no agreement exists, is your company willing to enter into a long-term MPO in order to supply parts and components for the equipment and manufactures proposed herein? YES or NO	N/A
B.	Sub-Vendor is to indicate current Master Purchase Order(MPO) agreement(s) in the City. (Example 0298A0609)  If no agreement exists, is your company willing to enter into a long-term MPO in order to supply parts and components for the equipment and manufactures proposed herein? YES or NO	N/A

**7.0 Warranty****7.1 General Warranty Provisions**

<b>WARRANTY (Table 1) Class 7 &amp; 8 Vehicles</b>		<b>Complies (Y or N/A)</b>
C.	Express warranty is to be a minimum of 12 months on the Class 8 vehicle chassis. The warranty on the refuse body of the vehicle is to be a minimum of 2 years. The standard factory warranty plan for both the chassis and refuse body, to include the hydraulic components, shall be provided as an attachment to your bid proposal.	yes
D.	The Warranty is to include at no cost to the City of Denver, all parts and labor, and no charge for work performed at the vendors facility	yes
E.	Warranty shall start when the City places the vehicle into service <b>NOT</b> on the delivery date. The city must notify the vendor Taking an exception may make bid non compliant. <u>at the time when putting into service</u>	YES
F.	Warranty plans shall consist of the total unit and be broken out to a separate plan for each warranty item if applicable, such as engine warranty plan, transmission warranty plan, electrical, etc.	yes
G.	Options listed shall be bid and provided as factory installed under the terms of the full factory-backed warranty. This includes, but is not limited to: air conditioning, radios, cruise control, bumpers, towing packages etc. Dealer-installed options will not be permitted unless pre-approved by the City in writing and, where applicable, indicated on bid sheet as a "dealer installed" non-factory item.	yes
H.	Bidder will be responsible for warranty repair of all installed options/auxiliary equipment included in the bid that has a standard warranty that is less than the standard warranty for the base vehicle/equipment	yes
I.	Bidder shall use a single, local factory authorized dealership that will accomplish or coordinate required warranty work. The dealership must have a minimum of 1-year experience as a factory authorized vendor for like equipment being bid. Warranty parts shall be available and supplied within 24 hours	yes

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J.	If applicable, bidder shall provide a plan for the City to be reimbursed if the work can be done by the City on site. The current shop rate is \$75.00/hour, not to exceed \$85.00/hour. (Enter a response of N/A if not available)	n/a
K.	The bidder shall respond to request for warranty assistance within twenty-four (24) hours.	yes
L.	Warranty work shall be accomplished within an appropriate length of time (generally less than 3 working days for everything other than major component repair such as a transmission rebuild) and shall be coordinated with an authorized City representative	yes
M.	During the entire warranty period, if the unit requires transportation to a repair facility, the vendor/sub-vendors shall be responsible for all transportation at "NO COST" to the City and County of Denver. This includes transporting the unit back to the City's domicile location after repairs are complete. If an alternate is bid, charges to the City of Denver shall be listed (e.g. mileage, travel, labor, etc.). Even if an alternate is bid, in NO CIRCUMSTANCES will the City and County of Denver be responsible for transporting a unit greater than 25 miles from the center of Denver. For purposes of these warranty provisions, the center of Denver is defined as the City and County Building located on the corner of Colfax and Bannock Street.	n/a
N.	The item(s) procured by the City pursuant to this Bid Proposal shall, in addition to being subject to the express warranties referenced above, be subject to all implied warranties arising by operation of law under State of Colorado and Federal law, including but not limited to the implied warranty of merchantability and, to the extent applicable, the implied warranty of fitness for a particular purpose arising under the Colorado Uniform Commercial Code, Title 4, Colorado Revised Statutes. The bidder shall in no event attempt to limit or disclaim any of such implied warranties under this Bid Proposal, and any attempt to do so will render the bidder's bid non-responsive under this Bid Proposal.	yes

7.2 Fleet Defects

WARRANTY - (Table 2) Fleet Defect Clause, Class 7 & 8 Vehicles	
A.	<b>Definition:</b> If during the warranty period, thirty percent (30%) of the total number of units delivered have the same part(s) and/or components failure requiring replacement and/or modifications, caused by defects in Design, Testing, Material, and/or Workmanship, then this "Fleet Defect Clause" goes into effect.
B.	<b>Remedy:</b> Following notification of a Fleet Defect, the vendor shall develop and implement a plan that either reengineers, modifies, or replaces the defective parts/ systems, such that the identified problem is cured and the operation of the vehicle/equipment is not altered. When alterations are required to cure the defect, those alterations that change or modify the original bid specifications must be approved by the City and County of Denver prior to execution. The vendor will pay for all necessary labor and materials to repair, modify, and/or "update" all vehicles/units in this group. The vendor shall also propose a work schedule that is mutually agreed upon by the City of Denver that corrects the fleet deficiency within 30 days or a mutual agreed upon schedule.
C.	<b>Exceptions:</b> Fleet defects will not apply to minor aftermarket accessories specified by the City of Denver and installed per instructions/specifications. Examples include: toolboxes, spotlights, bed-liners, etc.
D.	<b>Mitigation:</b> Should the vendor become non responsive to the City's notification of a Fleet Defect, the City may employ several options. (1) After notifying the vendor in writing of The City's intent to mitigate its circumstances, the City may chose to perform its own warranty work and seek reimbursement for both parts and labor. (2) On major components, such as engine, transmission, air conditioning, etc., the City may chose to have the repairs performed by an authorized dealer and vendor shall reimburse the City for any parts or labor not covered by other warranty.

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E.	<b>Outside Metro-Denver:</b> Vendor will pay for all transportation costs if unit(s) must be sent out of the Denver area for repairs. The City and County of Denver reserves the right to inspect unit(s) before returning back to Denver. The City and County of Denver also reserves the right to send at least one employee, without cost to the City, to inspect the repair(s) before unit is released back to the City.
F.	<b>Expired Warranties:</b> Units that have mutually agreed upon warranty defects during the warranty period will continue to be repaired until completed. If an on-going remedy continues past the warranty date the repairs will continue under warranty until completed or cease at a time agreed upon by the vendor and City and County of Denver.

7.3 Warranty Options

		<b>WARRANTY Options (Table 3) Class 7 &amp; 8 Vehicles</b>		
<b>Cost of Factory Extended Warranties</b>		<b>Please indicate in the columns below the additional cost of an extended warranty for all applicable components listed in the left hand column.</b>		
		Inc = Included	N/A = Not available	
		Two Years	Three Years	Five Years
A.	Cab and Chassis	1,265.00	2,915.00	5,445.00
B.	Engine	included	935.00	1,185.00 (200K miles)
C.	Transmission	included	included	1,150.00
D.	Drive Train	included rear ends	included rear ends	900.00 rear ends
E.	Suspension	471.00	708.00	N/A
F.	Air Conditioning	330.00	655.00	N/A
G.	Hydraulics	N/A		
H.	a. Pumps	N/A		
	b. Cylinders	N/A		
	c. Tanks	N/A		
	d. Valves	N/A		
	e. Controls	N/A		
I.	Attached Body	N/A		
J.	Joystick	N/A		



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K.	Electrical Components	N/A		
L.	Camera System	N/A		
M.	Other	N/A		
N.	Notes:			

**7.4 Warranty Service Locations:** Warranty repair parts and service shall be available locally at an established factory authorized dealership meeting requirements of Table 1 Section 7.

- A. Cab & Chassis: Dealership Name: Rush Truck Center Telephone #: 303-291-6300  
 Street Address: 6955 E. 50th Ave City: Commerce City, CO 80022
- B. Barrel Loader Trash Body: Dealership Name: Hardline Equipment Telephone #: 303-288-8989  
 Street Address: 7550 Dahlia St. City: Commerce City, CO 80022
- C. Sundries Dealership Name: Hardline Equipment Telephone #: 303-288-8989  
 Street Address: 7550 Dahlia St. City: Commerce City, CO 80022

**8.0 Heavy Duty Vehicle Delivery Documentation:**

Delivery Documentation (GVWR 26,001-Lbs and Above Heavy Duty)	
A.	<b>Vehicles ordered under this specification</b> shall be complete and delivered to CITY AND COUNTY OF DENVER, Fleet Management Division. All prices quoted must be quoted at a firm price F.O.B. Denver, Colorado, 5440 Roslyn St. Building C.
B.	<b>Vendor shall supply at acceptance and delivery of vehicle.</b> <ol style="list-style-type: none"> <li>1. Bill of Sale (aka invoice, buyers order)</li> <li>2. Original MSO (Manufacturers Statement of Origin)</li> <li>3. Application for Title and/or Registration, Colorado Dept of Revenue form DR2395 (02-22-11)</li> <li>4. Odometer Disclosure Statement, Colorado Dept of Revenue form DR2407 (09-07-05)</li> <li>5. Letter of Certification on Vendor Letterhead (Required for Incomplete Vehicles) with added bodies etc, describes the final configuration of the vehicle)</li> <li>6. Air Brake inspection form required for any vehicle with air brakes or truck units capable of towing trailers greater than 10,000-Lbs</li> <li>7. Standard Sales Tax Receipt.</li> <li>8. DOT inspection form.</li> <li>9. Temporary License Plate.</li> <li>10. New Equipment Check-in Form/ Vendor Supplied Information on the Vehicle. Form provided by Fleet contact Dolores @ 720.865.3903</li> </ol>

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	11. Copy of City Purchase Order. 12. All Keys ordered for the Vehicle and Sundries, i.e. toolboxes etc. 13. All Manuals repair, parts, owners and/or CD's/DVD's etc 14. Vehicle Warranty information and receipt for optional warranty. 15. Receipts and Warranty information for vendor Installed/supplied components (lift gates, snowplows, lighting equipment etc) 16. All fluid levels top off (full) including fuel and DEF
C.	<b>For an "Incomplete Vehicle" (cab &amp; chassis) add the following:</b> 17. Verification of Vehicle Identification Number (VIN), Colorado Dept. of Revenue form DR2087. 18. Statement of Fact for incomplete vehicles with added bodies etc, describes the final configuration of the vehicle. 19. Original weight slip.
D.	<b>Delivery:</b> Monday through Friday between 8:00am and 1:00pm. Location: CITY AND COUNTY OF DENVER Fleet Management 5440 Roslyn St. Building C Denver, CO 80216 Contact person to coordinate delivery: Fleet Maintenance Division at (720) 865-3900 ext. 03 or direct line (720) 865-3903.

9.0 Vehicle Delivery  
 91 Delivery of Cab and Chassis to Body Vendor

PROVIDE NUMBER OF DAYS REQUIRED FOR DELIVERY OF CAB AND CHASSIS AFTER PURCHASE ORDER IS ISSUED TO BODY VENDOR	145 DAYS
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9.2 Delivery of Completed Truck with Body Installed to City and County of Denver

PROVIDE NUMBER OF DAYS REQUIRED FOR DELIVERY OF COMPLETE VEHICLE AFTER CAB AND CHASSIS IS DELIVERED	150 DAYS
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10.0 Complete Vehicle Cost  
 Include:  
 Cab & Chassis Total Cost  
 Side Loader Body Total Cost

ONE COMPLETE VEHICLE TOTAL COST	\$ 268,236.10
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This price good through Feb 1, 2019

# EXHIBIT B



## CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)  
08/19/2019

**THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.**

**IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).**

<b>PRODUCER</b> Aon Risk Services Southwest, Inc. Houston TX Office 5555 San Felipe Suite 1500 Houston TX 77056 USA	<b>CONTACT NAME:</b> PHONE (A/C. No. Ext): (866) 283-7122      FAX (A/C. No.): (800) 363-0105		
	<b>E-MAIL ADDRESS:</b>		
<b>INSURED</b> Rush Enterprises, Inc 555 IH 35 South, Suite #234 New Braunfels TX 78130 USA	<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
	INSURER A: The Insurance Co of the State of PA		19429
	INSURER B: National Union Fire Ins Co of Pittsburgh		19445
	INSURER C: American Home Assurance Co.		19380
	INSURER D: Illinois National Insurance Co		23817
	INSURER E: New Hampshire Insurance Company		23841
	INSURER F: Commerce & Industry Ins Co		19410

Holder Identifier :

**COVERAGES      CERTIFICATE NUMBER: 570077890460      REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. **Limits shown are as requested**

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:			GL5425782 SIR applies per policy terms & conditions	11/01/2018	11/01/2019	EACH OCCURRENCE	\$2,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$1,000,000
							MED EXP (Any one person)	Excluded
							PERSONAL & ADV INJURY	\$2,000,000
							GENERAL AGGREGATE	\$10,000,000
							PRODUCTS - COMP/OP AGG	\$10,000,000
A	<b>AUTOMOBILE LIABILITY</b>			CA 9767335 SIR applies per policy terms & conditions	11/01/2018	11/01/2019	COMBINED SINGLE LIMIT (Ea accident)	\$3,000,000
A	<input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY			CA 9767337 SIR applies per policy terms & conditions	11/01/2018	11/01/2019	BODILY INJURY (Per person)	
							BODILY INJURY (Per accident)	
							PROPERTY DAMAGE (Per accident)	
F	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION			28295005 SIR applies per policy terms & conditions	11/01/2018	11/01/2019	EACH OCCURRENCE	\$2,000,000
							AGGREGATE	\$2,000,000
E	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b>			WC031468021	11/01/2018	11/01/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER	
C	ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)		N/A	WC031468022	11/01/2018	11/01/2019	E.L. EACH ACCIDENT	\$1,000,000
D	If yes, describe under DESCRIPTION OF OPERATIONS below			WC031468019	11/01/2018	11/01/2019	E.L. DISEASE-EA EMPLOYEE	\$1,000,000
B				XWC5565573	11/01/2018	11/01/2019	E.L. DISEASE-POLICY LIMIT	\$1,000,000

Certificate No : 570077890460

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)**

As required by written contract, the City and County of Denver, its Elected and Appointed Officials, Employees and Volunteers are included as Additional Insured in accordance with the policy provisions of the General Liability and Auto Liability policies. Garage Keepers Legal Liability is included in the above referenced Auto Policy.

**CERTIFICATE HOLDER**

**CANCELLATION**

City and County of Denver Purchasing Division, 201 West Colfax Avenue, Dept. 304 Denver CO 80202 USA	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE  

**Contract Control Number:** PWADM-201950899  
**Contractor Name:** RUSH TRUCK CENTERS OF COLORADO, INC.

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at Denver, Colorado as of:

**SEAL**

**CITY AND COUNTY OF DENVER:**

**ATTEST:**

By:

\_\_\_\_\_

\_\_\_\_\_

**APPROVED AS TO FORM:**

**REGISTERED AND COUNTERSIGNED:**

Attorney for the City and County of Denver

By:

By:

\_\_\_\_\_


\_\_\_\_\_

By:

\_\_\_\_\_

**Contract Control Number:**  
**Contractor Name:**

PWADM-201950899  
RUSH TRUCK CENTERS OF COLORADO, INC.

By:  \_\_\_\_\_  
97724B7A22474F4...

Name: Justin Goree  
(please print)

Title: Regional GM  
(please print)

ATTEST: [if required]

By: \_\_\_\_\_

Name: \_\_\_\_\_  
(please print)

Title: \_\_\_\_\_  
(please print)