

## **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 **O.J. WATSON COMPANY, INC.** a Colorado corporation D/B/A O.J. WATSON EQUIPMENT, INC., whose address is 5335 Franklin St., Denver, CO (“Contractor”).

### **RECITALS:**

1. The City desires to obtain 20 Monroe RDS/FD/ASP and Snow Plows System and one Schwarze M6000TECO Sweeper Installed on Autocar ACMD42 and associated equipment, and Contractor desires to provide that equipment to the City.
2. Payment for the equipment shall be financed through a separate lease-purchase agreement (the “LPA”) between the City and Chase Equipment Finance, Inc., (“Financer”).

### **AGREEMENT:**

For and in consideration of the agreements contained, and subject to the terms and conditions stated, in this Agreement, the parties 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 Manager 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 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 facilities as set out on Exhibit A.

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.

5. **TERM.** The Term of this Agreement shall commence upon January 1, 2014, and expire on December 31, 2015.

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 have also entered into an escrow agreement that together with the LPA provide for payment to the Contractor of the maximum 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 **TWO MILLION TWO HUNDRED TWENTY EIGHT THOUSAND EIGHTY FIVE DOLLARS (\$2,228,085.00)** (the "Maximum Purchase Amount"), payable directly to the Contractor by Financer. Title to the Equipment shall vest with Financer upon payment of the Maximum Purchase Amount to Contractor. 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 shall not exceed 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 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 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, 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 non-renewed before the expiration date thereof. 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 the work performed under this Agreement (“Claims”), unless such Claims have been specifically determined by the trier of fact to be the sole negligence or willful misconduct of the City. This indemnity shall be interpreted in the broadest possible manner to indemnify City for any acts or omissions of Contractor or its subcontractors either passive or active, irrespective of fault, including City’s concurrent negligence whether active or passive, except for the sole 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.** In the event of any claim to the City concerning infringement or violation of a third party’s intellectual property rights, the City will endeavor to promptly notify Contractor in writing of any such claim and will cooperate with Contractor and its legal counsel in the defense thereof. Contractor may in its discretion (1) contest, (2) settle, (3) procure for the City the right to continue using the Equipment, software, or services, or (4) modify or replace them to be non-infringing (as long as the functionality and performance are not degraded as reasonably determined by the City). The City may participate in the defense of such action at its own expense. If none of the foregoing options is reasonably possible, then Contractor will

refund a pro-rata portion of the amounts paid hereunder with respect to the Equipment, software, or services (based on the expected life thereof) and reimburse the City for all reasonable expenses for removal and replacement of the Equipment or software. Contractor is not liable for any infringement-related liabilities based upon modifications to the Equipment or software made by the City without Contractor's consent or being used or sold with products not provided by Contractor and made without Contractor's consent.

19. **CONFLICT OF INTEREST:** The parties agree that no official, officer or employee of the City shall have any personal or beneficial interest whatsoever in the services or property described herein and Contractor further agrees not to hire or contract for services any official, officer or employee of the City or any other person which would be in violation of the Denver Revised Municipal Code Chapter 2, Article IV, Code of Ethics, or Denver City Charter Sections 1.2.9 and 1.2.12.

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, 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:** Contractor shall perform or cause to be performed all services 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>
20	Monroe RDS/FD/ASP and Snow Plow System	\$99,500
1	Schwarze M6000TECO Sweeper Installed on Autocar ACMD42	\$238,085
<b>TOTAL PURCHASE AMOUNT:</b>		<b>\$2,228,085</b>

Contractor shall deliver the vehicles in five (5) separate batches, set out below, in quantities of 5/5/5/5/1, the sequencing of which shall be agreed to between the Contractor and the City. The Contractor shall be paid pursuant to an Acceptance Certificate for each complete batch delivered.

Delivery of the first 10 Monroe Dump Trucks shall occur no later than November 15, 2014 and the remainder of the Equipment no later December 15, 2014. Deliver shall be to 5440 Roslyn Street, Denver, CO 80216.

<b>Item 9</b>	5 Monroe RDS/FD/ASP / MPPJ3910_ Dump Body/ Plow/Spreader System @ \$99,500	<u>\$497,500.00</u>
<b>Item 10</b>	5 Monroe RDS/FD/ASP / MPPJ3910 Dump Body/ Plow/Spreader System @ \$99,500	<u>\$497,500.00</u>
<b>Item 11</b>	5 Monroe RDS/FD/ASP / MPPJ3910 Dump Body/ Plow/Spreader System @ \$99,500	<u>\$497,500.00</u>
<b>Item 12</b>	5 Monroe RDS/FD/ASP / MPPJ3910_ Dump Body/ Plow/Spreader System @ \$99,500	<u>\$497,500.00</u>
<b>Item 13</b>	1 Schwarze M6000TECO Sweeper Installed on Autocar ACMD42 @ \$238,085.00	<u>\$238,085.00</u>
<b>TOTAL</b> 20___ Dump Trucks with Plow/Spreader System and 1 Construction Sweeper		<u>\$2,228,085.00</u>

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**.



**DENVER**  
THE MILE HIGH CITY

# CITY AND COUNTY OF DENVER

DEPARTMENT OF GENERAL SERVICES  
Purchasing Division  
www.denvergov.org/purchasing

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## REQUEST FOR PROPOSAL

Request for Proposal No. CHASSIS DUMPSNOW0751A  
**STRATEGIC LONG-TERM TRUCK CAB AND CHASSIS & TRUCK BODY(S)  
PROCUREMENT WITH SERVICE AND PARTS CONSIDERATIONS.**

### SCHEDULE OF EVENTS

➤ RFP Issued	December 14, 2012		
➤ Pre-Proposal Conference	December 20, 2012	9:30 AM	Local Time
➤ Specifications Due Date (Early Submittal OK)	January 4, 2013	12:00 P.M.	
➤ Specification Review Date (City's Deadline)	January 11, 2013		
➤ Deadline to Submit Additional Questions	January 15, 2013	3:00 P.M.	Local Time
➤ Response to Written Questions	January 17, 2013		
➤ Proposal Due Date	January 23, 2013	4:00 PM	Local Time

Vendor offers to furnish to the City and County of Denver the materials, supplies, products or services requested in accordance with the specifications and subject to the Terms and Conditions described herein.

### VENDOR SIGN HERE

Company Name: O.J. Watson Company, Inc.

By: Richard K. Eckrich  
(Printed or Typed Name)

Signature:   
Signature constitutes acceptance of all Terms and Conditions listed on this form and all documents attached.

Email: deckrich@ojwatson.com

Phone: 303.295.2885

***THIS PROPOSAL MUST BE RETURNED IN A SEALED ENVELOPE WITH THE PROPOSAL NUMBER AND PROPOSAL TITLE ON THE ENVELOPE.***

Reference Nos.: 11-037, 11-038  
12-074, 12-075, TBD, TBD

13-108,13-109

CITY AND COUNTY OF DENVER  
Technical Specifications and Request for Proposal Items  
For a  
Multi-Purpose Live Floor Dump Body with Options

**1.0 General Description**

A new current model year 13-yard multi-purpose front discharging live bottom dump body to be installed on a City provided Class 8, 64,000 GVWR (plate certified) business class tandem axle truck.

The 13-yard multi-purpose front discharging live bottom dump body is intended to be installed on the cab and chassis ( See Attached Specification Documents for Information on the Cab and Chassis) The 13-yard multi-purpose front discharging live bottom dump body shall be compatible and suitable for installation on the Class 8, 64,000 GVWR (plate certified) business class tandem axle truck listed in the attached documents without modifications to the provided cab and chassis.

The Class 8, 64,000 GVWR business class tandem axle truck with the 13-yard multi-purpose front discharging live bottom dump body shall be fully suitable for 1) snow plowing and salt/sand spreading, 2) hauling materials from dirt and debris to asphalt for paving operations.

**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)

**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.

**1.4 Completion of Bid Items and Alternates**

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

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- A. Provide vehicle/equipments 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.

**1.5 Major Areas of Concern**

	Description of Concern
A.	Operator Cab Area to include: <ol style="list-style-type: none"> <li>1. Ergonomic layout of vehicle and all body controls.</li> <li>2. Ease and speed of operation of all functions.</li> </ol>
B.	Dual Function Ability: <ol style="list-style-type: none"> <li>1. Primary functions are to efficiently and safely:               <ol style="list-style-type: none"> <li>a Plow City streets of snow and ice during and after snow storms.</li> <li>b Distribute granular de-icing agents onto the City streets in prescribed tons/mile and record dispensed amounts.</li> </ol> </li> <li>2. Secondary function is to efficiently and safely transport hot asphalt to City paving projects and discharge the asphalt into the City paving machines efficiently and at proper temperature for efficient mat lay down of the asphalt.</li> <li>3. Ability to easily and quickly switch between primary and secondary functions.</li> </ol>
C.	Warranty: <ol style="list-style-type: none"> <li>1. Ability and cost to obtain an extended warranty on the 13-yard multi-purpose front discharging live bottom dump body, hoist, snowplow/spreader controls and hydraulic system.</li> <li>2. Location of warranty providers.</li> </ol>
D.	Service Ability: <ol style="list-style-type: none"> <li>1. Ability to easily service the 13-yard multi-purpose front discharging live bottom dump body, snowplow, hydraulic system and spreader body components/items that require regular (yearly or less) servicing and maintenance.</li> </ol>



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**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 for the live bottom dump body, hoist, snowplow and snowplow control system manufactures.
3. Live bottom dump body, hoist, snowplow and snowplow control system manufacturer's date of order acceptance. Written order confirmation is required.

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

The cab and chassis and body component contractors shall contact all sub-contractors providing accessories and equipment for the vehicle (s) and provide all the contractors with the list of all accessories and equipment, manufacturer's order confirmation, order number, vehicle specifications, build date and delivery date to local dealer from the vehicle manufacturer on the ordered vehicle. It is the cab and chassis selling dealer's responsibility to notify Fleet Management, Purchasing and the body contractor so the body contractor can timely order required components, the accessories, and equipment and has the items in stock and is prepared to install the body, accessories and equipment items when the vehicle arrives at their facility.

**3.0 Basic Requirements 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".

**3.1 13-Yard Stainless Steel Multi-Purpose Dump Body or approved equal**

	Description of Equipment	Offered Equipment	Cost
A.	<p>General Description: The multi-purpose front discharging live-bottom body shall perform multiple purposes efficiently. They are:</p> <ol style="list-style-type: none"> <li>1. In the paving season the body shall transport and off load hot asphalt into the City's paving machines.</li> <li>2. During snow occurrences the body shall efficiently dispense either salt or sand materials onto City streets with spreading rates as low as 50-lbs per lane mile to a maximum of 150-lbs per lane mile.</li> <li>3. The body shall also transport sweeper tailings to dump sites.</li> <li>4. The body shall also be capable of transporting and efficiently off-loading dirt, gravel, cobble and other general construction materials.</li> </ol>	<p>Make: <u>Monroe</u> Model: <u>RDS/FD/Asph</u></p> <p><input checked="" type="radio"/> Yes    No</p> <p>Low Spread Rate: <u>50</u> lbs/lane mile High Spread Rate: <u>150</u> lbs/lane mile</p> <p><input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No</p>	<p>\$ <u>40,426.00</u></p>

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<p><b>B.</b> Stainless Steel Multi-Purpose Live-Bottom Body Construction</p> <ol style="list-style-type: none"> <li>Length: 15-feet.</li> <li>Interior Width: 88-inches.</li> <li>Interior wall height: 44-inch.</li> <li>Volume without sideboards: 11.2-cu. yds.</li> <li>Volume with sideboards: 13.2-cu yds</li> <li>The side walls shall radius slope from the vertical sidewall to the flat floor at the conveyor. The radius/slope shall provide for self cleaning and feeding of materials on to the conveyor. No large "flat" floor/side sections due to poor cleanout of materials</li> <li>The dump body shall have a flat front head sheet or a small/partial dog house to allow for hoist clearance.</li> <li>Tailgate:             <ol style="list-style-type: none"> <li>Height 50" or 6" higher than sidewalls</li> <li>Tailgate shall be "asphalt type" sloped rearward for efficient dump/discharging asphalt into the City's asphalt pavers.</li> </ol> </li> <li>Side walls, head sheet, longsilis, top rail and tailgate shall be constructed of 1-piece no splicing of material and be fully welded.</li> <li>Discharge, front of body</li> </ol>	<p>Body Length: <u>15 feet</u>            Body Width: <u>88 inches</u>            Wall Height: <u>44 inches</u>            Volume with out side boards: <u>11.2</u> yds<sup>3</sup>  <input checked="" type="radio"/> Yes    No            Width of Flat section: <u>24</u> in            Body is self cleaning/clearing with intended materials to be hauled in the body: <input checked="" type="radio"/> Yes    No            Dog House <input checked="" type="radio"/> Yes    No            Dog House Size: <u>15"</u> W x <u>32</u> T x <u>16</u> D            Height: <u>60</u> in            Tailgate Type: <u>Asphalt Type</u>  <input checked="" type="radio"/> Yes    No            Discharge Location: <u>Front</u></p>	<p>\$ _____            \$ _____            \$ _____            \$ _____            \$ _____            \$ _____            \$ _____</p>
<p><b>C.</b> Material:</p> <ol style="list-style-type: none"> <li>Sides, 1-piece, 7-gauge/ 3/16" minimum, 304 stainless steel.</li> <li>Head sheet 1-piece, 7-gauge/ 3/16" 304 stainless steel and conform to the body contour. Fully welded inside and outside.</li> <li>Top rail shall be a box formed 7-gauge/ 3/16" 304 stainless steel self-cleaning design (sloped to inside the body) with the top rail over lapping the side wall for additional stiffness.</li> <li>Rear corner posts shall be full depth from top of the tailgate to the bottom of the longsilis, 7-gauge/ 3/16", 304 stainless steel.</li> <li>Side supports mid body extending from the top rail to the lower cross tube. Material 7-gauge/ 3/16" x 4" x 4' formed 304 stainless steel.</li> <li>Longsilis shall be fully boxed 1/4", 304 stainless steel, 14" deep.</li> <li>Lower cross members shall be 7-gauge/ 3/16" x 3" x 2" channel welded to the base of the longsilis on 2' centers</li> <li>Top cross members shall be 7-gauge/ 3/16" x 3' x 3" structural angle welded to the top of the longsilis on 12" centers.</li> </ol>	<p>Material Size &amp; Type: <u>7-gauge 304</u>            Material Size &amp; Type: <u>7-gauge 304</u>            Material Size &amp; Type: <u>7-gauge 304</u>            Quantity: <u>2-1 per side</u>            Material Size &amp; Type: <u>7-gauge 304</u>            Material Size &amp; Type: <u>Not needed - Leave room for Tanks</u>            Material Size &amp; Type: <u>1/4" 304</u>            Material Size &amp; Type: <u>7-gauge 304</u>            Material Size &amp; Type: <u>7-gauge 304</u></p>	<p>\$ _____</p>

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D.	Under Structure: 1. Cross members 4" boxed beam 1/4' 304 stainless steel on 12" centers gusseted to longitudinal beams at each beam. 2. Longitudinal beams maximum height 14" boxed-beam 1/4" 304 stainless steel. 3. Longitudinal beams shall mount on extruded rubber strips. 4. Mylar insulator to prevent electrolysis shall separate all dissimilar metals (steel, aluminum).	Material Size & Type: _____ Material Size & Type: _____ Height: <u>14.5</u> in <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No	\$ _____  \$ _____
E.	Conveyor Floor: 1. The floor shall be minimum 1/4" AR 400 steel 2. The floor shall be easily replaceable (bolt-in). 3. The floor shall have 7-gauge/ 3/16" 304 stainless steel conveyor chain guards. 4. The chain guards shall be easily replaceable (bolt-in).	Material Size & Type: <u>1/4" AR 400</u> <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No	\$ _____ \$ _____ \$ _____
F.	Conveyor Floor Cover: 1. The conveyor shall have a 1/4" steel slide-in conveyor cover for use when not using the conveyor for dispensing salt/sand. 2. The covers shall have 2 D-hooks for lifting 3. The conveyor cover shall be secured to the body so that it cannot come loose or come out during dumping of loads 4. How is the floor cover installed and removed (explain)	Material Size & Type: <u>1/4" Steel</u> <input checked="" type="radio"/> Yes No How Secured to Body: <u>2 bolts at rear of body through longills. Remove bolts at slide to rear from under chain covers</u>	\$ _____ \$ _____ \$ _____
G.	Conveyor: 1. Conveyor shall be forward discharging 2. Conveyor chain width: 28" measured outside edge of chain to outside edge. 3. Conveyor chain: pintle D667X type with 28,000-lb tensile strength per stand carbon steel with stainless steel pins and cotter pins. 4. Cross bars: 1-1/2" x 3/8" spaced on every chain link approximately 2-1/4" spacing (tight spacing). 5. Drive sprockets: 8 tooth, carbon steel keyed to 2" dia. Shaft minimum. 6. Conveyor motor: 9-hp @ 1,500 psi/15 gpm high-torque, low speed hydraulic motor direct drive to a reduction gearbox. Motor shall have built-in speed sensor with "Brad Harrison" connector. 7. Conveyor bearings: self-aligning, shielded ball flange bearings easily lubricated from central location at rear of unit. 8. Chain wiper: provided at front of conveyor unit. 9. Chain adjustment: spring loaded idler shaft with 3" minimum adjustment. Chain shall be easy to adjust from rear of spreader.	Discharge Direction: <u>Forward</u> Chain Width: <u>24"</u> Pin Material: <u>Stainless Steel 21,700 T.S.</u> Cross Bar Spacing: <u>2 1/4"</u> Shaft Size: <u>2</u> in Motor Specs: <u>9 hp @ 1500 psi / 15 gpm</u> Connector Type: <u>Brad Harrison</u> Bearing Type: <u>Self Aligning</u> <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No <u>No Spring - Front Adjust</u>	\$ _____ \$ _____ \$ _____ \$ _____ \$ _____ \$ _____ \$ _____



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	<p>f. The system shall be a Faster Quick Release Coupling Multi-Faster Series set up the same as City units CH94 thru CH99. (no approved equals)</p> <p>1) Female Coupler: P/N 2P508-4-12-N-F 2) Male Coupler: P/N 2P508-4-12-N-M</p> <p>5. All male/female fittings shall have protective cover guards to prevent dirt and damage when the hoses are disconnected</p> <p>6. Spinner disk shall be direct mounted on 7.5-hp @ 1500 psi/12 gpm high-torque, low speed hydraulic motor shaft, material carbon steel. Motor shall have built-in speed sensor with "Brad Harrison" connector.</p> <p>7. Vanes bolted to spinner disk, 6 required, material carbon steel.</p> <p>8. The chute shall have an adjustable internal baffle and shall direct salt/sand around the driveline. The chute shall be easily removable for driveline service.</p>	<p>Make: <u>Faster</u> Model: <u>NPN</u></p> <p>Part Number: <u>2P508-4-12-N-F</u> Part Number: <u>2P508-4-12-N-M</u></p> <p>Make: <u>White</u> Model: <u>RS</u> Motor Specs: <u>7.5 hp @ 1500 psi/12 gpm</u> Connector Type: _____</p> <p>Yes <input type="radio"/> No <input checked="" type="radio"/> <u>Poly per I 2</u> Yes <input type="radio"/> No <input type="radio"/> <u>Bolt on</u> How removed: _____ Yes <input checked="" type="radio"/> No <input type="radio"/></p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>
<p>J.</p>	<p>Spinner Deflector Shields:</p> <p>1. Spinner Shields:</p> <p>a. Sides, 2 shields, pin adjusted. Constructed of stainless steel.</p> <p>b. Rear, 1 shield, pin adjusted. Constructed of stainless steel</p> <p>c. Front, 1 shield, forward deflector. Constructed of 10 ga. X 8" x 16" stainless steel channel and welded to spinner pedestal.</p> <p>d. One (1) easily removable covering of 2-ply reinforced rubber ¼" x 16" x 12" to be attached to forward deflector to prevent salt/sand materials from being thrown forward into the transmission/driveline area of the truck</p> <p>2. One (1) rear easily removable for driveline maintenance and repair covering of ¼", 2-ply reinforced rubber shall be installed between the conveyor and around the driveline to prevent salt/sand materials from contacting any parts of the driveline."</p> <p>3. Driveline protection, easily removable for maintenance and repair.</p> <p>a. Protective covering shall be ¼" thick, 2-ply, reinforced rubber</p> <p>b. Installed in and below the truck frame in front of the front drive axle to prevent salt/sand materials from contacting the vehicle axles, suspension, brakes and other components located in the axle area of the truck.</p> <p>c. The rubber skirting shall extend down to within 6" of the pavement</p> <p>d. The rubber skirting shall be easily removable for maintenance and repair, 15 minutes maximum.</p>	<p>Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>Location: <u>In front of drive axle</u></p> <p>Height Above Pavement: <u>6</u> in</p> <p>Removal/Reinstall Time: <u>15</u> minutes</p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>

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K.	<p>Heavy-Duty Tailgate:</p> <ol style="list-style-type: none"> <li>Rear tailgate shall be "high lift" forward hinged 12" on top with dump-thru capabilities. The "high lift" is desired for easier dumping of snow and leaves.</li> <li>Tailgate construction:           <ol style="list-style-type: none"> <li>50" high x 88" wide, 6-panel, 7-gauge/ 3/16" 304 stainless steel with a 10-gauge perimeter boxed reinforcement.</li> <li>Offset top hardware.</li> <li>Fully welded construction with reinforced hinge and latch points.</li> <li>Tailgate chains shall be covered to prevent body damage.</li> </ol> </li> <li>Hinge pins shall nitrate steel. The pins shall also be drilled for a safety hairpin cotter pin.</li> <li>Safety hairpin cotter pins shall be 302 stainless steel and attached to the body with attachment chain to prevent loss. A safety pin storage hole shall be provided at each location.</li> </ol>	<p><input checked="" type="radio"/> Yes    <input type="radio"/> NO</p> <p>Panels: <u>6</u></p> <p>Material Size &amp; Type: <u>7-gauge 304 Stainless</u></p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No  <input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p>Pin Type: <u>Stainless Steel</u></p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>
L.	<p>Banjo Plates:</p> <ol style="list-style-type: none"> <li>Banjo plates, 304 stainless steel, added for support/safety chains at rear corner posts and tail gate as required.</li> <li>Tailgate shall be able to operate in partial to full open position.</li> </ol>	<p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p>	<p>\$ _____</p>
M.	<p>Cab Protector:</p> <ol style="list-style-type: none"> <li>Cab protector 1/8", 304 stainless steel load bearing type 36" in length with a 10" inset on both sides to provide vehicle exhaust clearance and be symmetrical.</li> <li>Cab protector shall be inset 10" per side to provide 6" minimum clearance to the exhaust pipe.</li> <li>Cab protector shall have provisions for safety strobe lights, Whelen Model 500 series surface mount with branch protection.</li> </ol>	<p>Size: <u>10 gauge 304 36"</u></p> <p>Inset Amount: <u>10</u> in <u>approx. TBD per Chassis</u></p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p>	<p>\$ _____</p>
N.	<p>Horizontal and Vertical Members:</p> <ol style="list-style-type: none"> <li>All horizontal and vertical members shall be self-cleaning to prevent material build up.</li> </ol>	<p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p>	<p>\$ _____</p>
O.	<p>Side Board Holders:</p> <ol style="list-style-type: none"> <li>Height at top of the side boards shall not exceed 8'-10"</li> <li>Side board holders shall be bolt thru design for with a 4" width.</li> <li>Sideboards 3" x 6" stainless steel C-Channel with a 3" wide x 3" high, P/N CACD830 Acme Rubber Company (1.800.222.2263)</li> <li>The dock bumper shall be bolt attached thru a continuous strip of 3/16" stainless steel, bolted on 8" centers, to the top of the stainless steel C-channel.</li> </ol>	<p>Height @ Top of Side Boards: <u>6"</u></p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p>Make: <u>Acme Rubber</u> Model: <u>CACD 830</u></p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p>	<p>\$ _____</p>

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P.	<p><b>Tie Down Rail:</b></p> <ol style="list-style-type: none"> <li>Tarp tie-down rail or 5 evenly spaced hooks on side of body and on tailgate.</li> <li>Tie-down rail and hooks shall be 3/8" dia. 304 stainless steel minimum.</li> </ol>	<p>Tie Down Rail Yes <input checked="" type="radio"/> No <input type="radio"/>          Hooks Quantity: <u>5</u> <input checked="" type="radio"/> Yes <input type="radio"/> No  <input checked="" type="radio"/> Yes <input type="radio"/> No</p>	<p>\$ _____</p>
Q.	<p><b>Rear Fenders:</b></p> <ol style="list-style-type: none"> <li>Fenders shall be full body length with 3" formed outer lips.</li> <li>Fenders shall be constructed from 7-gauge/ 3/16", 304 stainless steel</li> <li>Fenders shall be reinforced to the body at the front and rear of the body minimum</li> </ol>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No  <input checked="" type="radio"/> Yes <input type="radio"/> No  <input checked="" type="radio"/> Yes <input type="radio"/> No</p>	<p>\$ _____</p>
R.	<p><b>Suspension Protection:</b></p> <ol style="list-style-type: none"> <li>For Hendrickson rear RTE-463 walking-beam, multi-leaf spring system, dual spring rate.             <ol style="list-style-type: none"> <li>Rear rubber skirting to 10" above the pavement shall extend across the rear to prevent asphalt from getting onto the rear suspension and causing damage.</li> <li>Front rubber skirting to 10" above the pavement shall extend across the front of the suspension to prevent salt/sand from getting onto the rear suspension and causing damage.</li> <li>The rubber skirting shall be easily removable for maintenance and repair, 15 minutes maximum.</li> </ol> </li> </ol>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No          Height Above Pavement: <u>10</u> inch  <input checked="" type="radio"/> Yes <input type="radio"/> No          Height Above Pavement: <u>10</u> inch          Removal Time: <u>15</u> minutes</p>	<p>\$ _____          \$ _____          \$ _____</p>
S.	<p><b>Shovel Bracket:</b></p> <ol style="list-style-type: none"> <li>Shovel hook bracket (1 required) located on the left side wheel cover of the dump body.</li> <li>The bracket shall be a spring-loaded snap-close clamp to secure the shovel handle to the body with a retention bracket for the top end of the shovel to slide into. The shove blade shall face forward.</li> </ol>	<p><input checked="" type="radio"/> Yes <input type="radio"/> No  <input checked="" type="radio"/> Yes <input type="radio"/> No</p>	<p>\$ _____</p>
T.	<p><b>Toolbox:</b></p> <ol style="list-style-type: none"> <li>A toolbox shall be installed on top of the left rear fender just forward of the tandem dual tires.</li> <li>The toolbox shall fit the body contour on the back side.</li> <li>The toolbox shall be 66" L x Fender Width x 16" T.</li> <li>The toolbox door shall be bottom hinged with stainless cable stops on each end of the door</li> <li>The door shall have a stainless steel key lockable slam lock</li> </ol>	<p>Location: <u>Left Rear Fender</u>  <input checked="" type="radio"/> Yes <input type="radio"/> No          Toolbox Size: <u>66L</u> x <u>16T</u> x <u>24W</u>  <input checked="" type="radio"/> Yes <input type="radio"/> No  <input checked="" type="radio"/> Yes <input type="radio"/> No</p>	<p>\$ _____</p>

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U.	<p>Mudguards:</p> <ol style="list-style-type: none"> <li>1. Front of tandem aluminum.</li> <li>2. Rear of tandem heavy-duty rubber anti-sail type. The mud flaps shall be easy to swing forward and hook above the rear tire. The latch system shall have a reinforced hole on the mud flap and a hook on the body to retain the mud flap.</li> <li>3. The rear mud flap hinge joint shall be chain type (no axle type allowed)</li> <li>4. The mud flaps shall not come unhooked when the dump body is raised for dumping into the paving machines.</li> </ol>	<p>Yes <input checked="" type="radio"/> No <input type="radio"/> <b>Stainless</b></p> <p>Hinge Type: <u>Chain</u></p> <p>Yes <input checked="" type="radio"/> No <input type="radio"/></p>	<p>\$ _____</p> <p>\$ _____</p>
V.	<p>Ladder</p> <ol style="list-style-type: none"> <li>1. Mounted left and right rear side of body centered above the rear tire.</li> <li>2. Ladder rungs shall be open grip strut non-slip type.</li> <li>3. Ladder portion below the body shall be a bolt-on type.</li> <li>4. Rungs shall be evenly spaced</li> <li>5. Left side 1st rungs no more than 22" above the ground.</li> <li>6. Right side 1st rungs no more than 22" above the ground.</li> </ol>	<p>Location: <u>LH &amp; RH Rear above tire</u></p> <p>Rung Material: <u>Open grip stainless steel</u></p> <p>1st Rung Height: <u>22</u> inches</p> <p>1st Rung Height: <u>22</u> inches</p>	<p>\$ _____</p>
W.	<p>Vibrator,</p> <ol style="list-style-type: none"> <li>1. Vibrator, 2 required, shall be a Cougar DC-1100 12-vDC or approved equal:</li> <li>2. Dump body shall have a 12-vDC electric vibrator securely attached to the each lower side of the dump body structure.</li> <li>3. Each vibrator shall produce a minimum of 1,000-lbs of centrifugal force.</li> <li>4. Mounting bolts shall not protrude through the floor.</li> <li>5. A stainless steel safety cable shall secure the vibrator to the body with a minimum of two attachment points located on opposite sides on the vibrator to prevent the vibrator from falling off if the bolts come loose.</li> <li>6. The vibrator shall be mounted using Grade 8 fasteners, washers and lock nuts.</li> <li>7. The electrical system shall include             <ol style="list-style-type: none"> <li>a. Operator abuse automatic timer shutdown. The timer shall be mounted in a location/manner to prevent operator adjustment.</li> <li>b. Automatic overload protection.</li> <li>c. Copper #4 welding cable minimum.</li> <li>d. Cab mounted momentary operator button wired through a constant-duty solenoid.</li> </ol> </li> </ol>	<p>Make: <u>Cougar</u> Model: <u>DC-1100</u></p> <p>Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>Force: <u>1100 lbs</u></p> <p>Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>Yes <input checked="" type="radio"/> No <input type="radio"/></p> <p>Cable Size: <u>#4</u></p> <p>Yes <input checked="" type="radio"/> No <input type="radio"/></p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>



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	<p>8. The vibrator shall be fully sealed against high-pressure wash water, corrosion, and road dirt.</p> <p>9. The vibrator shall be maintenance free not requiring lubrication or other routine maintenance functions except checking mounting bolts.</p>	<p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ _____</p> <p>\$ _____</p>
<p>X.</p>	<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. Back up lights Truck-Lite LED, flush mount, sealed lexan body, grommet insulated, multi-pin units model 44 P/N 44206C.</p> <p>4. Marker lights Truck-Lite LED 3 per side model 10 P/N 10250R or 10250Y or model 30 P/N 30250R or 30250Y.</p> <p>5. Rear ID bar Truck-Lite LED model 35 P/N 35741R or 35740R.</p> <p>6. License plate light, Truck-Lite model 15 P/N 15040</p> <p>7. Wiring shall be sealed Fit' N Forget modular plug-in type where possible.</p> <p>8. Salt/sand spreader illumination light Ecco PN E92007 500 lumens. The light shall be installed to provide night vision at the spreader for the operator but shall not blind on-coming traffic. Location shall be mutually determined at installation</p> <p>9. Dielectric grease shall be applied to all plug connections and terminals to prevent corrosion.</p>	<p>Make: <u>Truck Lite</u></p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p>Make: <u>ECCO</u>    Model: <u>E 92007</u></p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>
<p>Y.</p>	<p>Strobe Light System:</p> <p>Rear Corner Posts:</p> <p>1. Whelen 500 series rubber grommet flush mount system "Ultra Bright" LED strobe/flasher.</p> <p>2. Strobe lights shall be located as follows:</p> <p>a. Rear corner posts top, (1) required per side Whelen 500 Series</p> <p>1. Installed above the integral Stop/Turn/Tail/ lights.</p> <p>2. "Amber", grommet mounted top left side.</p> <p>3. "Blue", grommet mounted top right side.</p> <p>Cab Protector:</p>	<p>Make: <u>Whelen</u>    Model: <u>500</u></p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>

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<p>3. Whelen Model 500 series surface mount with branch protection LED strobe, (2) required per side one front facing and one side facing on front outer corners of the cab protector.</p> <p>a. "Amber", mounted left side P/N 50A03ZAR. (2 required)</p> <p>b. "Blue", mounted right side P/N 50B03ZBR. (2 required)</p> <p>c. Brush Guard P/N 5-BRUSH (4 required)</p> <p>4. The warning lights shall operate off the "Touch Screen Control" panel Spec Section 3.6.E, with 1 switch per strobe light, with light to indicate the strobe is on shall be provided. .</p> <p>5. Dielectric grease shall be applied to all plug connections and terminals to prevent corrosion.</p>	<p>Make: <u>Whelen</u> Model: <u>500</u></p> <p><u>Yes</u></p> <p>Yes <input checked="" type="radio"/> No "Touch Screen Control" should read "Touch Guard Control"</p> <p><input checked="" type="radio"/> Yes No</p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>
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<p>13-Yard Live Floor Dump Body Equipment SUB TOTAL COST</p>	<p>\$ <u>40,426.00</u></p>
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3.2 Body Hoist or approved equal:

	Description of Equipment	Offered Equipment	Cost
<p>A.</p>	<p>Body Hoist: <u>Pg. 17 Hydraulics E-12-A = DA Section</u></p> <p>1. Hoist, Custom model 6.54-3004-150-SA single cover tube single acting direct lift nominal 27.5-ton hoist or approved equal. Vendor shall load test and verify that the hoist is appropriate for its intended use.</p> <p>2. The hoist capacity and design shall be appropriate to lift a fully heaped load of asphalt, wet sand or design water load.</p> <p>3. Hoist material medium-tensile steel meeting NTEA Class 100 requirements.</p> <p>4. Hoist shall be "Direct Lift" type design with the initial cylinder force directed upward for sufficient breakaway force and cylinder force to lift the loads outlined in Sec 3.7.A.2.</p> <p>5. Hoist pivot point bearings shall be greaseless composite bearing material "Never Require Lubrication".</p> <p>6. Hoist capacity: 79,800 lbs on 1<sup>st</sup> stage @ 2,500 psi.</p> <p>7. Hydraulic system pressure 2,500-psig maximum with 27.5-ton capacity rated at 70% or less of system capacity.</p> <p>8. Vendor shall demonstrate with load lift test that the hoist is proper for the application and the City's intended use.</p> <p>9. Hoist cycle time: 30 to 45 seconds.</p>	<p>Make: <u>Mailhot</u> Model: <u>CS140-65-40A</u></p> <p>NTEA Type: <u>Body hoist</u> Class: <u>110</u></p> <p>Ton Rating: <u>33.5</u> tons</p> <p>Hoist Type: <u>Direct Lift</u></p> <p>Yes <input checked="" type="radio"/> No <u>Greaseable</u></p> <p>Capacity: <u>33.5</u> tons at <u>2500</u> psig</p> <p>Hoist Cycle Time: <u>40</u> seconds</p> <p><input checked="" type="radio"/> Yes No</p>	<p>\$ <u>9,118.00</u></p> <p>\$ _____</p>

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	Description of Equipment	Offered Equipment	Cost
	10. Hoist cylinders shall have internal bypass to protect cylinders from damage. 11. Powered up and gravity down. 12. Rear Hinge: a. Fabricated from 8" x 4" x 1/2" structural angle iron. b. Hinge pins shall be 2-3/8" 416 stainless steel c. The body hinges and bearings shall be composite greaseless not requiring-lubrication. d. Hinge plate shall be fully welded to the dump body and to the truck frame. 13. Dump angle 50°. 14. Lift cylinder: Hard chrome cylinder rod all stages.	Yes <input checked="" type="radio"/> No in valve Yes <input checked="" type="radio"/> No Page 17 E-12.A DA Section Steel Type: <u>Angle Iron</u> Size: <u>4x4x1/2</u> Material Size & Type: <u>2" 416 Stainless</u> <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No Dump Angle: <u>50°</u> Yes <input checked="" type="radio"/> No Nitride	\$ _____ \$ _____
B.	Dump Body Safety Legs: 1. Dump body anti-lowering safety legs shall be provided. 2. The safety legs shall lock the dump body in the raised position preventing lowering of the dump body. 3. Pin storage (if applicable) in a sleeve, that the pin cannot fall/vibrate etc. out of shall be provided. 4. The pin shall be attached to the safety arm/dump body/chassis with chain/cable to prevent loss. 5. Safety legs shall rest in a saddle to prevent bouncing around.	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No Yes <input checked="" type="radio"/> No Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> Yes No <i>See note below</i>	\$ _____ \$ _____ \$ _____ \$ _____ \$ _____

*Do to the design of the Monroe safety prop pins are not required. The prop will fold over center in to a receiver type bracket.*

<b>Underbody Hoist SUB TOTAL COST</b>	\$ <u>9,118.00</u>
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3.3 Hydraulic System and Controls:

	Description of Equipment	Offered Equipment	Cost
A.	Hydraulic System Perimeters and Drive Method: 1. Hydraulic system shall operate off of the truck's system at low engine idle (750 rpm) and remain functional at all engine speeds not gaining increased performance above low engine idle speed. 2. Chelsea model 890 transmission "Hot Shift" PTO with hydraulic pump direct mounted to rear of the transmission with a fully enclosed "wet" drive shaft. PTO shall be rated for 670 lb-ft of torque constant duty.	Engine Operating RPM: <u>750</u> rpm  PTO Direct Mount: <input checked="" type="radio"/> Yes <input type="radio"/> No Make: <u>Chelsea</u> Model: <u>890</u>	\$ <u>28,610.00</u>  \$ _____
<p style="color: red;">The hydraulic system will produce 18.41 GPM @ 750 engine RPM</p>			
B.	Hydraulic System Design: 1. Hydraulic System shall be closed center, pressure compensated, load sensing type to provide hydraulic power to all accessories. All hydraulic components shall operate effectively and efficiently at 2,500 psi. 2. Pressure gauges for each hydraulic circuit shall be glycerin filled. 3. To augment the circuit pressure gauges the active hydraulic circuit pressure shall be displayed on the Operator Screen 4. Hydraulic Pump shall be cast iron variable displacement load sensing piston type, 5. Hydraulic pump size sufficient to operate the dump body snowplow and sand spreader, (approximate size 5.5 cid [cubic inch displacement] for transmission mount application), pump shall not interfere with the drive shaft or other items that require periodic service or repair. 6. SAE rear ports, SAE type mounting flange. Pump shall be rated for pressures up to 5,000 psi. Pump shall be Sauer Danfoss Series 45 direct mounted to the rear of the transmission using a Chelsea 890 series constant mesh PTO. 7. Hydraulic system shall operate at 2,500-psig maximum operational pressure and 40 gpm minimum at 1,700 rpm. 8. The hydraulic system shall be proper for intended use	System Type: <u>Sauer Danfoss closed center, piston pump, pressure compensated, Load sensing</u>  <input checked="" type="radio"/> Yes <input type="radio"/> No Make: <u>Sauer Danfoss</u> Model: <u>S/D 45F90C</u>  Pump Size: <u>5.5</u> cid Operating Pressure: <u>Max 5000</u> psig Pump Make: <u>Sauer Danfoss</u> Model: <u>45F90C</u> Flow: <u>40</u> gpm @ <u>2500</u> psi @ <u>1700</u> rpm PTO Make: <u>Chelsea</u> Model: <u>890</u>  <input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No	\$ _____ \$ _____ \$ _____ \$ _____ \$ _____ \$ _____ \$ _____



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D.	<p>Hydraulic Filtration:</p> <ol style="list-style-type: none"> <li>1. In-tank hydraulic filter.           <ol style="list-style-type: none"> <li>a. Rated for no less than 80 gpm</li> <li>b. Filter Schroeder CPI SG03020010 with KZ 10 Synthetic 10 micro-glass element with visual condition indicator gage</li> </ol> </li> <li>2. High Pressure, Pressure line Parker model (World Pressure Filter) WPF 7,000 psig rated with 7-micron absolute tandem type (1 per pump).</li> </ol>	<p><input checked="" type="radio"/> Yes    <input type="radio"/> No          Rating: <u>80</u> gpm          Make: <u>Schroeder CPI</u>    Model: <u>SGD 3020010</u>          Filter Rating: <u>10</u> microns          Make: <u>Parker</u>    Model: <u>WPF3 xxx</u>          Filter Size: <u>7</u> microns</p>	<p>\$ _____          \$ _____          \$ _____</p>
E.	<p>Hydraulic Control Valve Section:</p> <ol style="list-style-type: none"> <li>1. The hydraulic valve section shall be a modular manifold design that will efficiently and effectively operate either a front mount salt/sand conveyor and spinner, slid-in salt/sand spreader with liquid (prewet, anti-ice @ 15 gal/lane mile and ice blast @ 75-gal/lane mile), dump hoist and other specified hydraulically driven components.</li> <li>2. Each hydraulic function shall have its own individual manifold stacked together to form the manifold base.           <ol style="list-style-type: none"> <li>1. The manifold shall consist of:               <ol style="list-style-type: none"> <li>a. Inlet porting: SAE #16.</li> <li>b. Outlet porting: SAE #20.</li> <li>c. Load sense porting: SAE #4.</li> </ol> </li> <li>3. The dump body manifold shall be stacked next to the inlet port.</li> <li>4. The hydraulic control valves shall be pulse-width modulated and proportionally controlled.</li> <li>5. Each hydraulic valve segment shall be individually mounted to the manifold base assembly and be serviceable without removing any hydraulic hoses or other hydraulic valve segments.</li> <li>6. Each hydraulic valve segment shall have its own individual heavy-duty, continuous-duty solenoid coil.</li> <li>7. Each solenoid coil shall have an LED power indicator light for troubleshooting and have water/magnesium proof AMP Jr. Style connectors.</li> <li>8. All coils shall operate on 12vDC and require a maximum of 1,400 mille-amps.</li> <li>9. Each hydraulic valve shall be equipped with a cam lever style manual override except for the conveyor and spinner sections (these will have thumb screw overrides). Overrides shall be easy to access and operate.</li> </ol> </li> </ol>	<p>Make: <u>Sauer Danfoss</u>    Model: <u>PVG 32/100</u>  <input checked="" type="radio"/> Yes    <input type="radio"/> No  <input checked="" type="radio"/> Yes    <input type="radio"/> No    <u>Compliant w/ Sections 3.3 10. a &amp; b</u>          Size: <u>16</u>          Size: <u>16</u>          Size: <u>4</u>          Manifold Design: <u>Sections w/ Spreader.</u>          Valve Type: <u>Electric PWM manifold</u>          Yes    <input checked="" type="radio"/> No    <u>Valve is serviceable without removing hoses or other valves</u>  <input checked="" type="radio"/> Yes    <input type="radio"/> No  <input checked="" type="radio"/> Yes    <input type="radio"/> No  <input checked="" type="radio"/> Yes    <input type="radio"/> No  <input checked="" type="radio"/> Yes    <input type="radio"/> No</p>	<p>\$ _____          \$ _____          \$ _____          \$ _____          \$ _____          \$ _____          \$ _____          \$ _____</p>

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<p>10. Valve flow ratings:</p> <p>a. Dump body section shall be a Sauer Danfoss PVG100 rated at 47-gpm minimum.</p> <p>b. All other sections shall be rated at 27-gpm minimum.</p> <p>11. The sand/salt spreader manifold shall have 5 valve cartridge ports for:</p> <p>a. Conveyor</p> <p>b. Spinner</p> <p>c. Prewet (blank/plugged for future use)</p> <p>d. Anti-Ice (blank/plugged for future use)</p> <p>e. Spare (blank/plugged for future use)</p> <p>12. Control valve specifications</p> <p>a. Dump Body Hoist: 4-way double acting with 500 psi down side work port relief valve.</p> <p>b. Plow Lift: 4-way double acting with 500 psi down side work port relief valve</p> <p>c. Plow Angling: 4-way double acting</p> <p>d. Conveyor: 2-way cartridge style flow control with manual override rated at 17-gpm</p> <p>e. Spinner: 2-way cartridge style flow control with manual override rated at 7-gpm</p>	<p>Make: <u>Sauer Danfoss</u> Model: <u>PVG 100</u></p> <p>Rating: <u>47</u> gpm</p> <p>Rating: <u>27</u> gpm</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p>Yes <input checked="" type="radio"/> No <b>Additional Spare Section Provided</b></p> <p><input checked="" type="radio"/> Yes No</p> <p>GPM: <u>27 or as customer required</u></p> <p>Yes No GPM: <u>27 or as required</u></p> <p>Yes No GPM: <u>17</u></p> <p><input checked="" type="radio"/> Yes No</p> <p>GPM: <u>7</u></p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>
<p>F. Plow Edge Protection System:</p> <p>1. The snowplow edge protection system shall function to:</p> <p>a. Reduce plow weight on snowplow edge.</p> <p>b. Eliminate the requirement for castor support wheels.</p> <p>c. Add hydraulic up (lift) pressure to snowplow lift circuit to reduce weight of the plow on the roadway.</p> <p>2. The cumulative weight of the plow weight and hydraulic down pressure shall be adjustable and balanced with up/lift hydraulic pressure to provide efficient snowplowing and reduce plow edge wear.</p> <p>3. Adjustments shall be sealed/tamperproof so only authorized personnel can make adjustments to plow balance settings.</p> <p>4. The snowplow shall be free to follow the contour of the roadway and shall do so utilizing an active modulating hydraulic function that forces the snowplow to the road surface as well as holds (counters) the plow from full force down on the roadway. The net result shall be:</p>	<p>Make: <u>Certified Power</u> Model: <u>A60317HD07</u></p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p>How Sealed: <u>1. inside enclosure 2. Wire lock Seal</u></p> <p><input checked="" type="radio"/> Yes No</p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>

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	<p>a. Plow lift must be immediate to avoid plow or roadway damage.</p> <p>b. Plow return to plowing shall be fast to minimize under plowed stretches of roadway.</p> <p>5. The amount of both the down force and countering up lift shall be adjustable to provide proper plowing operation.</p> <p>6. The balance system shall not require being turned off to raise or lower the plow.</p> <p>7. When the plow balance system is turned off the full weight of the plow shall be applied to the roadway.</p> <p>8. The plow balance system shall be controlled via CAN integrated rocker switch located on the snowplow control panel. The switch shall be easy to access and lighted when the circuit is in operation.</p> <p>9. The balance valve system shall utilize manifold mounted, solenoid activated cartridge valves.</p> <p>10. Each solenoid coil shall have an LED power indicator light for troubleshooting and have water/magnesium chloride proof Din connectors.</p> <p>11. Each hydraulic valve segment shall have its own individual heavy-duty, continuous-duty solenoid coil.</p> <p>12. Hydraulic test ports for field observation of control pressures shall be provided in a very easy to access location.</p>	<p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p>Where located: <u>CPI Console, customer defined</u></p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>
<p>G.</p>	<p>Snowplow, Spreader and Hoist Control System or Approved Equal:</p> <p>1. Certified Power "Freedom" ACS Control system with the following characteristics or Approved Equal.</p> <p>2. A complete in-cab integral console control system shall include all hydraulic functions, spreader functions, auxiliary functions, warning indicators and diagnostic and programming functions.</p> <p>3. The ACS system shall be ergonomically mounted on a center floor or seat mounted armrest design control console as follows:</p> <p>4. The winter snowplow/snow fighting and summer systems shall:</p> <p>a. Communicate over a CAN Open system bus using CAN Open protocol and shall not be a proprietary communication protocol.</p> <p>b. The system shall consist of four primary modules that reside on the Bus and allow flexibility in mounting configurations.</p> <p>c. The system is completely expandable and allows for additional modules to be added to the CAN Bus.</p>	<p>Make: <u>Certified Power</u> Model: <u>Freedom ACS</u></p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p>Type System: <u>Can Open</u></p> <p>Number of Modules: <u>4</u></p> <p><input checked="" type="radio"/> Yes No</p>	<p>\$ _____</p> <p>\$ _____</p>



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<p>d. All four primary components of the system are firmware upgradeable using a laptop and Certified Power, Inc. interface cable(s).</p> <p>e. The configuration file for a calibrated system can be saved for transfer to other systems or as a backup providing the ability to use specific configurations for varying vehicle use or operator skill level.</p> <p>f. The original setup configuration shall be maintained at the factory as a secondary backup and is traceable by part number.</p> <p>g. The system shall incorporate three levels of security and access that is password protected and defined by the user. No tools, PC or Fobs are required.</p> <p>h. There shall be three levels of access called 1) "operator", 2) "technician" and 3) "administrator" shall give the user varying levels of access to the system setup, data, configuration fields and parameters based upon access given.</p> <p>    1) Operator shall only have access for on-screen data and collection of dispersion data.</p> <p>    2) Technician shall be capable of calibrating and diagnosis</p> <p>    3) Administrator shall have full access to all menus in the system and have the ability to make system configuration changes as well as system parameter changes.</p> <p>5. The in-cab control system panel shall support up to 10 rocker switch inputs and up to 4 joystick inputs.</p> <p>6. The ACS (Advanced Control System) Display</p> <p>    a. The display screen shall have:</p> <p>    b. A fully sealed TFT LCD (Thin Film Transistor Liquid Crystal Display) constructed using a sandwich-like structure with the liquid crystals between two glass plates.</p> <p>    c. The display size shall be a 4" x 6" minimum.</p> <p>    d. The TFT LCD graphic display shall have auto dimming backlight that is user adjustable.</p> <p>    e. The screen shall have an Ethernet port for accessing a built in Web server. The operator display screen can be used to configure or troubleshoot a system with or without connecting to a PC or Laptop.</p> <p>    f. The interface shall utilize Internet Explorer and not require any proprietary software to connect to the system.</p>	<p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p>Rocker #: <u>10</u>    Joystick #: <u>4</u></p> <p>Screen Type: <u>TFT LCD</u></p> <p>Display Size: <u>4"</u> x <u>6"</u></p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p>	
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<p>g. The display shall incorporate fully field configurable inputs and outputs; 4 X 32 bit Processor, 1 meg+ RAM</p> <p>h. The display shall have a built in diagnostic feature allowing technicians to view all input signals in real time.</p> <p>i. The display shall provide error and event logging in English and system status change logging for reviewing operator inputs.</p> <p>j. A status window shall provide the operator with system status messages.</p> <p>k. When configured the display will display:</p> <ol style="list-style-type: none"> <li>1) Granular rate, in lbs/lane mile.</li> <li>2) Prewet rates gallons/lane mile (provided but not used this application).</li> <li>3) Anti-ice rates, gallons/lane mile (provided but not used this application).</li> <li>4) Anti-ice lane indication, (not used this application).</li> <li>5) Road/air temperature, degrees °F &amp; °C.</li> <li>6) Hydraulic pressure PSIG.</li> <li>7) System status, error messages.</li> <li>8) Plow float indication.</li> <li>9) Auto/manual mode indication.</li> <li>10) Material currently being used.</li> </ol> <p>l. The unload mode shall be available when using "Auto Only" mode to allow the spreader to be emptied while the unit is stationary.</p> <p>m. Granular rates shall be infinitely adjustable and include up to 6 material types.</p> <p>n. Lane spread configurable for either % of lane width or calibrated lane(s).</p> <p>o. The system shall automatically adjust granular output to maintain constant lbs/lane mile output when using calibrated lane feature for up to 4 lanes for accurate ground speed application.</p> <p>p. Either or both pre-wet and anti-ice rates can run accurately independently or simultaneously (provided but not used this application).</p> <p>q. The anti-ice lane system shall automatically adjust liquid output to maintain constant gallons/lane mile output for up to 3 lanes when using calibrated lane feature (provided but not used this application).</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>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>Yes No</p> <p>Yes No</p> <p>Yes No</p>	
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<p>r. The system shall have "over speed" protection for the liquid functions that will alert the operator and shut down the liquid function when the driver has exceeded a user defined speed (provided but not used this application).</p> <p>s. The liquid functions shall automatically stop due to low level or overspeed conditions (provided but not used this application).</p> <p>t. The system shall automatically go into "override" mode in the event of sensor failure(s). The failure(s) shall be logged in diagnostic error log.</p> <p>u. The active functions that are not in use shall show "off" and the graphic display shall be "grayed out" for ease of operator interpretation.</p> <p>7. The ACS Operator Control Panel:</p> <p>a. The operator panel shall have a molded silicone rubber keypad utilizing separate high life magnetic snap action switches and 3 high life magnetic 16 position detented encoders used for:</p> <ol style="list-style-type: none"> <li>1) Rate.</li> <li>2) Lane.</li> <li>3) Liquid control (provided but not used this application).</li> </ol> <p>b. The operator shall be able to easily and quickly adjust spread rate within allowed rates:      Granular: 50 lbs/lane mile to 150 lbs/lane mile      Liquid: 15 gal/lane mile to 75 gal/lane mile (not active)</p> <p>c. The detented positions will be user programmable as to the value of each increment in the setup menu.</p> <p>d. The operator panel provides input capabilities to support RS232, RS422, truck speed input, and multiple digital I/O.</p> <p>e. The panel shall have provisions for Roadwatch or Vaisala Surface Patrol road/air temperature sending unit input for indication on Operator Display.</p> <p>f. The panel shall have built in LED backlighting that automatically dims with the display for night viewing.</p> <p>g. The panel shall incorporate Blast and Pause (Interrupt) functions.</p> <p>h. The panel shall incorporate mode, product and select switches integrated in the panel.</p>	<p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p>Panel Material: <u>Molded Silicone Rubber</u></p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p>Allowed Rate: <u>50</u> to <u>150</u> Lbs/lane mile</p> <p>Allowed Rate: <u>15</u> to <u>75</u> gal/lane mile</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ _____</p>
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<p>i. The spreader and liquid functions when controlled, utilizing the closed loop feedback shall incorporate an "auto trim" feature that will allow the system to automatically set the PWM minimums and maximums when engaged.</p> <p>j. The software shall incorporate a "test speed" mode for use in testing the system safely without requiring the truck to be moving or the drive axles engaged.</p> <p>8. The ACS Joystick and Joystick Module:</p> <p>a. Joystick Module shall include: (14) digital inputs and (5) Joystick Axis inputs with Float(s) provisions.</p> <p>b. Control of snow plow and body dump hoist shall be through a multi-function electric joystick. The joystick shall be a fully proportional 3-axis joystick with four operating modes plus blast and pass buttons.</p> <p>c. The current operation mode shall be displayed on the Operator Screen.</p> <p>d. The joystick functions shall permanently and clearly labeled functions.</p> <p>e. An easy to use dead-man trigger provision must be provided on joystick control.</p> <p>f. The operating mode/blast/pass buttons shall be user programmable as follows:</p> <p>1) Top row, left to right: Hoist, Plow, Open for Scraper, Open for Wing.</p> <p>2) Bottom row, left to right: Blast, Pass.</p> <p>g. The snowplow functions shall be:</p> <p>1) Forward movement = Plow Lower.</p> <p>2) Rearward movement = Plow Raise.</p> <p>3) Left movement = Plow Angle Left.</p> <p>4) Right movement = Plow Angle Right.</p> <p>h. Dump body hoist functions as follows:</p> <p>1) Forward movement = Hoist Lower.</p> <p>2) Rearward movement = Hoist Raise.</p> <p>9. The ACS Hydraulic and Product Valve Driver Module:</p> <p>a. All electrical connections shall be fully sealed threaded IP68 assemblies for environmental protection and wiring retention.</p> <p>b. All external wiring shall be TPE fully sealed and with IP68 connections between the driver module and the valves.</p>	<p><input checked="" type="radio"/> Yes    No</p> <p>Digital Inputs: <u>14</u>    Joystick Axis: <u>5</u></p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p>How Does It Work: <u>Automatically displays current operator Selections</u></p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p>Provide Sample With Bid</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p>High Side #: <u>14</u></p>	<p>\$ _____</p> <p>\$ _____</p>
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<p>c. Output Module to include: (14) High-side PWM capable, individually programmable Outputs:</p> <ol style="list-style-type: none"> <li>1) Analog 4-20 mA, 100 ohm Input (1)</li> <li>2) Configurable Switch Inputs (NPN or PNP) (8) required.</li> <li>3) Digital (NPN) Switch Inputs (3) required.</li> <li>4) Feedback Sensor Inputs (4) required.</li> </ol> <p>d. All PWM (Pulse Width Modulated) outputs are software configurable and can be controlled by closed loop operation, proportional input devices, or digital input devices.</p> <p>e. Field Programmable Module Ports: Minimum (4) up to (14) additional ports for future system functions or circuit reassignments exclusive of basic system configuration.</p> <p>f. The module for system safety shall have over temperature shutdown, over current shutdown, and low voltage shutdown.</p> <p>g. The valve driver module shall reside on the BUS as the "Master" and all truck values and configurations will be saved in this module.</p> <p>h. Power and activation to "ACS" will be through a relay module (provided with the "ACS" system).</p> <p>i. All circuits will be ignition switch "Run" activated.</p> <p>j. A complete wiring diagram shall be provided for the specific model provided to include:</p> <ol style="list-style-type: none"> <li>1) Schematic shall be part number and location coded and weather sealed.</li> <li>2) Wiring schematic shall be 24" x 18" minimum size with print 1/8' minimum size.</li> <li>3) Installation and troubleshooting information</li> <li>4) A parts breakdown for the entire "ACS" system shall be provided.</li> </ol> <p>10. The final mounting position of all the operator controls shall be mutually agreed upon at installation.</p>	<p>Analog #: <u>1</u> Switch Input #: <u>8</u> Digital Switch #: <u>3</u> Feedback Sensor #: <u>4</u></p> <p>Field Programmable Port #: <u>14</u></p> <p><input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No</p>	<p>\$ _____ \$ _____ \$ _____ \$ _____ \$ _____</p>
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H.	<p>Hydraulic Hoses (No Approved Equals):</p> <ol style="list-style-type: none"> <li>All hoses must have JIC swivel connections at each end located in such a manner to aid in component replacement</li> <li>High-pressure hose Parker 451ST SAE 100R17, 1" dia ID steel braided 3,000-psi working pressure.</li> <li>Return hose Parker 451ST SAE 100R17, 1" dia ID steel braided 3,000-psi working pressure.</li> <li>Suction hose Parker 811HT 1 1/2" dia ID steel reinforced 150-psi working pressure with crimped swivel ends.</li> <li>All hydraulic hoses shall be shielded and secured/clamped at 18" intervals to prevent chaffing or damage under the truck.</li> </ol>	<input checked="" type="radio"/> Yes    No	\$ _____
		Brand: <u>Parker</u> Type: <u>HP</u>	\$ _____
		Brand: <u>Parker</u> Type: <u>HP</u>	\$ _____
		Brand: <u>Parker</u> Type: <u>HP</u>	\$ _____
		<input checked="" type="radio"/> Yes    No	\$ _____

Hydraulic System and Controls SUB TOTAL COST	\$ <u>28,610.00</u>
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3.4 Tarp System or Approved Equal:

	Description of Equipment	Offered Equipment	Cost
A.	<p>Tarp:</p> <ol style="list-style-type: none"> <li>Pull Tarp model N9.5E, 12vdc electric tarp system with pull-arms and anti-sail arms.</li> <li>Tarp system shall be installed on cab protector with strobe light provisions.</li> <li>Tarp must be able to extend approximately 2' past dump body.</li> <li>A "Red" LED "tarp open/extended" warning light shall be attached to the cab protector both sides to show that the trap is open and no dumping is allowed.</li> <li>Tarp shall operate off of the "Touch Screen" control</li> </ol>	<p>Make: <u>Pulltarp</u>    Model: <u>N9</u></p> <p>Yes    No</p> <p>Distance: <u>Min 2'</u></p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>
B.	<p>Tarp Material:</p> <ol style="list-style-type: none"> <li>Tarp Asphalt type A-2 14-oz nylon material, asphalt rated urethane coated both sides with "Super Slick Coating" rated at 400°F.</li> </ol>	Tarp Material Rating: <u>Asphalt</u>	\$ _____
C.	<p>Tarp Wind Deflector</p> <ol style="list-style-type: none"> <li>A tarp wind deflector shall be provided at front of hopper.</li> </ol>	<input checked="" type="radio"/> Yes    No	\$ _____

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D.	Pull Arms:		
	1. Pull arms for tall or irregular loads that load climber will not follow.	<input checked="" type="radio"/> Yes	No
	2. Pull arms shall be easily and quickly replaceable with standard electrical galvanized conduit.	<input checked="" type="radio"/> Yes	No
	3. Anti-sail arms shall be attached to the pull arms	<input checked="" type="radio"/> Yes	No

Tarp System SUB TOTAL COST	\$ <u>2,261.00</u>
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3.5 Pintle Tow Hook:

	Description of Equipment	Offered Equipment	Cost
A.	Pintle Hook Plate: 1. The pintle hook plates shall be set up to accept a future Holland pintle tow hook 30-ton capacity air cushioned type. 2. The pintle tow hook when installed shall not cause interference when unloading materials. 3. The pintle hook plate <u>shall not</u> extend more than 4" past the back edge/tread of the rear tires to assure the pintle hook plate does not contact the paver before the truck tires touch the paver hitch arms	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No	\$ <u>1,050.00</u>  \$ _____
B.	Mounting 1. Steel plate 3/4" thick mounted and gusseted to truck frame. 2. Mounting height 24" above the ground at top of pintle hook.	Plate Thickness: <u>3/4</u> Height: <u>24"</u>	\$ _____
C.	D-rings: 1. D-rings 1"-dia 3" x 4" ID 47,000-lbs MBS 2. Two required for safety chains mounted to steel mounting plate.	D-Ring Spec: <u>1"</u> <input checked="" type="radio"/> Yes No	\$ _____
D.	Trailer Brake Connections: 1. Air brake connections mounted on steel mounting plate. Swing-away glad hands with steel covers. 2. Air Brake connector: (type "A") for electrical SAE J560 7-way primary trailer cable receptacle brake connections for both ABS and non-ABS trailers. The receptacle shall be mounted on top left side on steel mounting plate. 3. Electric Brake Trailer Connection: (type "B") factory (OEM) plug-in trailer wiring harness wired to RV heavy-duty female 7-pin connector for ABS and non-ABS trailers. The receptacle shall be mounted on top left side on steel mounting plate. 4.	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No	\$ _____ \$ _____ \$ _____

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Description of Equipment	Offered Equipment	Cost
<p>Connector shall be fully sealed and have trailer connector boot installed on the back side to prevent corrosion from snow fighting chemicals.</p> <p>5. Brake Controller: Draw-Tite Activator 20187 digital plus inertia Trailer Brake Controller (no approved equals). The brake activator shall be installed in an easy to see and access position, but not in a location that interferes or could interfere with the driver or passenger during operation or while entering and exiting the vehicle.</p>	<p>Make: <u>Draw-Tite</u> Model: <u>20187</u></p>	<p>\$ _____</p> <p>\$ _____</p>

<b>Pintle Tow Hook SUB TOTAL COST</b>	<b>\$ <u>1,050.00</u></b>
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**3.6 Snowplow System Monroe 10-Foot Snowplow, Model MPPJ39R10-ISTT-PLG-POLY and Equipment or Approved Equal**

A.	<p>Snowplow:</p> <ol style="list-style-type: none"> <li>Power reversible, 10-foot long with 39-inch high mould board and two-section trip edge (5' blade sections).</li> <li>The trip edge shall be able to be easily bolted together for a single trip edge when using rubber cutting edges</li> <li>The provided snow plow shall be interchangeable without modification with City trucks CH109 &amp; CH110.</li> </ol>	<p>Make: <u>Monroe</u> Model: <u>MPPJ3910</u></p> <p>Trip Edge Sections: <u>TWO</u></p> <p><input checked="" type="radio"/> Yes    No</p> <p><u>Current One Piece</u></p> <p>Interchangeable with CH109 &amp; CH110 <input checked="" type="radio"/> Yes    No</p>	<p>\$ <u>12,720.00</u></p>
B.	<p>Moldboard:</p> <ol style="list-style-type: none"> <li>Mold board 3/8" thick polyethylene, (Safety Orange) one piece, no splices. Polyethylene:</li> <li>Ultra high molecular weight polyethylene material.</li> <li>Tensile strength 7,000 psi, ASTM D638.</li> <li>Elongation 800% at break.</li> <li>No breakage when izod impact tested ASTM D256A.</li> <li>New resin material only, color impregnated, ultra violet stabilized.</li> </ol>	<p><input checked="" type="radio"/> Yes    No</p> <p>Material: <u>Poly</u></p> <p><input checked="" type="radio"/> Yes    No</p> <p>UV Stabilized <input checked="" type="radio"/> Yes    No Color: <u>Orange</u></p>	<p>\$ _____</p>



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C.	<p>Trip Edge:</p> <ol style="list-style-type: none"> <li>1. Trip action: two-section with 3/4" torsion springs shall activate and automatically reset whenever cutting edge comes in contact with an obstruction.</li> <li>2. The 2 trip sections shall be 5' sections.</li> <li>3. The blade shall be supported by a 4" x 4" x 3/4" steel angle.</li> <li>4. Trip action shall prevent damage or dislodging manholes and covers. Torsion springs shall be easily adjustable to adjust for varying plowing conditions.</li> <li>5. The trip edge shall have provisions for bolting the two (2) 5' sections together into a single trip edge for use with rubber cutting edges.</li> </ol>	<p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>
D.	<p>Curb Shoes:</p> <ol style="list-style-type: none"> <li>1. Curb shoes AASHO standard, 3-hole, (2 required), steel 3/4" thick Winter Equipment P/N HC6312GR (right) and HC6312GL (left) or approved equal with 14 sq. in. of bearing surface,</li> <li>2. Installed/mounted one on each end of mold board.</li> </ol>	<p>Make: <u>Winter</u>    Model: <u>HC.6.3.12</u> <u>GR/GL</u></p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ _____</p>
E.	<p>Plow Frame:</p> <ol style="list-style-type: none"> <li>1. Constructed from welded structural steel,</li> <li>2. Upper frame work and 10 reinforcing ribs minimum 3/8" thick</li> <li>3. Lower frame 1/2" thick minimum.</li> <li>4. Plow frame shall be designed to shed debris and prevent entry of debris and moisture into tubes, joints and crevices.</li> </ol>	<p><input checked="" type="radio"/> Yes    No</p> <p>Size: <u>Qty 10 1/2" ribs thick</u></p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ _____</p>
F.	<p>Cutting edge:</p> <ol style="list-style-type: none"> <li>1. Kuper GK-5, 2-piece blade with ceramic inserts in thick molded rubber cutting edge punched with round holes to AASHO standards on 12" centers; ends shall be punched for 3-hole curb shoe (Spec Sec. 11.7-D. The 5/8" dia. mounting holes shall be round; slotted holes are not acceptable.</li> <li>2. Plow shall be able to accept either the two-section blade or a single section 10 ft. plow edge.</li> </ol>	<p>Make: <u>Kuper</u>    Model: <u>GK.5.</u> <u>3'+4' Sections</u></p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ _____</p> <p>\$ _____</p>
G.	<p>Spray Guard:</p> <ol style="list-style-type: none"> <li>1. Spray guard shall be bolted to top of moldboard</li> <li>2. Material 12" wide x 1/4" thick rubber belt.</li> </ol>	<p><input checked="" type="radio"/> Yes    No</p>	<p>\$ _____</p>

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H.	Blade Guides: (No Substitutes) 1. Winter Equipment Company (800.294.6837) PN KT-PM36 2. Blade guides one per side, 2 required. 3. Length 36" long, color "Safety Orange" outer PVC sheeting over wire cable.	Make: <u>Winter</u> PN: <u>KT-PM36</u> <input checked="" type="radio"/> Yes    No	\$ _____
I.	Paint: 1. Paint shall be "Black" polyester powder epoxy painted, applied following recommended procedures. 2. All parts painted prior to assembly. 3. Powder epoxy paint shall be a minimum of 2-mils thick. 4. Removal of all surface contaminations (grease, welding and surface slag). 5. Steel shot blasting of all parts.	Type of Paint: <u>Powder Coat</u>  Paint Thickness: <u>2.5-3.5</u> mils <input checked="" type="radio"/> Yes    No  <input checked="" type="radio"/> Yes    No	\$ _____
J.	Castor Wheels Brackets: 1. Castor wheels shall be suitable for future installation of Snow-Wheel System Inc. (507) 238-1980, model 6509 swivel snow-wheel with height adjustment. <b>Castor wheels shall not be provided.</b> 2. The castor wheel mounting plate shall be designed for : a. With a new rubber bit that the castor adjustment arm does not extend out of its sleeve any more than necessary to reduce flexing of the castor wheel adjustment shaft. b. The castor wheel mounting plate shall have 4 different mounting hole sets to allow proper castor wheel height adjustment with either rubber bits or steel cutting edges.	Castor Bracket Cost \$ _____  <input checked="" type="radio"/> Yes    No  Number of Castor Mounting Locations: <u>4</u>	\$ _____
K.	Joystick Controls: 1. The snowplow and all functions shall be joystick controlled. 2. The joystick shall be capable of controlling the Monroe model MPPJ39R10-ISTT PLG-Poly front snowplow. 3. The snowplow shall operate off the hydraulic system and controls contained in specification section 11.4.A thru F of this specification.	<input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No  <input checked="" type="radio"/> Yes    No	\$ _____

Monroe 11-Foot Underbody Snowplow, Series 3500 TOTAL COST <u>Front Mount Plow</u>	\$ <u>12,720.00</u>
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3.7 Monroe Flat Plate Hitch or Approved Equal

	Description of Equipment	Offered Equipment	Cost
	<p>Hitch Type:</p> <ol style="list-style-type: none"> <li>Flat plate quick hitch or approved equal shall interchange with existing flat plate hitches installed on City trucks CH94 through CH110 and easily mount/dismount/operate existing Monroe Model MPPJ39R10-ISTT-PLG-POLY snowplows.</li> <li>Truck mounted plate shall be 5/8" thick minimum with two upper steel claws mating upper portion of plow to hitch.</li> <li>Lower attachments shall mate lower portion of plow to hitch. The attachment shall use male spring loaded handle operated pins on flat plate hitch mating into a female holes in plow frame.</li> <li>The spring loaded latching handle (painted orange) shall be located on the left front of the plow hitch. The handle shall be easy to operate for various size and strength operators.</li> <li>When plow is removed from truck only a flat plate hitch shall remain on the truck. Lifting cylinder and other associated items shall stay with the plow assembly.</li> <li>Plow/hitch design shall not obstruct full forward tilt of the trucks hood assemble. Hose connections shall be in one (1) central easy to access location.</li> </ol>	<p><input checked="" type="radio"/> Yes    No</p> <p>Plate Thickness: <u>5/8"</u>    Material: <u>HRA36</u></p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ <u>2,637.00</u></p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>
	<p>Front Snowplow Hydraulic Quick Release Coupling System:</p> <ol style="list-style-type: none"> <li>The snowplow hydraulic connections shall be thru a multi-hose lever-arm connector system.</li> <li>The system shall be a Faster Quick Release Coupling Multi-Faster Series set up the same as City units CH94 thru CH110. (No Approved Equals)           <ol style="list-style-type: none"> <li>Female Coupler: P/N 2P508-4-12-N-F</li> <li>Male Coupler: P/N 2P508-4-12-N-M</li> </ol> </li> <li>All male/female fittings shall have protective cover guards to prevent dirt and damage when the hoses are disconnected</li> </ol>	<p>Make: <u>Faster</u>    Model: <u>NPN</u></p> <p>Yes    No</p> <p>Female P/N: <u>2P508.4.12.N.F</u></p> <p>Male P/N: <u>2P508.4.12.N.M</u></p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>
	<p>Paint:</p> <ol style="list-style-type: none"> <li>Paint shall be "Black" polyester powder epoxy painted, applied following recommended procedures.</li> <li>All parts painted prior to assembly.</li> <li>Powder epoxy paint shall be a minimum of 2-mils thick.</li> <li>Removal of all surface contaminations (grease, welding and surface slag).</li> <li>Steel shot blasting of all parts.</li> </ol>	<p>Type of Paint: <u>Powder Coat</u></p> <p>Paint Thickness: <u>2.5-3.5</u>    mils</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ _____</p>

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Monroe Flat Plate Hitch UNIT SUB TOTAL COST	\$ <u>2,637.00</u>
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3.8 Monroe Snowplow Miscellaneous Items

	Description of Equipment	Offered Equipment	Cost
1.	Snowplow Lights: 1. LED 10 Diode Pattern 7" round plow light kit Truck-Lite model 80863 2. Lights shall be installed using rubber cushion pads and 3-point stainless steel brackets to prevent damage from corrosion. Lights shall be installed on truck fenders. : 3. Headlight wiring shall be sealed. 4. Wiring connectors shall be as "waterproof" as practical using shrink tube and dielectric grease. 5. 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). 6. Dielectric grease shall be applied to all electrical plug terminals and connections to reduce corrosion.	Make: <u>Truck Lite</u> Model: <u>80863</u>  <input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No	\$ <u>1,304.00</u>
2.	Paint: 1. Paint shall be "Black" polyester powder epoxy painted, applied following recommended procedures. 2. All parts painted prior to assembly. 3. Powder epoxy paint shall be a minimum of 2-mils thick. 4. Removal of all surface contaminations (grease, welding and surface slag). 5. Steel shot blasting of all parts.	Type of Paint: <u>Powder</u>  <input checked="" type="checkbox"/> Yes No Paint Thickness: <u>3-4</u> mils <input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No	\$ _____

Monroe Snowplow Miscellaneous Items TOTAL COST	\$ <u>1,304.00</u>
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3.9 Sundries Equipment

	Description of Equipment	Offered Equipment	Cost
A.	Protective Skirting: 1. Rear rubber skirting to 10" above the pavement shall extend across the rear to prevent asphalt from getting onto the suspension and causing damage. 2. Front rubber skirting to 6" above the pavement shall extend across the front of the suspension to prevent salt/sand from getting onto the suspension/air bags and causing damage. 3. The rubber skirting shall be easily removable for maintenance and repair, 15 minutes maximum.	<input checked="" type="radio"/> Yes    No  <input checked="" type="radio"/> Yes    No  <input checked="" type="radio"/> Yes    No	\$ <u>873.00</u>  \$ _____  \$ _____
B.	Driver Height Warning Sign 1. Installed on truck dash providing the travel height of the vehicle. 2. Sign shall be in 1" "white" block letters.	<input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No	\$ _____
C.	Conspicuity Tape: 1. Conspicuity tape shall be applied to both sides of the dump body, and to the tailgate; location at the lower skirt line and on the top rail 2. DOT-C2 Standard No. 108 reflective conspicuity tape 3. Tape shall be applied in symmetrical pattern from middle of panel outward.	<input checked="" type="radio"/> Yes    No Make: <u>Reflexite</u> Model: <u>18806</u> <input type="radio"/> Yes <input type="radio"/> No	\$ _____

<b>Sundries Equipment SUB TOTAL COST</b>	\$ <u>873.00</u>
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3.10 **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.

	Description of Equipment	Offered Equipment	Cost
A.	Spare Parts: 1. Joystick controller quantity (1)	Make: <u>PQ</u> Model: <u>M 22047</u>	\$ <u>960.00</u>
B.	Inspection Trip: 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. 2. When 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. 3. The City may select to send 4 representatives to inspect the 1st 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. 4. Inspection Trip Costs to include: a. Air fare per person: b. Surface transportation costs: c. Lodging per person per day: d. Meals per person per day: 5. Total cost per person for 1st article inspection trip:	Provide information:  Distance to fabrication plant: _____ miles Plant Location: _____  Air Fare: \$ <u>400.00</u> , Airline: <u>Frontier</u> Surface Transportation: \$ <u>0</u> , Mode: <u>CAR</u> Lodging / day: \$ <u>120.00</u> , Hotel: <u>Monroe</u> Meals / day: \$ <u>50.00</u>	          \$ <u>400.00</u> \$ <u>0</u> \$ <u>120.00</u> \$ <u>50.00</u> \$ <u>570.00</u>

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**4.0 Dump Body and Other Dealer Provided Equipment (where applicable):**

**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 451ST SAE 100R17 (tight bend radius) 2-wire braid hose meeting SAE-100R16 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.

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- 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 and beveled end.
- E. Welds shall be full length to prevent "rust bleed" from non-welded seams

**5.0 Manuals/Equipment**

Item	Description of Equipment	Offered Equipment	Cost
<b>Training Tape</b>	One DVD or CD demonstrating and explaining the safe and proper use of the vehicle/equipment. 1. Dump Body & Equipment.	<input checked="" type="checkbox"/> Yes    No	\$ 120.00
<b>Operators Manual Paper</b>	One book per vehicle/equipment with "safe equipment operation" section for each component. 1. Dump Body & Equipment.		\$ 0
<b>Service/Maintenance Manual Paper</b>	Two complete sets per Contract (not per vehicle); binder required, 1. Manuals shall be provided for: A. Dump Body & Equipment. 2. Manuals shall include complete and detailed information for maintenance of the equipment, including general information, specifications, troubleshooting guide, lubrication and required adjustments.	<input checked="" type="checkbox"/> Yes    No <input checked="" type="checkbox"/> Yes    No	\$ 0



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	<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><input checked="" type="radio"/> Yes    No</p>	
<p><b>Service/ 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:     A. Dump Body &amp; Equipment.</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><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ _____</p> <p>\$ _____</p>
<p><b>Service/ 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, specifications, troubleshooting guide, lubrication and required adjustments.</p>	<p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p>If other Specify: _____</p> <p>_____</p> <p>_____</p>	<p>\$ _____</p>

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	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.	<input checked="" type="radio"/> Yes    No	
<b>Parts Manual Paper</b>	Two complete sets, per Contract (not per vehicle) binders required, 1. Manuals shall be provided for: A. Dump Body & Equipment. 2. Illustrated parts book shall be furnished containing data so that part numbers can be readily found for each system.	<input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No	\$ <u>  0  </u>
<b>Parts Manual on CD rom or DVD</b>	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. 1. Information shall be provided for: A. Dump Body & Equipment. 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. 3. New CD roms or DVDs shall be provided when information is updated, superseded or changed.	<input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No  <input checked="" type="radio"/> Yes    No	\$ <u>  0  </u>

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<p><b>Parts Manual          On          Internet Access, or          Other Electronic          Media</b></p>	<p>One complete subscription; per Contract (not per vehicle)</p> <ol style="list-style-type: none"> <li>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.</li> <li>Internet information shall include complete and detailed information for parts for the:             <ol style="list-style-type: none"> <li>Dump Body &amp; Equipment.</li> </ol> </li> <li>Internet information shall cover vehicle/equipment, shall include general parts information, parts specifications, ordering guide lines and superseded parts information.</li> <li>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.</li> <li>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.</li> </ol>	<p>Access Information:          7 days/week including holidays <input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No  <input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No          If other Specify: <u>With vendor Approval</u></p> <p><input checked="" type="radio"/> Yes    No</p>	<p>\$ <u>0</u></p>
<p><b>New Equipment          Check-in Form:</b></p>	<p>The successful vendor shall complete the City's "New Equipment Check-in Form" completely and accurately with all requested information.</p>	<p>_____</p> <p>_____</p>	<p>\$ <u>0</u></p>

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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.		\$ <u>0</u>
<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.		\$ <u>0</u>
<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.		\$ <u>0</u>

6.0 Repair Parts Delivery

<b>Repair Parts delivery</b>	
A.	<p><b>Prime Vendor</b> is to indicate current Master Purchase Order agreement(s) in place with the City. (Example 0667A0108):</p> <p>If no agreement(s) exists, is your company willing to enter into long-term Master Purchase Order Agreement(s) in order to supply parts and components for the equipment and manufacturers proposed herein? <u>YES</u> OR NO</p>
B.	<p><b>Sub-Vendor</b> is to indicate current Master Purchase Order agreement(s) in place with the City. (Example 0298A0609):</p> <p>If no agreement(s) exists, is your company willing to enter into long-term Master Purchase Order Agreement(s) in order to supply parts and components for the equipment and manufacturers proposed herein? YES OR NO <u>Unknown</u></p>

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7.0 Warranty

7.1 General Warranty Provisions

WARRANTY (Table 1) Class 7 & 8 Vehicles		Complies (Y or N/A)
A.	Express warranty is to be a minimum of 12 months on the vehicle/equipment. The standard factory warranty plan shall be provided as an attachment to your bid proposal	Y
B.	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	Y
C.	Warranty shall start when the City places the vehicle into service <b>NOT</b> on the delivery date. Taking an exception may make bid non compliant.	Y
D.	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.	Y
E.	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.	Y
F.	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	Y
G.	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	Y
H.	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 \$71.00/hour, not to exceed \$85.00/hour. (Enter a response of N/A if not available)	Y
I.	The bidder shall respond to request for warranty assistance within twenty-four (24) hours.	Y
J.	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	Y
K.	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.	Y

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L.	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.	Y
M.	This warranty in Table 1 and Table 2, is IN ADDITION to factory warranties on the vehicle and components	Y

**7.2 Fleet Defects and Lemon Clause**

<b>WARRANTY - (Table 2) Fleet Defect Clause, Class 7 &amp; 8 Vehicles</b>		
A.	<p>Definition; If during the warranty period, a vehicle/unit(s) covered by this specification is out of service for 10% or 208 hours during the first 2,080 service hours of the 1st year warranty period caused by defects in Design, Testing, Material, and/or Workmanship, then this "Product Defect Clause" or "Lemon Clause" goes into effect. The Product Defect Clause/Lemon Clause shall be determined solely by the City.</p> <ol style="list-style-type: none"> <li>1. The vendor shall at the City's option:               <ol style="list-style-type: none"> <li>a. Buy the vehicle/unit back at "Full Purchase Price" as the vehicle/unit shall be considered a "Defective Vehicle/Unit" or "Lemon".</li> <li>b. Provide a replacement vehicle/unit that the City considers equal to the replacement vehicle/unit.</li> </ol> </li> <li>2. Computation of Service Hours = 8 hrs/day use X 5 work days/week x 52 weeks/year = 2,080 work hours per year.</li> <li>3. Computation of Percentage = 2,080 available for work hours/year X 0.10 (10%) = 208 Out of Service Hours in the 1st year warranty period.</li> <li>4. A Work Day, 8 hours, shall be computed as Monday thru Friday from 7:00 am to 3:00 pm</li> <li>5. This clause will not apply to delays in completion of warranty repairs due to acts of God, acts of the Public Enemy, acts of the Government (in either its sovereign or contractual capacity), fires, floods, or strikes, and unusually severe weather, PROVIDED that the Vehicle/Unit Vendor shall within three (3) calendar days of any such delay notify the City of Denver's Fleet Management in writing of the causes of delay and the facts relating to the problem</li> <li>6. After 24 hours/3 days of consecutive "lost service" of the vehicle/unit due to warranty problems the warranty period shall be extended by the length of lost service time due to warranty problems.</li> <li>7. The City of Denver shall consider the information submitted and may extend the time (208 hours) for completing, if in the City's, judgment, the facts justify such a warranty extension. The judgment of the City shall be final.</li> </ol>	
B.	<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.	
C.	<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.	
D.	<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.	

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E.	<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.
F.	<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.
G.	<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>		
		<b>NOTE: FOR STAGE 1 SUBMITTAL ONLY INDICATE THE WORD 'INC' or 'AVAILABLE' IN THE APPROPRIATE COLUMNS NOT A PRICE</b>		
		<b>Inc = Included</b>	<b>N/A = Not available</b>	
		<b>Two Years</b>	<b>Three Years</b>	<b>Five Years</b>
A.	Dump Body			
B.	Hoist			
C.	Tarp			
D.	Snow controls System			
E.	Hydraulics			
F.	a. Pumps	N/A	N/A	N/A
	b. Cylinders			
	c. Tanks			
	d. Valves			
	e. Controls			
G.	Body Conveyor System			
H.	Joystick			
I.	Electrical Components			
J.	Other			

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K.	Notes:			
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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. Dump Body: Dealership Name: O.J. Watson Co, Inc. Telephone #: 303.295.2885  
 Street Address: 5335 Franklin St. City: Denver
- B. Snow Fighting System: Dealership Name: O.J. Watson Co, Inc. Telephone #: 303.295.2885  
 Street Address: 5335 Franklin St. City: Denver
- C. Sundries: Dealership Name: O.J. Watson Co, Inc. Telephone #: 303.295.2885  
 Street Address: 5335 Franklin St. City: Denver

8.0 **Delivery Considerations:**

<b>Delivery Documentation (GVWR 26,001-Lbs and Above Heavy Duty)</b>	
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.	Delivery: 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: Dolores Gallegos at (720) 865-3900 ext. 03 or direct line (720) 865-3903.




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9.0 Body and Snow Fighting Equipment Delivery  
 9.1 Delivery of Completed Body

PROVIDE NUMBER OF DAYS REQUIRED FOR DELIVERY OF COMPLETED BODY AND SNOW FIGHTING SYSTEM AFTER RECEIPT OF THE CAB & CHASSIS	120 DAYS
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10.0 Complete Vehicle Cost

Include: <ul style="list-style-type: none"> <li>○ Dump Body and Snow Fighting Equip Total Cost                         <ul style="list-style-type: none"> <li>● Dump Body Total Cost</li> <li>● Snowplow System Total Cost</li> <li>● Spreader System Total Cost</li> <li>● Optional Items Total Cost</li> </ul> </li> </ul> Do Not Include: <ul style="list-style-type: none"> <li>○ Optional Equipment</li> <li>○ Warranty Cost (s)</li> <li>○ Manual Cost (s)</li> </ul>	TOTAL COST  Authorized Signature 	\$ 98,999.00  Pricing updated to \$99,500.00 11-4-2013
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s:\bid information\bids annual and term\0751ae body\_dump&snow\0751a-2012 specification and pricing template .doc

RETURN TO: Department of General Services PURCHASING DIVISION 201 West Colfax Avenue Department 304, 11 <sup>th</sup> Floor Denver, CO 80202 Phone: (720) 913-8100 FAX: (720) 913-8101	CITY AND COUNTY OF DENVER    <b>DENVER</b> THE MILE HIGH CITY	Department of General Services PURCHASING DIVISION <a href="http://www.denvergov.org/purchasing">www.denvergov.org/purchasing</a>  Buyer: Michael Romero 720-913-8122
ADRIENNE BENAVIDEZ MANAGER, GENERAL SERVICES	MICHAEL HANCOCK MAYOR	JAMES P. MCINTYRE DIRECTOR OF PURCHASING

**FORMAL PROPOSAL**

Formal Proposal No. 6984

Four (4) Wheel Street Sweepers  
 33,000 GVWR

SCHEDULE OF EVENTS

• Proposal Issued	September 6, 2012		
• Deadline to Submit Additional Questions	September 13, 2012	3:00 P.M.	Local Time
• Response to Written Questions	September 18, 2012		
• Proposal Due Date	September 21, 2012	3:00 P.M.	Local Time

Vendor offers to furnish to the City and County of Denver the materials, supplies, products or services requested in accordance with the specifications and subject to the Terms and Conditions described herein.

**VENDOR SIGN HERE**

Company Name: O. J. WATSON COMPANY, INC.

By: CHRIS CAMPBELL  
 (Printed or Typed Name)

Chris Campbell  
 (Signature)

Signature constitutes acceptance of all Terms and Conditions listed on this form and all documents attached.

**THIS PROPOSAL MUST BE RETURNED IN A SEALED ENVELOPE WITH THE PROPOSAL NUMBER AND PROPOSAL TITLE ON THE ENVELOPE.**

**C.5 PRICING SUMMARY TABLE:**

After indicating required information in each attached configuration(s), indicate the requested pricing and lead-time information for each configuration section referenced in the pricing summary table below.

<b>Section # &amp; Description</b>	<p align="center"><b>CONFIGURATION #1:</b>  <b>Four (4) Wheel Street Sweeper</b>  <b>REF 12-089,12-090</b>  <b>QTY 2</b></p>
<p align="center"><b>ONE COMPLETE VEHICLE TOTAL COST-</b>          Excluding Manuals and Warranty</p>	<p align="center">\$ <u>229,205.00</u> /Each Vehicle</p>
<p align="center">PROVIDE NUMBER OF CALENDAR DAYS REQUIRED FOR DELIVERY</p>	<p align="center"><u>225</u> /Days ARO</p>

Proposing Company Name: O.J. WATSON COMPANY, INC.

Authorized Signature: Chris Snyder

FOR ADDITIONAL INFORMATION CONTACT BUYER  
 Michael Romero 720-913-8122 or [michael.romero@denvergov.org](mailto:michael.romero@denvergov.org)

Reference Nos: 12-089, 12-090

**CITY AND COUNTY OF DENVER**  
**Technical Specifications and Bid Items**  
**For a**  
**Hydraulically Driven 4-Wheel Broom Street Sweeping Machine**

**1.0 General Description**

A new dual control 4-wheel EPA PM-10 certified street sweeper with high lift side dump for emptying contents of hopper into a dump truck. The sweeper shall be equipped with hydraulic drive side/gutter and main brooms. The sweeper shall effectively and efficiently sweep rotomill tailings in rotomilled surfaces and in transitions from rotomilled surfaces to non-milled pavement plus in drainage depressions. The sweeper shall be suitable for six (6) years of continuous rotomill tailings and street sweeping operation in the Denver CO environment.

**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)

**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.

**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/equipments 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.

2.0 Basic Requirements, or approved equal.

2.1 Basic Vehicle

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.	Straight single axle cab-over engine truck with dual controls, set back front axle and 33,000-lb. GVWR (plate certified, with a Global Python S3000,6-yd <sup>3</sup> volume, 4-yd <sup>3</sup> usable minimum capacity material capacity sweeper body. 1. Wheelbase: 140". Appropriate for application 2. Cab-to-Axle: 94". Appropriate for application 3. Front tire cut angle 50°. Appropriate for application 4. Curb-to-curb turning diameter: 40'-0". Appropriate for application <b>Vendor shall verify that wheelbase cab to axle and rear frame length is appropriate for application. Rear of frame shall extend to rear of sweeper body.</b>	Make: <u>AUTOCAR</u> Model: <u>ACMD42</u> Controls Left & Right Side: <u>Yes</u> No GVWR Rating: <u>33,000</u> lbs  Wheelbase: <u>138</u> " C to A: <u>87</u> " Cut Angle: <u>50</u> ° Turn Dia. : <u>41'4"</u>	\$ <u>INCLUDED</u>
B.	Frame Rating: 1. Heavy-duty 80,000-psi full channel steel, with 2. RBM ≥ 1,015,000 in-lb. RBM, 3. Section modulus 12.7 in <sup>2</sup> minimum.	Frame Rating: <u>40,000</u> -lbs Yield Strength: <u>120,000</u> psi Frame RBM/rail: <u>1,810,000</u> lbf-in Section Modulus/rail: <u>119</u> in <sup>3</sup>	\$ <u>INCLUDED</u>
C.	Component Service: 1. 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. 2. Access to rear engine mounts or transmission removal should not require the removal of electrical wiring, hydraulic hoses, air tanks or air dryers. 3. Air dryer shall be easy and quick to access for servicing.	<input checked="" type="checkbox"/> Yes No  <input checked="" type="checkbox"/> Yes No  Mounting Location: <u>FRAME LHS</u>	\$ <u>INCLUDED</u> <u>INCLUDED</u>

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D.	<b>Towing Provisions:</b> 1. Tow hooks, two front frame mounted. 2. Air brake 1/4" female Type "C" steel quick-connect hook up system on vehicle for wrecker air brake connection. 3. Connector shall be equal to: Camel PN 61-523 or Amflo PN C2 or Schrader PN 3504. "Reference Only". 4. Quick-connectors shall be accessible and protected but shall not stick out where they could get damaged. 5. A check valve shall be provided at the vehicles air tank to prevent air loss.	<input checked="" type="radio"/> Yes    No Make: <u>SCHRADER</u> Model: <u>3504</u>  <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No	\$ <u>INCLUDED</u> \$ <u>INCLUDED</u>
E.	<b>Keying:</b> 1. Keys keyed alike Ignition, Door, (same) and Toolboxes (same), 2 standard sets per vehicle. 2. Additional 5 key sets 3. If the City has similar make and model trucks in fleet the trucks shall be keyed the same as existing trucks.	Each additional key set: \$ <u>N/C</u> <input checked="" type="radio"/> X 5= Yes <input checked="" type="radio"/> No	\$ NC \$ <u>INCLUDED</u> \$ <u>0</u>

2.2 Engine

	Description of Equipment	Offered Equipment	Cost
A.	<b>Engine:</b> 1. In-line wet sleeve 6 cylinder, 7.8L (476 in <sup>3</sup> ), electronically controlled, turbo charged with after cooler diesel engine. Engine shall be rated at 215 hp @ 2,200 rpm, Torque 560 lb/ft @ 1,450 rpm, minimum. 2. The engine shall be electronically controlled meeting current EPA/CARB certifications with following components: 3. Engine shall utilize DEF (diesel exhaust fluid) to meet current EPA regulations and reduce NOx 4. Engine shall be electronically controlled with following components: a. Engine warning/shutdown system with manual override to monitor: b. Low oil pressure. c. High oil temperature. d. High coolant temperature. e. Low coolant level. f. High transmission oil temperature. g. Idle shutdown timer.	Make: <u>CUMMINS</u> Model: <u>15B</u> HP: <u>220</u> @ <u>2600</u> rpm Torque: <u>520</u> @ <u>1600</u> rpm  Emissions Rating: <u>EPA 2010 TIER IV</u>  <input checked="" type="radio"/> Yes    No  <input checked="" type="radio"/> Yes    No  <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No	\$ <u>INCLUDED</u>

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	Description of Equipment	Offered Equipment	Cost
	h. Speed limiter top gear and cruse. Computer controlled fast idle and PTO protection. i. Thermos bottle stopper-type dipstick. j. Magnetic drain plug.	<input checked="" type="checkbox"/> Yes    No    Top Speed: <u>65</u> mph <input checked="" type="checkbox"/> Yes    No <input checked="" type="checkbox"/> Yes    No	
B.	Filtration: 1. Oil: Fleetguard LF3000 full flow/bypass oil filter. 2. Fuel: Racor 690RP12 fuel/water separator with thermostatically controlled fuel line heater.	Make: _____ Model: _____ Make: <u>FLEETGUARD</u> Model: <u>FS SERIES</u>	\$ _____ \$ <u>INCLUDED</u>
C.	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 will not draw in exhaust gases or road dust. 3. Air filter dual element dry type with air inlet restriction indicator located in cab	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Yes    No Make: <u>DONALDSON</u> Model: <u>13" w/ SAFETY ELEMENT</u>	\$ <u>INCLUDED</u>
D.	Exhaust Meeting 2012 Tier 4 EPA Standards: 1. Exhaust discharge shall be vertical behind the cab. 2. The exhaust after treatment device shall be horizontally mounted behind 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 or truck. 4. Horizontal with a vertical chrome stack and stainless steel exhaust guard curved out 60°. 5. Exhaust discharge shall be above roofline and exhaust gases shall not discolor the body.	Trap Make: <u>CUMMINS</u> Model: _____ Location: <u>ACROSS FRAME BEHIND CAB UP VERTICAL LEFT HAND SIDE BEHIND CAB</u> <input checked="" type="checkbox"/> Yes    No <input checked="" type="checkbox"/> Yes    No <input checked="" type="checkbox"/> Yes    No	\$ <u>INCLUDED</u>
E.	Fuel Tank: 1. Fuel tank 50-gallon minimum 2. Fuel heater Dynocraft 12v-inline with lighted on dash control. 3. Two open mesh grip strut steps shall be provided on the tank to assure easy ingress and egress.	Size: <u>56</u> gallons Make: <u>FLEETGUARD</u> Model: <u>FS SERIES</u> Yes    No	\$ <u>INCLUDED</u>
F.	Diesel Enhancement Fluid Tank: 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>BEHIND CAB LEFT HAND SIDE</u> DEF Tank Volume: <u>5</u> gallons Yes    No	\$ <u>INCLUDED</u>

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G.	Coolant Hoses: 1. Gates Blue Stripe hoses 2. With constant torque hose clamps.	Yes    No <input checked="" type="checkbox"/> Yes    No	<u>\$ INCLUDED</u>
H.	Fan: 1. Fan clutch heavy-service-duty with automatic fan control.  2. The fan shall cycle according to engine coolant and transmission coolant temperature.	Make: _____ Model: _____  <input checked="" type="checkbox"/> Yes    No	<u>\$ INCLUDED</u>
I.	Air Compressor: a. Bendix 18.7-cfm Tu-Flo minimum.	Make: <u>WABCO</u> Model: _____ Capacity: <u>18.7</u> cfm	<u>\$ INCLUDED</u>
J.	Cold Weather Starting Aids on Truck Engine. 1. Block heater, Phillips "Zero-Start" 120vAC, 1500 Watt, engine coolant temperature controlled to: a. Turn "on" at 40°F engine coolant temperature. b. Turn "off" at 55°F engine coolant temperature. 2. The plug-in station shall have 2 LED indicator lights to: a. Light when plugged into "hot line" to show "hot line is energized." b. Light when engine coolant drops below 40°F. 3. Plug-in shall be mounted below driver's door, protected from mechanical and weather damage. Heater plug shall be a male standard grounded 15 amp rated plug. 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. 5. Cold weather starting assist (no either allowed).	Make: <u>PHILLIPS</u> Model: <u>ZERO START</u>  On Temperature: <u>40</u> Off Temperature: <u>55</u>  <input checked="" type="checkbox"/> Yes    No <input checked="" type="checkbox"/> Yes    No Location: _____  <input checked="" type="checkbox"/> Yes    No  Type: _____	\$ _____  \$ _____  \$ _____  <u>\$ INCLUDED</u>



2.3 Transmission and Drivetrain

	Description of Equipment	Offered Equipment	Cost
A.	Transmission shall be an Allison 2500 RDS series, wide ratio, 5 or 6-speeds and PTO with the following components: 1. Transmission and rear differential gearing shall be optimized for "Best" fuel economy; speed shall not be less than 60 mph. 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. 3. Transmission interface wiring for Allison MD/HD transmission. 4. Electric push-button transmission controls shall be located on the "dog house" not under the joystick armrest. Location to be mutually agreed upon. 5. TranSynd TES 295 automatic transmission fluid. 6. Deep pan transmission sump with "Gold Series" filter kit rated for severe duty of 75,000 miles or 36 months. 7. Transmission water-to-oil cooler. 8. Remote mounted transmission filter. 9. Magnetic drain plug.	Make: <u>ALLISON</u> Model: <u>2500</u> Speeds: <u>6</u> <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No	\$ <u>INCLUDED</u>          \$ <u>INCLUDED</u>          \$ <u>INCLUDED</u> \$ <u>INCLUDED</u>
B.	Rear Axle: 1. Rear axle capacity 21,000-lbs. minimum 2. Driver controlled 2-speed axle. 3. Axle ratio a. High for 60 mph top speed. b. Low 8.17:1 or lower for slow sweeping. 4. Oil seals, 5. Gear lubricant Union 76 Triton EP 75W-90 synthetic gear lubricant 6. Magnetic drain plug.	Make: <u>DANA SPICER</u> Model: <u>21065T</u> Axle Capacity: <u>21,000</u> lbs 2-Speed: Yes No  Provide ratio and top speed: <u>6.17</u> <u>65mph</u> Provide ratio and top speed: <u>8.4</u> <u>45mph</u>	\$ <u>INCLUDED</u>
C.	Front Axle: 1. Capacity 12,000-lbs. minimum with oil seals. 2. Gear lubricant Union 76 Triton EP 75W-90 synthetic gear lubricant	Make: <u>DANA</u> Model: <u>12002 W</u> Axle Capacity: <u>12,000</u> lbs	\$ <u>INCLUDED</u>

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D.	Suspension: 1. Front: capacity 12,000-lbs. minimum with taper leaf with graphite impregnated spring pin bushings and shock absorbers. 2. Rear: capacity 21,000-lbs. minimum with air bag type suspension a. Solid axle performance when dumping and sweeping b. Active during travel. c. Suspension mode shall be controlled by a dash mounted transport/sweep mode switch. 3. Front and rear suspension shall have heavy-duty shocks at all wheel ends 4. Front and rear sway/stabilizer bars shall be provided	Capacity: <u>12,000</u> Capacity: <u>23,000</u> <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> Yes    No Yes    No	\$ <u>INCLUDED</u>
E.	Brakes: 1. Air brakes with S-cam, 16.5" x 4" front and 16.5" x 7" rear extended service brakes 2. Outboard mounted cast iron drums, dust shields, non-asbestos brake block.	Make: <u>ARVIN MERTOR</u> Model: <u>Q PLUS</u> <input checked="" type="radio"/> Yes    No	\$ <u>INCLUDED</u>
F.	ABS system: 1. Wabco 4-channel with 5-9 psi crack pressure relay valve. Airlines shall be color-coded nylon type.	Make: <u>BENDIX</u> Model: _____	\$ <u>INCLUDED</u>
G.	Brake Chambers: 1. MGM, TR series.	Make: <u>ARVIN MERTOR</u> Model: _____	\$ <u>INCLUDED</u>
H.	Slack Adjusters: 1. Self-adjusting.	Make: <u>ARVIN MERTOR</u> Model: _____	\$ <u>INCLUDED</u>
I.	Air Dryer, (No Approved Equals) 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.	Make: <u>BENDIX</u> Model: <u>AD-IP</u>	\$ <u>INCLUDED</u>
		<u>OUTSIDE FRAME LHS</u>	\$ <u>INCLUDED</u>
J.	Driveline: 1. Permanent lube type U-joints.	Yes    No	\$ _____
K.	Power Steering: 1. Dual right and left side full controls 2. TRW with 2-qt. reservoir.	<input checked="" type="radio"/> Yes    No	\$ <u>INCLUDED</u>
L.	PTO (if required): 1. Control air actuated from inside cab.	Yes    No <u>N/A</u>	\$ _____

2.4 Electrical System

	Description of Equipment	Offered Equipment	Cost
A.	Alternator: Heavy duty, internally regulated, output 130-amp minimum.	Make: <u>Delco Remy</u> Model: <u>2751</u> Rating: <u>130</u> amps	<u>\$ INCLUDED</u>
B.	Batteries: 1. Vehicle batteries shall be used for both starting the vehicle engine and the auxiliary sweeper engine. 2. Two or three Group 31 batteries with a total CCA of 1950 minimum. 3. Battery location frame mounted left hand side. 4. Battery shut-off switch easy to see and access. 5. Jump start provision easy to access. 6. Battery cables (00) stranded copper minimum.	Yes <input checked="" type="radio"/> No Make: <u>DELCO</u> Model: <u>31 ECL</u> Quantity: <u>2</u> CCA's: <u>1500</u> <input checked="" type="radio"/> Yes No	<u>\$ INCLUDED</u>
C.	Body Builder's Junction Box: 1. A body builder junction box shall be provided in cab to prevent corrosion from magnesium chloride. Terminal shall be marked for easy identification.	<input checked="" type="radio"/> Yes No Location: _____	<u>\$ INCLUDED</u>
D.	Circuit Protection: 1. Circuit breakers with manual reset, no fuses.	<input checked="" type="radio"/> Yes No	<u>\$ INCLUDED</u>
E.	Wiring: 1. Wiring shall be color coded with hot stamped wire numbers. All wiring shall be run in wiring looms.	<input checked="" type="radio"/> Yes No	<u>\$ INCLUDED</u>
F.	Back Up Alarm: 1. Fully sealed 107 dB, SAE type B, 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.	Rating: <u>109</u> <input checked="" type="radio"/> Yes No	<u>\$ INCLUDED</u>
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.	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No Make: _____ Model: _____	<u>\$ INCLUDED</u> \$
H.	Vehicle Rear Lights: (No Approved Equals) 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. 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.	Make: <u>TRUCK-LITE</u> Model: _____ Make: <u>TRUCK-LITE</u> Model: <u>SUPER 44</u>	<u>\$ INCLUDED</u> <u>\$ INCLUDED</u>

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3. Third Brake Light use the same used light used for Stop/Turn/Tail light and disable the Turn and Tail light sections.	Make: <u>TRUCK-LITE</u> Model: <u>SUPER 44</u>	<u>\$ INCLUDED</u>
4. Back up lights Truck-Lite LED, flush mount, sealed lexan body, grommet insulated, multi-pin units model 44 P/N 44206C.	Make: <u>TRUCK-LITE</u> Model: <u>44206 C</u>	<u>\$ INCLUDED</u>
5. Marker lights Truck-Lite LED 3 per side model 10 P/N 10250R or 10250Y or model 30 P/N 30250R or 30250Y.	Make: <u>TRUCK-LITE</u> Model: <u>10250</u>	<u>\$ INCLUDED</u>
6. Rear ID bar Truck-Lite LED model 35 P/N 35741R or 35740R.	Make: <u>TRUCK-LITE</u> Model: <u>35</u>	<u>\$ INCLUDED</u>
7. License plate light, Truck-Lite model 15 P/N 15040	Make: <u>TRUCK-LITE</u> Model: <u>15</u>	<u>\$ INCLUDED</u>
8. Work lights Two (2) Hopper mount Signal-Stat 623W Halogen work lights with lighted on dash mounted control switch.	Make: <u>SIGNAL-STAT</u> Model: <u>623 W</u>	<u>\$ INCLUDED</u>
9. Wiring shall be sealed Fit' N Forget modular plug-in type where possible.	Make: _____ Model: _____	<u>\$ INCLUDED</u>
10. Lights shall not protrude into rear riders area or be below the hopper in an area 20" in from the outer hopper sides	Make: _____ Model: _____	<u>\$ COMPLY</u>
11. Dielectric grease shall be applied to all plug connections and terminals to prevent corrosion.	<input checked="" type="radio"/> Yes <input type="radio"/> No	

2.5 **Cooling System**

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.	<input checked="" type="radio"/> Yes <input type="radio"/> No	<u>\$ INCLUDED</u>
B. Coolant protection shall be -34° F.	Temperature Protection: <u>-34</u>	<u>\$ INCLUDED</u>
C. Fleetguard coolant filter WF2071.	Make: <u>FLEETGUARD</u> Model: <u>WF2071</u>	<u>\$ INCLUDED</u>

2.6 Tires and Wheels

	Description of Equipment	Offered Equipment	Cost
A.	Tires: 11R 22.5, tubeless, load range G. 1. Front: Michelin XZA2. 2. Rear dual: Michelin XZA2.	Brand: <u>GOODYEAR</u> Model: <u>G661 HSA</u> Brand: <u>GOODYEAR</u> Model: <u>G661 HSA</u>	\$ <u>INCLUDED</u> \$ <u>INCLUDED</u>
B.	Wheels: Disc, 10-hole, Stud piloted type, Single nut, Meets ISO Standard 4107. White powder epoxy coated finish. 1. Front 22.5" x 8.25". 2. Rear 22.5" x 8.25"	Brand: <u>ACCURIDE</u>  Size: <u>22.5 x 8.25</u> Size: <u>22.5 x 8.25</u>	\$ <u>INCLUDED</u>

2.7 Interior

	Description of Equipment	Offered Equipment	Cost
A.	Operator Controls: 1. Steering and vehicle controls dual left and right sides: 2. All critical controls required to operate the vehicle shall be easy to reach and operate from both left and right seats. 3. Tilt and telescoping steering wheels. 4. Operator controls isolated dual left and right so that the sweeper can be operated safely, easily and efficiently from either side for optimum viewing during all sweeping operations. 5. Gauge packages shall be provided for both operator positions.	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No	\$ <u>INCLUDED</u> \$ <u>INCLUDED</u>  \$ <u>INCLUDED</u> \$ <u>INCLUDED</u>
B.	Controls and Gauges: 1. All controls and gauges shall be illuminated and ergonomically positioned for operator ease of operation for operators 5'-0" to 6'-6" tall. No control shall interfere with the operator. 2. The cab shall be configured to be ergonomic, comfortable and with ample room to minimize operator fatigue and discomfort.	<input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No	\$ <u>INCLUDED</u>
C.	Seats: 2 Passenger Configuration. 1. Driver's seat left side shall be Bostrom, Talladega 910 high back driver's seat, and gray vinyl with cloth insert and air ride suspension with seat belts. 2. Driver's seat right side shall be Bostrom, Talladega 910 high back driver's seat, and gray vinyl with cloth insert and air ride suspension with seat belts.	Make: <u>ISRI</u> Model: <u>HT 914</u>  Make: <u>ISRI</u> Model: <u>HT 914</u>	\$ <u>INCLUDED</u> \$ <u>INCLUDED</u>

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D.	Instrumentation: 1. Instrumentation shall include a. Lane-mile swept odometer, b. Engine hourmeter, c. Hopper full light, d. Tachometer, e. Voltmeter, f. Coolant temperature, g. Oil temperature, h. Oil pressure i. Fuel level. 2. Gauges shall be easy to see from left or right operator's position.	Yes    No <u>USE TRUCK ODOMETER</u> <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No	<u>\$/INCLUDED</u>
E.	Door Windows: 1. Left and right door side windows shall be remote powered up/down and easily accessible from both operator positions.	<input checked="" type="radio"/> Yes    No	<u>\$/INCLUDED</u>
F.	Floor covering 1. Floor covering shall be black rubber/vinyl flooring with under mat insulation.	<input checked="" type="radio"/> Yes    No	<u>\$/INCLUDED</u>
G.	Floor Mats: 1. Weather Tech by Cannon, (1-800-441-6287) heavy-duty rubber floor mats with raised outer lip capable of holding water.	Make: <u>WEATHER TECH</u> Model: <u>W3</u>	<u>\$/INCLUDED</u>
H.	Power Point: 1. A 12vDC power source for operating a computer inside the cab.	<input checked="" type="radio"/> Yes    No	<u>\$/INCLUDED</u>
I.	Radio: 1. Radio AM/FM stereo with two speakers.	Make: <u>MTD</u> Model: _____	<u>\$/INCLUDED</u>
J.	Windshield Wipers: 1. Wipers 2-speed self parking. 2. Intermittent wiper mode.	Speeds: <u>2</u> <input checked="" type="radio"/> Yes    No	<u>\$/INCLUDED</u>
K.	Air Conditioning: 1. Factory installed cab R134A air conditioning 2. Cab shall be insulated to include floor, firewall, roof and walls.	Refrigerant Type: <u>134A</u> <input checked="" type="radio"/> Yes    No	<u>\$/INCLUDED</u>
L.	Fire extinguisher: 1. Extinguisher ABC, 5-lb. dry type rechargeable 2. Installed in cab. 3. Location labeled with 1" letters on outside of the cab.	Type: <u>ABC</u>	<u>\$/INCLUDED</u>
M.	Driver Height Warning Sign 1. Installed on truck dash providing the travel height of the vehicle. 2. Sign shall be in 1" "white" block letters.	<input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No	<u>\$/INCLUDED</u>

N.	<p>Grab handles:</p> <ol style="list-style-type: none"> <li>1. One each on exterior of cab for operator and passenger assist and one interior for passenger.</li> <li>2. Grab handles shall provide adequate clearance to other objects to provide easy access and clearance to prevent pinch or other hazards.</li> </ol>	<p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p>	<p><u>\$ INCLUDED</u></p>
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**2.8 Exterior:**

	Description of Equipment	Offered Equipment	Cost
A.	<p>Cab design:</p> <ol style="list-style-type: none"> <li>1. Cab-over-engine with low floor.</li> <li>2. Heavy-duty type with steel or aluminum body.</li> <li>3. High visibility tilt forward design.</li> <li>4. Front hinged doors.</li> <li>5. Steps mounted to body.</li> <li>6. Maximum step height 15".</li> <li>7. Rubber fender extensions</li> </ol>	<p>Cab Type: <u>COE</u></p> <p>Body Rating: <u>TWO PERSON</u></p> <p>Body Material: <u>STEEL</u></p> <p><input checked="" type="radio"/> Yes    No</p> <p>Step Height: <u>15</u> in</p>	<p><u>\$ INCLUDED</u></p>
B.	<p>Mirrors: "No Approved Equal"</p> <ol style="list-style-type: none"> <li>1. Rear view mirrors Moto Mirror Model 7-5400 "Flat Back Traditional" 7" x 16" motor head, remote, heated, stainless steel left and right mounted on the cab.</li> <li>2. Convex 12" stainless steel mirrors mounted under primary mirrors.</li> <li>3. A left and right hand down mirror shall also be provided.</li> <li>4. Mirror controls shall be easily accessible from both operator positions.</li> </ol>	<p>Overall mirror full extended width: <u>114</u> inches</p> <p>Overall mirror width with left side mirror folded in: <u>102</u> inches</p> <p>Make: <u>MOTO</u>    Model: <u>7-5400</u></p>	<p><u>\$ INCLUDED</u></p>
C.	<p>Paint,</p> <ol style="list-style-type: none"> <li>1. Polyurethane paint equal to DuPont Imron 5000, "Bright White", applied following manufacture's procedures to include:</li> <li>2. Color top coat, 2 coats, applied to all non-stainless steel components following manufactures procedures.</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> </ol>	<p>Make: <u>DuPont</u>    Type: <u>IMRON</u></p> <p>Color: <u>WHITE</u></p>	<p><u>\$ INCLUDED</u></p>

2.9 Street Sweeping Equipment 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.	Global Python S3000 sweeping system shall meet EPA PM-10 certification or Approved Equal.	Make: <u>SCHWARZE</u> Model: <u>M6000TECO</u> EPA PM-10 certified: <input checked="" type="checkbox"/> Yes No	\$ <u>INCLUDED</u>
B.	Sweeper Capacities and Dimensions: 1. Sweeping width main broom only: 60" 2. Sweeping width with main broom and 1 side broom: 7'-6" 3. Sweeping width with main broom and both side brooms: 10'-0" 4. Hopper usable capacity 4 yds <sup>3</sup> per SAE J1793	Width: <u>5'8"</u> Width: <u>7'6"</u> Width: <u>10'-0"</u> Usable Hopper Capacity: <u>4405<sup>3</sup></u>	
C.	Side Brooms: 1. Left and right side brooms shall be hydraulic motor direct driven, digger type that can be angled to the sweeping surface. 2. The broom brushes shall be 48" dia. with multiple steel wire filler panels. 3. Side brooms shall be trailing parallelogram arm design. 4. Brooms shall be hydraulically lowered and raised by a single control easily accessed from both operator positions. 5. Side brooms shall have individual in-cab switch operated tilt for left and right side brooms. 6. Broom speed shall be easily adjustable from 70 rpm to 120 rpm and independent of sweeper ground speed via flow control valve. 7. Side broom position indicators shall be provided. 8. Side broom down pressure: a. Shall be easily adjustable from the operator's position while moving or stopped. b. Independently pressure adjustable right and left. 9. Side brooms shall not throw debris at tires. 10. Side brooms shall automatically stop and raise when the vehicle is placed into reverse.	Drive Method: <u>HYDRAULIC</u> Size: <u>49"</u> # of Fillers: <u>5</u> Type: <u>TRAILING PARALLELOGRAM ARM</u>  <input checked="" type="checkbox"/> Yes No Broom Speed: <u>60</u> to <u>120</u> rpm  Yes <input checked="" type="checkbox"/> No Yes No <input checked="" type="checkbox"/> Yes No  <input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No <input checked="" type="checkbox"/> Yes No	\$ <u>INCLUDED</u>



<p>D.</p>	<p>Main Pick Up Broom:</p> <ol style="list-style-type: none"> <li>1. Main broom shall be polypropylene bristle 36" dia. X 60" long prefab rebuildable core type.</li> <li>2. The main broom shall be hydraulic motor direct driven.</li> <li>3. Variable speed control 60 rpm to 130 rpm via flow control valve and independent of sweeper ground speed via flow control valve.</li> <li>4. The main broom design shall be full floating with sealed self-aligning bearings.</li> <li>5. Hydraulic down pressure independently adjustable left and right broom sides</li> <li>6. Main broom shall have automatic wear compensation</li> <li>7. Main broom control operated by a single control, easily accessed from both operator positions.</li> <li>8. The main broom shall have a debris shield to prevent sweeper debris from being thrown into traffic. The shield shall redirect the debris back into the dirt chamber.</li> <li>9. Dirt shoes with tungsten carbide wear surfaces.</li> <li>10. The main broom shall automatically stop and raise when the vehicle is placed into reverse</li> </ol>	<p>Broom Size: <u>36" X 58"</u>                  Broom Material: <u>Poly</u> Rebuildable: <input checked="" type="radio"/> Yes No                  Drive Method: <u>HYDRAULIC</u>                  Broom Speed: <u>60</u> to <u>130</u></p> <p><input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No - PNEUMATIC  <input checked="" type="radio"/> Yes No - PNEUMATIC                  Yes <input checked="" type="radio"/> No UP/DOWN SWITCH } BOTH SIDES                  ON/OFF SWITCH  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No</p>	<p><u>\$INCLUDED</u></p> <p><u>\$INCLUDED</u></p>
<p>E.</p>	<p>Conveyor:</p> <ol style="list-style-type: none"> <li>1. The conveyor shall have adjustable conveyor height setting and be capable of picking up and loading materials from fine sand/dirt to solid objects 8" high X conveyor width.</li> <li>2. The conveyor shall be hydraulically raised and lowered for different material settings from inside the operators cab.</li> <li>3. The conveyor shall be chain squeegee type with replaceable rubber flights.</li> <li>4. The conveyor shall have full width replaceable rubber flights.</li> <li>5. The conveyor shall be hydraulic driven with relief valve protection and be reversible without reversing the main broom.</li> <li>6. Conveyor speed shall be easily adjustable from 60 rpm to 130 rpm from the operator's position.</li> <li>7. The conveyor speed shall be independent of sweeper ground speed via flow control valve.</li> <li>8. The conveyor shall be capable of raising 9" while sweeping.</li> <li>9. The conveyor drive sprockets shall be hard rubber suitable for long life sweeping of rotomill tailings</li> <li>10. Conveyor stall alarm audible/flashing light located in the cab.</li> </ol>	<p>Material Pick Up Size: <u>SAND</u> to <u>8" X 58"</u>                  Conveyor Type: <u>SQUEEGEE</u></p> <p>Low Height: <u>3</u> inch                  High Height: <u>9</u> inch</p> <p><input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No</p> <p>Conveyor Speed: <u>60</u> to <u>81</u></p> <p><input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No</p> <p>Life Expectancy: <u>800</u> hours  <input checked="" type="radio"/> Yes No</p>	<p><u>\$INCLUDED</u></p>

	<p>11. A lower conveyor roller flush system shall be provided.                  12. The conveyor shall be able to load the hopper to 100% rated capacity.                  13. The conveyor shall automatically stop and raise when the vehicle is placed into reverse or transport mode.                  14. The hopper shall have a dump disable switch and not be capable of dumping if the elevator is in the down position.</p>	<p><input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No <i>EXCEEDS AUTOMATIC SEQUENCE VALVE</i></p>	
<p>F.</p>	<p>Hopper:                  1. The hopper shall have a six- (6) yd<sup>3</sup> volumetric minimum capacity with 4 yd<sup>3</sup> material capacity per SAE J1793.                  2. The hopper shall be constructed of mild steel with:                  a. Floor 7 gauge mild steel                  b. Sides, top and door mild 11 gauge                  c. Hopper door 40" long X full hopper width                  d. Hopper side shift 6"                  3. Hopper full indicator.                  4. Hopper hydraulic lift capacity 14,000-lb.                  5. High hopper dump cycle time: 65-seconds.                  6. Single lever control for dumping easily accessed from both operator positions.                  7. Dumping shall be from right side of sweeper body with a 48°+ dump angle.                  8. Dump height at bottom of the dump door 12'-3" minimum.                  9. All articulating joints shall be self-aligning self-lubricated bearings.                  10. The sweeper shall not require outriggers or ground contact support devices for dumping the hopper.                  11. The dump cycle shall not function if the vehicle does not have the parking brake set or is on an out of spec-level surface.</p>	<p>Hopper Size: <u>5</u> yd<sup>3</sup>                  Hopper Fill Capacity: <u>4</u> yd<sup>3</sup>  <input checked="" type="radio"/> Yes No Type: <u>MILD STEEL</u>                  Material Thickness: <u>7</u> Type: <u>MILD STEEL</u>                  Material Thickness: <u>3/8 10GA</u> Type: <u>MILD STEEL</u>                  Door Size: <u>48"</u> X <u>49.5"</u>                  Hopper Side Shift: <u>N/A</u> inch                  Capacity: <u>14,000</u> lbs                  Dump Cycle Time: <u>45</u> seconds  <input checked="" type="radio"/> Yes No                  Dump Side: <u>CURBSIDE</u>                  Dump Height: Low <u>36"</u> to High <u>11'6"</u>                  Yes <input checked="" type="radio"/> No <i>LUBRICATION REQUIRED</i>  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No</p>	<p><u>\$ INCLUDED</u></p>

CCD BID: 6984 CONFIGURATION #1:  
 Four (4) Wheel Street Sweeper  
 REF 12-089,12-090 QTY 2

G.	<p>Water Spray System:</p> <ol style="list-style-type: none"> <li>The water pump shall be capable of running dry without damage and rated at 3.5 gpm @ 40 psi minimum.</li> <li>Spray system shall spray full width of gutter and pick up brooms.</li> <li>All spray booms shall be either located in a location that is protected from mechanical damage or protected from mechanical damage using guards</li> <li>Each Broom shall have it's own water spray system</li> <li>Spray system water pump shall be hydraulically driven.</li> <li>Spray nozzles shall be adjustable.</li> <li>Front spray bar to help suppress dust.</li> <li>Water filter easily replaceable.</li> <li>The water spray system and water tank shall have a ¼-turn water drain valve at the lowest point and in an easy to access location for quickly drain water from the system.</li> </ol>	<p>Run Dry: <input checked="" type="radio"/> Yes No Pump Type: <u>ELECTRIC DIAPHRAGM</u></p> <p>Pump Output: <u>5.88</u> gpm @ <u>100</u> psi  <input checked="" type="radio"/> Yes No</p> <p>Protection Method: <u>UNDER BUMPER &amp; ELEVATOR PROTECTED</u></p> <p><input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes <u>NO ELECTRIC</u>  <input checked="" type="radio"/> Yes <u>NO FACTORY PRE-SET</u>  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No</p>	<p>\$ <u>INCLUDED</u></p> <p>\$ <u>INCLUDED</u></p>
H.	<p>Flush System:</p> <ol style="list-style-type: none"> <li>Flush system shall flush and clean the hopper, conveyor and lower conveyor rollers.</li> <li>A manual ¼-turn bypass valve to divert hydrant water into the wash system.</li> <li>The valve shall be easy to access from the outside of the sweeper body on the curb side of the sweeper.</li> <li>A wash down system with 25' wash down hose and squeeze trigger rated at 3 gpm @ 30 psi. The hose to sweeper shall have a simple quick-disconnect coupler so the wash down hose can be stored inside the toolbox.</li> </ol>	<p><input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No</p> <p>Performance: <u>3.0</u> gpm @ <u>40</u> psi</p>	<p>\$ <u>INCLUDED</u></p> <p>\$ <u>INCLUDED</u></p>
I.	<p>Water Tank:</p> <ol style="list-style-type: none"> <li>Capacity: 310-gallons with easy to view site gauge.</li> <li>Tank material non-corroding polyethylene with easy to access quick ¼-turn drain valve.</li> <li>The water fill system shall be anti-siphon air gap design meeting national and local codes/standards.</li> <li>Filtration, 2" Y-type with #80 stainless steel mesh filter elements on fill port.</li> <li>The water tank shall have a "low water" warning light easily visible from both of the operators' stations.</li> <li>Plumbing for water system(s) shall be PVC/PE piping.</li> </ol>	<p>Capacity: <u>350</u> gallons          Tank Material: <u>Poly</u></p> <p><input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No</p>	<p>\$ <u>INCLUDED</u></p> <p>\$ <u>INCLUDED</u></p> <p>\$ <u>INCLUDED</u></p> <p>\$ <u>INCLUDED</u></p>

CCD BID: 6984 CONFIGURATION #1:  
 Four (4) Wheel Street Sweeper  
 REF 12-089,12-090 QTY 2

	<p>7. The water spray system and water tank shall have a ¼-turn water drain valve at the lowest point and in an easy to access location for quickly drain water from the system.</p> <p>8. Hydrant fill system located on right side of sweeper with back flow prevention system.</p> <p>9. Fill hose 20' canvas double jacketed rubber lined 2-1/2" fire type fill hose with fire hydrant coupling shall be provided with easy access hose storage compartment.</p>	<p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p>	
<p>J.</p>	<p>Auxiliary Engine Unit:</p> <ol style="list-style-type: none"> <li>Auxiliary 4-cylinder 2.4L (149 in³) turbo charged, John Deere, model 4024, 80-hp @ 2,500 rpm, 184 lb-ft torque @ 1,600 rpm, EPA tier 4 certified diesel engine powered with low oil pressure and high coolant temperature shut down system. No PTO powered systems.</li> <li>Engine shall be encapsulated in a noise-suppressing shroud.</li> <li>Engine shall be mounted on vibration isolated sub-frame.</li> <li>The auxiliary engine shall have:             <ol style="list-style-type: none"> <li>Cab easy access engine start and stop and variable throttle.</li> <li>Engine hourmeter,</li> <li>Tachometer,</li> <li>Voltmeter,</li> <li>Coolant temperature,</li> <li>Oil temperature,</li> <li>Oil pressure</li> <li>Automatic shut down system monitoring oil pressure and coolant temperature.</li> </ol> </li> <li>Air filtration dual stage with spinner pre-filter and cab mounted air restriction indicator.</li> <li>The auxiliary engine shall use fuel from the truck main fuel tank.</li> <li>The auxiliary engine shall use the truck's batteries for starting and operation.</li> <li>Remote oil drain hose routed to outside and shall be provided with ¼-turn valve and hose plug at end of hose.</li> <li>Silicon hoses with constant torque silicon hose clamps.</li> <li>Engine must be easy to access and service.</li> <li>Engine compartment sound insulated.</li> </ol>	<p>Make: <u>JOHN DEERE</u> Model: <u>TD201104-T4</u></p> <p>Engine Size: <u>3.62</u> L</p> <p>HP: <u>75</u> @ <u>2600</u> rpm</p> <p>Torque: <u>184</u> @ <u>1600</u> rpm</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No <u>ENGINE TEMP</u></p> <p><input checked="" type="radio"/> Yes No</p> <p>Yes No</p> <p>Yes <input checked="" type="radio"/> <u>SEPARATE 925 CCA BATTERY</u></p> <p>Yes <input checked="" type="radio"/> <u>PLUG FITTING INSTEAD OF 1/4 TURN</u></p> <p>Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No DbA rating: <u>74 @ 50 ft</u></p>	<p><u>\$ INCLUDED</u></p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>

	<p>12. Cold Weather Starting Aids on Auxiliary Engine:</p> <p>a. Block heater, Phillips "Zero-Start" 120vAC, 1500 Watt, engine coolant temperature controlled to:</p> <p>1) Turn "on" at 40°F engine coolant temperature. <i>N/A</i></p> <p>2) Turn "off" at 55°F engine coolant temperature. <i>N/A</i></p> <p>b. The plug-in station shall have 2 LED indicator lights to:</p> <p>1) Light when plugged into "hot line" to show "hot line is energized." <i>N/A</i></p> <p>2) Light when engine coolant drops below 40°F. <i>N/A</i></p>	<p>Make: <u>DUETZ</u> Model: <u>ENGINE OIL HEATER</u>  <i>TWIN LOWV AULS TO -20°F</i></p>	<p><u>\$/INCLUDED</u></p>
<p>K.</p>	<p>Hydraulics:</p> <p>1. Hydraulic pump shall be direct mounted the auxiliary engine.</p> <p>2. Hydraulic pump shall be:</p> <p>a. Dual/tandem gear pump.</p> <p>b. Working pressure 3,000 psig maximum.</p> <p>3. Pressure gauges for each circuit shall be glycerin filled.</p> <p>4. Hydraulic tank:</p> <p>a. Steel 10-gauge.</p> <p>b. Capacity 65-gallon usable minimum.</p> <p>c. Magnetic drain plug, oil level and temperature gauge.</p> <p>d. Tank vent shall have a 10-micron screw-on vent.</p> <p>e. The tank fill shall have a 10-micron fill filter to prevent contamination.</p> <p>5. An in-cab restriction indicator light/audible alarm and a low hydraulic oil sensor with an in-cab indicator light/audible alarm when the system is 5-gallons low.</p> <p>6. Hydraulic filtration:</p> <p>a. Return line replaceable 10-micron with beta 4 ratio, easy to access for replacement.</p> <p>b. Suction strainer 100-micron.</p> <p>c. Shut off valves ¼-turn on each side of filter.</p> <p>7. Hydraulic oil cooler air-to-oil suitable for operation in Denver CO operating conditions</p> <p>8. Hoses:</p> <p>a. SAE rated with 4-to-1 safety factor.</p> <p>b. Hoses shall have JIC swivel fitting on both hose ends.</p> <p>9. Hose shall be covered and routed/protected against abrasion/chafing and mechanical damage.</p>	<p>Coupling Method: <u>DIRECT MOUNT</u></p> <p><input checked="" type="radio"/> Yes No</p> <p>Maximum Working Pressure: <u>3,000</u> psi</p> <p><input checked="" type="radio"/> Yes No</p> <p>Material: <u>STEEL</u> Gauge: <u>10</u></p> <p>Capacity: <u>35</u> gallons</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p><input checked="" type="radio"/> Yes No</p> <p>Cooler Type: <u>AIR TO OIL 120,000 BTU</u></p> <p><u>EXCEEDS - O-RING FACE SEALS</u></p> <p><input checked="" type="radio"/> Yes No</p>	<p><u>\$/INCLUDED</u></p> <p><u>\$/INCLUDED</u></p> <p><u>\$/INCLUDED</u></p> <p><u>\$/INCLUDED</u></p> <p><u>\$/INCLUDED</u></p> <p><u>\$/INCLUDED</u></p> <p><u>\$/INCLUDED</u></p> <p><u>\$/INCLUDED</u></p>
<p>L.</p>	<p>Dirt Shoes:</p> <p>1. Carbide dirt shoes shall be provided</p>	<p><input checked="" type="radio"/> Yes No</p>	<p><u>\$/INCLUDED</u></p>

CCD BID: 6984 CONFIGURATION #1:  
 Four (4) Wheel Street Sweeper  
 REF 12-089,12-090 QTY 2

M.	Conspicuity Tape: 1. DOT-C2 Standard No. 108 reflective conspicuity tape 2. The tape shall be applied symmetrically full length to rear and sides of the body.	<input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No	<u>\$/INCLUDED</u>
N.	Paint: 1. All visible exterior metal surfaces shall be "Bright White" polyester powder epoxy painted with prior to assembly. Powder epoxy paint shall be a minimum of 2-mils thick. 2. All other surfaces shall be painted with polyurethane enamel, "Grey", applied following paint manufacturer's procedures to include using self-etching primer and treating bare metal with conditioner's and conversion coating's.	Color: <u>WHITE</u> Brand: <u>DUPONT</u> Type: <u>IMPON</u>  Yes <input checked="" type="radio"/> No <u>BLACK</u>	<u>\$/INCLUDED</u>
O.	Light Bar Warning Lights with Brush Guards, 2 required: 1. Meeting SAE Class-1 requirements. 2. Whelen, model Responder LP mini light bar, 17" long, P/N R2LPPA amber LED warning light. 3. Brush guard heavy-duty. 4. Lights center mounted 1 on the front and 1 on the rear of the sweeper body. 5. A dash-mounted switch with light to indicate the light is on shall be provided. The switch shall be installed in an easy to see and access position from both the left and right operators' position, but not in a location that interferes or could interfere with the driver or passenger during operation or while entering and exiting the vehicle.	Make: <u>WHELEN</u> Model: <u>R2LPPA</u>  <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No	<u>\$/INCLUDED</u>  <u>\$/INCLUDED</u>
P.	Directional Arrow Board: 1. Whelen Traffic Advisor 6' long model TA1660L6 Ultra-Bright LED with control head model TACTRL2. 2. The arrow board shall be rear mounted in the area above the rear access doors. Exact location to be mutually agreed upon at installation. 3. The control head shall be group mounted on transmission tunnel floor in an easy to see and access position from both the left and right operators' position, but not in a location that interferes or could interfere with the driver during operation or while entering and exiting the vehicle.	Make: <u>WHELEN</u> Model: <u>TA1660L6</u> Controller Model: <u>TACTRL2</u> <input checked="" type="radio"/> Yes    No  <input checked="" type="radio"/> Yes    No	<u>\$/INCLUDED</u>
Q.	Vehicle Signage shall be applied as follows: 1. "Danger Keep Back 50 Feet", rear of sweeper body high up on the rear access doors. 2. "Slow Moving Vehicle", rear of sweeper, DOT approved.	<input checked="" type="radio"/> Yes    No  <input checked="" type="radio"/> Yes    No	<u>\$/INCLUDED</u>  <u>\$/INCLUDED</u>

CCD BID: 6984 CONFIGURATION #1:  
 Four (4) Wheel Street Sweeper  
 REF 12-089,12-090 QTY 2

R.	Conspicuity Tape: 1. Conspicuity tape 3M Scotchlite, DOT-C2 Standard No. 108 reflective conspicuity tape 2. The conspicuity tape shall be applied full length to rear and sides of the truck and sweeper body.	Make: _____ Type: _____ Yes      No <i>COMPLY, SEE ITEM "M"</i>	\$ <u>0</u>
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Sweeper SUB TOTAL COST	\$ <u>229,205.00</u>
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3.0 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.	CNG Fuel System: 1. Engine Truck: a. 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 b. The CNG engine shall meet all required EPA on-highway emissions standards 2. Engine Auxiliary Sweeper a. Ford MSG-425, 2.5 liter, 4-cylinder 68 hp @ 3,200 rpm continuous, torque 113 lb/ft @ 3,200 rpm, continuous with electronic engine management for engine protection, monitors high coolant temperature, low oil pressure, over speed and starter lockout. b. The CNG engine shall meet all required EPA and CARB (California Air Resources Board) emissions standards 3. Fuel Tank: a Both the truck CNG and auxiliary CNG engines shall use the same fuel tank(s) as a fuel source. b Fuel tank(s) shall meet or exceed 1) NFPA 52 standards 2) US-DOT/FMVSS304 3) ISO 11439 c Tank Manufacturer d Tank Information 1) Tank Construction Type: composite 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 style="text-align: center;"><i>NOT AVAILABLE AT THIS TIME FROM SCHWARZE. FOR TWIN ENGINE.</i></p> Make: _____ Model: _____ HP: _____ @ _____ rpm Torque: _____ @ _____ rpm Yes      No <p style="text-align: center;"><i>SINGLE ENGINE TOTAL ADD PRICE PER MACHINE.</i></p> Make: _____ Model: _____ HP: _____ @ _____ rpm Torque: _____ @ _____ rpm Yes      No Yes      No Yes      No Yes      No Make: _____ Model: _____ Material: _____ Service Lift: _____ yrs Recertification: _____ yrs Inspection Type: _____ Service Pressure: _____ psig Yes      No	\$ _____  \$ _____  \$ _____  \$ _____  \$ _____  \$ _____  \$ _____  \$ _____  \$ _____
		<i>\$ 340,000.00</i>	



Description of Equipment	Offered Equipment	Cost
<p>e Tank Installation Locations:</p> <p>1) The CNG tank mounting location shall be mutually agreed upon by the vendor and the City prior to the ordering of the cab and chassis. The vendor shall provide drawing of proposed CNG tank location(s). The locations shall not increase the truck wheelbase or the overall height of the truck and body 12' – 6" or body length over a regular non-CNG configuration:</p> <p>a) Tank Size: provide diameter x length                      b) Tank Weight each: Empty                      c) Quantity of Tanks for 75 gallon DGE                      d) Weight All Tanks: Empty                      e) Weight All Tanks: Full CNG                      e) Tank Enclosure Width, Length, Height                      f) Tank Enclosure Material: Steel/Gauge</p> <p>f Tank Mounting:</p> <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>g 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>CNG Tank (s) Location: _____                      _____                      _____                      _____                      _____                      _____</p> <p>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>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>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>

Description of Equipment	Offered Equipment	Cost
c The pressure reducing regulator system shall have 2 pressure gauges installed in the system.	Pressure Range: _____ to _____ psi	\$ _____
1) High Pressure gauge 0-to-5,000 psi installed on tank side to show tank system pressure.	Pressure Range: _____ to _____ psi	\$ _____
2) Low pressure gauge 0-to-250 psi to show engine down-stream fuel delivery pressure to the engine.	Yes No	\$ _____
3) Gauges shall be stainless steel glycerin filled.	Yes No	\$ _____
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.	Yes No	\$ _____
e Engine coolant flow and CNG fuel supply shall enter the regulator on the same side of the regulator.	Yes No	\$ _____
f Coolant ports shall be oriented vertical (up) in horizontal regulators to prevent air from becoming trapped in the regulator.	Yes No	\$ _____
g The pressure reducing regulator shall not under any circumstance be installed in series with the truck cab heater system.	Yes No	\$ _____
5. Automatic Fuel Shut Off:	Yes No	\$ _____
a The automatic fuel shut off valve shall be plumbed directly to the exit/warm side of the engine coolant heated pressure reducing regulator.	Yes No	\$ _____
b The automatic fuel shut off valve shall have its weight supported by a mounting bracket.	Valve Cv: _____	\$ _____
c The automatic fuel valve shall have a Cv of 2.0 minimum to assure adequate fuel flow.	Yes No	\$ _____
d The automatic fuel shut off shall be a NC (normally closed) valve when the ignition is in "Off" position.	Make: _____ Type: _____	\$ _____
6. Fuel Lines:	Yes No	\$ _____
a All high pressure shall be ½" od x 0.049" wall stainless steel 316L tubing appropriate for the application.		
b Stainless steel lines shall have thermal expansion/contraction loops for smaller diameter lines and S-bend expansion joints for larger diameter lines.		

Description of Equipment	Offered Equipment	Cost
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".	Yes      No	\$ _____
d Fitting for the CNG fuel system shall be:	Make: _____ Type: _____	\$ _____
1) Stainless steel tube fittings shall be Swagelok or Parker A-lok with thread sealant.	Yes      No	
2) Special NPTF pipe fittings shall be stainless steel with thread sealant.	Yes      No	
e All NPT fitting shall be installed on male pipe threads using proper thread sealants.	Sealant Type: _____	
1) Thread sealant and anti-seize shall be a nickel impregnated or nickel coated Teflon tape.		
2) Teflon tape shall start at 2nd thread.		
3) On 1/2" and under use 2 wraps of tape		
4) On 5/8" to 1" use 3 wraps of tape.		
5) Assure last section of tape is pulled down tight against the threads.		
6) Do not use sealant on compression threads	Make: _____ Type: _____	\$ _____
f Post heat exchanger hoses and lines may be Parker 929 heavy-wall PTFE hose exceeding SAE100R14A or stainless steel tubing.	Yes      No Tubing Size: _____	\$ _____
7. Fuel Fill System:	Make: _____ Model: _____	\$ _____
a The fuel receptacle and fuel fill system shall be rated for both "fast fill" and "slow fill" with a minimum 1/2" od x 0.049" wall 300 series stainless steel.	Fill Location: _____ Yes      No	\$ _____
b The fuel fill nozzle:	Pressure Range: _____ to _____ psi Pressure Range: _____ to _____ psi Yes      No	\$ _____
1) Shall be a male NGV1 OPW with rubber protective cover boot		\$ _____
2) Fill location on the driver's side of the vehicle		\$ _____
3) The fuel filler line shall be plumbed to the CNG tank bank.		\$ _____
c The tank fill enclosure shall have:		
1) A high pressure line/tank pressure gauge 0-to-5,000 psi		
2) A low pressure fuel to engine pressure gauge 0-to-250 psi		
3) An OPW male NGV1 fuel fill receptacle with easy access and excellent clearance for both "fast fill" and "slow fill" receptacles.		

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 Four (4) Wheel Street Sweeper  
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Description of Equipment	Offered Equipment	Cost
4) An emergency ¼-turn shut off valve for shutting down the system in case of a fueling emergency.	Yes No	\$ _____
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.	Yes No	
e The fill receptacle shall have an easy to remove/reinstall fuel fill cover to protect the fill port from contamination during truck operation.	Yes No	
8. CNG Filtration		
a High pressure, on the fuel tank(s) fill line to clean the CNG before it enters the fuel tank storage system.	Make: _____ Model: _____	\$ _____
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	Make: _____ Model: _____	\$ _____
9. Fuel Gauge:		
a An electric fuel gauge shall be provided with easy to see vehicle dash gauge to show fuel tank volume.	Fuel Gauge Type: _____ Make: _____ Model: _____	\$ _____
b The fuel sender shall be a sealed unit mounted to the high-pressure tank system	Yes No	\$ _____
c A sealed 3-pin Weatherpak connector with a 1-amp fast blow automotive fuse shall connect the sender to the gauge.	Yes No	
d Pins are:	Yes No	
1) Red = power	Yes No	
2) Green = signal	Yes No	
3) Black = ground	Yes No	

<p>B.</p>	<p>Zonar System (No Approved Equals)                  The Zonar system shall be the model EVIR-GPS-GSM (Electronic vehicle information reports- global position system- global systems mobile communications) and provide the following functions minimum:                  1. The system shall be fully compatible with and fully interface with:                      a. CCG Faster fleet maintenance software                      b. Kronos time keeping system for reporting employee data                  2. Webb based reporting.                  3. The system shall provide the following functions:                      a. Ties the operator to the vehicle.                      b. Pre and Post trip vehicle inspection information and compliance.                      c. Send inspection information to Fleet Maintenance for an automatic "work order" generation.                      d. Track vehicle time out of the yard, time on route, and return to yard time.                      e. Tracks engine idle time.                      f. Monitors route pick-ups/work stops, show the vehicles route and work stops on a real time basis.                      g. Uses the City's own maps of Denver area.                      h. Captures meter readings (odometer, engine hours) reports for PM scheduling.                      i. Has five (5) additional electronic inputs 8 to 30 vDC for monitoring and reporting vehicle functions and information.                  4. The system shall be fully contained in an injection molded, impact resistant plastic case that is water -tite and insulated.                  5. The system shall have passed SAE J-1455 vibration test</p>	<p>Make: <u>ZONAR</u> Model: <u>EVIR-GPS-GSM</u></p> <p>Yes    No                  Yes    No                  Yes    No                    Yes    No                  Yes    No                    Yes    No                  Yes    No                    Yes    No                  Yes    No                    Yes    No                  Yes    No                    Yes    No                  Yes    No                    Yes    No                  Yes    No                    Yes    No                  Yes    No                    Yes    No                  Yes    No</p>	<p>\$ <u>1,000.<sup>00</sup></u>                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____                  \$ _____</p>
<p>C.</p>	<p>Hopper Liner:                  1. The hopper shall have spray-in high-durability low friction spray-in liner with same hardness and durability as the Custom Linings Industrial Coating product 911 Polyurea with primer 100 high-durability low friction spray-in liner.                  Custom Linings Industrial Linings                  27995 County Rd 317                  Buena Vista CO 81211                  Tel: 719.395.4414</p>	<p>Manuf: <u>CUSTOM LININGS</u> Brand: <u>911 POLYUREA</u>                  Type Material: <u>PER SPECIFICATION</u></p>	<p>\$ <u>3,498.<sup>00</sup></u>                  Must Provide Cost</p>

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 Four (4) Wheel Street Sweeper  
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<p>2. The product shall be compatible with the Custom Linings Industrial Coating product 911 polyurea with primer 100 high-durability low friction spray-in liner.</p> <p>a. Elongation: 500%</p> <p>b. Tensile Strength: 3,200 psi</p> <p>c. Hardness: Shore D-50</p> <p>d. Temperature Range: -40°F to +350°F</p> <p>3. The spray-in hopper product shall be installed to assist in the off loading of debris into City dump trucks.</p> <p>4. The spray-in material shall be durable enough to last a minimum of the warranty period.</p>	<p>Compatible with product 911: <input checked="" type="radio"/> Yes No</p> <p>Manuf: <u>INDUSTRIAL COATING</u> Brand: _____</p> <p>Type Material: <u>911 POLYUREA</u></p> <p>Elongation: _____ %</p> <p>Tensile Strength: _____ psi</p> <p>Hardness: _____</p> <p>Temp Range: _____ to _____</p> <p><input checked="" type="radio"/> Yes No</p>	<p><del>\$ 3,498.<sup>00</sup></del>        Duplicate</p>
<p>D. Automatic lubrication system to include:</p> <p>1. Centralized lubrication multi-point sweeper only system minimum.</p> <p>2. System shall be installed by the sweeper factory. 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.</p> <p>3. Grease pump/reservoir shall be AC3 with 3 liter grease capacity.</p>	<p>Make: <u>SKF</u> Model: <u>203 SERIES</u></p> <p>Grease Reservoir Size: <u>4 LITER</u></p> <p>System Pressure: <u>4,000</u> psi</p> <p>Grease Line Material: <u>NYLON GREASE LINES</u></p>	<p>\$ 5,382.<sup>00</sup></p>
<p>OPTIONAL EQUIPMENT TOTAL COST</p>		<p>\$ 348,880.<sup>00</sup></p>

4.0 Equipment Information

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. Equipment.	<input checked="" type="radio"/> Yes    No	<u>\$ INCLUDED</u>
<b>Operators Manual Paper</b>	One book per vehicle/equipment with "safe equipment operation" section for each component. 1. Equipment.		<u>\$ INCLUDED</u>
<b>Service/Maintenance Manual Paper</b>	Two complete sets per Contract (not per vehicle); binder required, 1. Manuals shall be provided for: A. Equipment 2. Manuals shall include complete and detailed information for maintenance of the equipment, including general information, specifications, troubleshooting guide, lubrication and required adjustments. 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.	<input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No  <input checked="" type="radio"/> Yes    No	<u>\$ INCLUDED</u> <u>\$ INCLUDED</u>
<b>Service/Maintenance Manual on CD rom or DVD</b>	One complete set; per Contract (not per vehicle) 1. Manuals shall be provided for: A. Equipment and Attachments 2. Manuals shall include complete and detailed information for maintenance of the equipment, including general information, specifications, troubleshooting guide, lubrication and required adjustments. 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.	<input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No  <input checked="" type="radio"/> Yes    No	<u>\$ INCLUDED</u> <u>\$ INCLUDED</u>

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	<p>4. New CD roms or DVDs shall be provided when information is updated, superseded or changed.</p>	<p><input checked="" type="radio"/> Yes    No</p>	<p><u>\$ INCLUDED</u></p>
<p><b>Service/ Maintenance Manual on Internet Access, or Other Electronic Media</b></p>	<p>One complete set; per Contract (not per unit)</p> <ol style="list-style-type: none"> <li>1. Vendor shall provide access to the site for the length of time that the City owns the equipment at a one time up front cost to the City.</li> <li>2. Internet information shall include complete and detailed information for maintenance of the equipment, including general information, specifications, troubleshooting guide, lubrication and required adjustments.</li> <li>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.</li> </ol>	<p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p>If other Specify: _____</p> <p>_____</p> <p>_____</p> <p><input checked="" type="radio"/> Yes    No</p>	<p><u>\$ INCLUDED</u></p>
<p><b>Parts Manual Paper</b></p>	<p>Two complete sets, per Contract (not per unit) binders required,</p> <ol style="list-style-type: none"> <li>1. Manuals shall be provided for:             <ol style="list-style-type: none"> <li>A. Equipment</li> </ol> </li> <li>2. Illustrated parts book shall be furnished containing data so that part numbers can be readily found for each system.</li> </ol>	<p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p>	<p><u>\$ INCLUDED</u></p> <p><u>\$ INCLUDED</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> <ol style="list-style-type: none"> <li>1. Information shall be provided for:             <ol style="list-style-type: none"> <li>A. Equipment</li> </ol> </li> <li>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.</li> </ol>	<p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p>	<p><u>\$ INCLUDED</u></p> <p><u>\$ INCLUDED</u></p>



	<p>3. New CD roms or DVDs shall be provided when information is updated, superseded or changed.</p>	<p><input checked="" type="radio"/> Yes    No</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:              A. Equipment</p> <p>3. Internet information shall cover vehicle/equipment, shall include general parts information, parts specifications, ordering guide lines and superseded parts information.</p> <p>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.</p> <p>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.</p>	<p>Access Information:              7 days/week including holidays    Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p><input checked="" type="radio"/> Yes    No</p> <p>If other Specify: _____</p> <p>_____</p> <p><input checked="" type="radio"/> Yes    No</p>	<p><u>\$/INCLUDED</u></p> <p><u>\$/INCLUDED</u></p>
<p><b>New Equipment Check-in Form:</b></p>	<p>The successful vendor shall complete the City's "New Equipment Check-in Form" completely and accurately with all requested information.</p>	<p>_____</p> <p>_____</p>	<p>\$ _____</p>

4.1 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.	<u>PER SPECIFICATION</u>	<u>\$ INCLUDED</u>
<b>Fleet Management Training Manager</b>	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.	<u>PER SPECIFICATION</u>	<u>\$ INCLUDED</u>
<b>Operator Training</b>	6-hours minimum to include: 1. Operation of the equipment. 2. Operator daily and weekly maintenance of the equipment.	<u>PER SPECIFICATION</u>	<u>\$ INCLUDED</u>
<b>On Site Mechanics Training</b>	On site mechanics training shall be 1 class, approximately 8 hours, day shift total provided at City facilities. The training shall cover maintenance and service procedures, trouble shooting and use of manuals.	<u>PER SPECIFICATION</u>	<u>\$ INCLUDED</u>

5.0 Repair Parts Delivery

<b>Repair Parts delivery</b>	
A.	<b>Prime Vendor</b> is to indicate current Master Purchase Order agreement(s) in place with the City. (Example 0667A0108):  If no agreement(s) exists, is your company willing to enter into long-term Master Purchase Order Agreement(s) in order to supply parts and components for the equipment and manufacturers proposed herein? <u>YES</u> OR NO
B.	<b>Sub-Vendor</b> is to indicate current Master Purchase Order agreement(s) in place with the City. (Example 0298A0609):  If no agreement(s) exists, is your company willing to enter into long-term Master Purchase Order Agreement(s) in order to supply parts and components for the equipment and manufacturers proposed herein? YES OR NO

6.0 Warranty  
 6.1 Warranty Requirement

WARRANTY (Table 1)		Complies (Y or N/A)
A.	Warranty is to be a minimum of 1-years unlimited-hours on the entire sweeper. Warranties on other manufacturer items shall be: 1. Conveyor:2 year or 1,000 hours whichever is greater 2. Auxiliary engine: 2 year unlimited hours 3. Water tanks: 5 years 4. Hydraulic pump/motor etc which are greater than the standard 1 year warranty shall be passed along to the City. 5. The standard factory warranty plan shall be provided as an attachment to your bid proposal	Y
B.	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	Y
C.	Warranty shall start when the City places the vehicle into service <b>NOT</b> on the delivery date	Y
D.	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.	Y
E.	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.	Y
F.	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	Y
G.	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	Y
H.	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 \$71/hour, not to exceed \$85.00/hour. (Enter a response of N/A if not available)	Y
I.	The bidder shall respond to request for warranty assistance within twenty-four (24) hours.	Y
J.	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	Y
K.	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.	Y
L.	This warranty in Table 1 and Table 2, is IN ADDITION to factory warranties on the vehicle and components	Y

6.2 Fleet Defects

Fleet Defects (Table 2)	
A.	<p><b>Definition:</b> If during the warranty period, a vehicle/unit(s) covered by this specification is out of service for 10% or 208 hours during the first 2,080 service hours of the 1<sup>st</sup> year warranty period caused by defects in Design, Testing, Material, and/or Workmanship, then this "Product Defect Clause" or "Lemon Clause" goes into effect. The Product Defect Clause/Lemon Clause shall be determined solely by the City.</p> <ol style="list-style-type: none"> <li>1. The vendor shall at the City's option:               <ol style="list-style-type: none"> <li>a. Buy the vehicle/unit back at "Full Purchase Price" as the vehicle/unit shall be considered a "Defective Vehicle/Unit" or "Lemon".</li> <li>b. Provide a replacement vehicle/unit that the City considers equal to the replacement vehicle/unit.</li> </ol> </li> <li>2. Computation of Service Hours = 8 hrs/day use X 5 work days/week x 52 weeks/year = 2,080 work hours per year.</li> <li>3. Computation of Percentage = 2,080 available for work hours/year X 0.10 (10%) = 208 Out of Service Hours in the 1<sup>st</sup> year warranty period.</li> <li>4. A Work Day, 8 hours, shall be computed as Monday thru Friday from 7:00 am to 3:00 pm</li> <li>5. This clause will not apply to delays in completion of warranty repairs due to acts of God, acts of the Public Enemy, acts of the Government (in either its sovereign or contractual capacity), fires, floods, or strikes, and unusually severe weather, PROVIDED that the Vehicle/Unit Vendor shall within three (3) calendar days of any such delay notify the City of Denver's Fleet Management in writing of the causes of delay and the facts relating to the problem</li> <li>6. After 24 hours/3 days of consecutive "lost service" of the vehicle/unit due to warranty problems the warranty period shall be extended by the length of lost service time due to warranty problems.</li> <li>7. The City of Denver shall consider the information submitted and may extend the time (208 hours) for completing, if in the City's, judgment, the facts justify such a warranty extension. The judgment of the City shall be final.</li> </ol>
B.	<p><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.</p>
C.	<p><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.</p>
D.	<p><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.</p>
E.	<p><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.</p>

F.	<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.
G.	<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.

6.3 Warranty Options

		WARRANTY Options (Table 3)			
Cost of Extended Warranties		Please indicate in the columns below the additional cost of an extended warranty for all applicable components listed in the left hand column.			
		Inc = Included		N/A = Not available	
		Four Years	Five Years		Comments
A.	Frame/Body	INC	INC		
B.	Engine	1775. <sup>00</sup>	2125. <sup>00</sup>		
C.	Drive Train	INC	695. <sup>00</sup>		
D.	Suspension	INC	N/A		
E.	Hydraulics				
F.	a. Pumps	INC	INC		
G.	b. Motors	INC	INC		
H.	c. Tanks	INC	INC		
I.	d. Valves	INC	INC		
J.	e. Controls	355. <sup>00</sup>	595. <sup>00</sup>		
K.	Electrical Components				5 YR PARTS WARRANTY ON LED LIGHTS AND SWEEPER WIRING HARNESS ONLY
L.	Other				
M.	Notes:				

6.4 **Warranty Service Location:** Warranty repair parts and service shall be available locally at an established factory authorized dealership. The dealership must have a minimum of 1-year experience as a factory authorized vendor for like equipment being bid. Warranty parts and repairs shall be available and supplied within 8-hours.

Cab & Chassis :	Dealership Name: <u>TRANSWEST TRUCKS</u> Street Address: <u>7626 BRIGLTON ROAD</u>	Telephone #: <u>303-289-3161</u> City: <u>COMMERCE CITY, CO</u>
Sweeper:	Dealership Name: <u>O.J. WATSON</u> Street Address: <u>5335 FRANKLIN ST.</u>	Telephone #: <u>303-295-2885</u> City: <u>DENVER, CO</u>
CNG Equipment:	Dealership Name: <u>N/A</u> Street Address: _____	Telephone #: _____ City: _____
Sundries:	Dealership Name: <u>O.J. WATSON</u> Street Address: <u>5335 FRANKLIN ST.</u>	Telephone #: <u>303-295-2885</u> City: <u>DENVER CO</u>

7.0 **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.	<p><b>Vendor shall supply at acceptance and delivery of vehicle.</b></p> <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> <li>11. Copy of City Purchase Order.</li> <li>12. All Keys ordered for the Vehicle and Sundries, i.e. toolboxes etc.</li> <li>13. All Manuals repair, parts, owners and/or CD's/DVD's etc</li> <li>14. Vehicle Warranty information and receipt for optional warranty.</li> <li>15. Receipts and Warranty information for vendor Installed/supplied components (lift gates, snowplows, lighting equipment etc)</li> </ol>

C.	<b>For an "Incomplete Vehicle" (cab &amp; chassis) add the following:</b> 1. Verification of Vehicle Identification Number (VIN), Colorado Dept. of Revenue form DR2087. 2. Statement of Fact for incomplete vehicles with added bodies etc, describes the final configuration of the vehicle. 3. 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: Dolores Gallegos at (720) 865-3900 ext. 03 or direct line (720) 865-3903.

8.0 Vehicle Delivery

8.1 Delivery of Completed sweeper 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	<u>225</u> DAYS
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9.0 Complete Vehicle Cost

<b>Include:</b> <ul style="list-style-type: none"> <li>o Cab &amp; Chassis Total Cost</li> <li>o Sweeper Body Total Cost</li> <li>o Sundries Items Total Cost</li> </ul> <b>Do Not Include:</b> <ul style="list-style-type: none"> <li>o Optional Equipment</li> <li>o Warranty Cost (s)</li> <li>o Manual Cost (s)</li> </ul>	ONE COMPLETE VEHICLE TOTAL COST	<u>\$ 229,205.<sup>00</sup></u>
--	---------------------------------	---------------------------------

11-4-2013 COST  
 238,085 With  
 Autolube  
 System and  
 Hopper Liner



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
1/17/2014

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 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> Security First Insurance Agency 7851 S. Elati Street Suite 100 Littleton CO 80120	<b>CONTACT NAME:</b> Maricor Price <b>PHONE (A/C No. Ext):</b> (303) 730-2327 <b>E-MAIL ADDRESS:</b> mprice@securityfirstia.com	<b>FAX (A/C No.):</b> (303) 730-2930
	<b>INSURER(S) AFFORDING COVERAGE</b>	
<b>INSURED</b> OJ Watson CO Inc, DBA: OJ Watson Equipment Co 5335 Franklin St Denver CO 80216	<b>INSURER A:</b> Auto Owners Insurance Co.	<b>NAIC #</b> 18988
	<b>INSURER B:</b>	
	<b>INSURER C:</b>	
	<b>INSURER D:</b>	
	<b>INSURER E:</b>	
	<b>INSURER F:</b>	

**COVERAGES** **CERTIFICATE NUMBER: 13-14 All Lines** **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.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY			48-830108-00	5/18/2013	5/18/2014	EACH OCCURRENCE \$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY		<input checked="" type="checkbox"/>				DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 30,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						MED EXP (Any one person) \$ 10,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PERSONAL & ADV INJURY \$ 1,000,000
	<input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						GENERAL AGGREGATE \$ 2,000,000
							PRODUCTS - COMP/OP AGG \$ 2,000,000
							\$
A	AUTOMOBILE LIABILITY			48-830108-02	5/18/2013	5/18/2014	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input type="checkbox"/> ANY AUTO		<input type="checkbox"/>				BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS		<input type="checkbox"/> SCHEDULED AUTOS				BODILY INJURY (Per accident) \$
	<input type="checkbox"/> HIRED AUTOS		<input type="checkbox"/> NON-OWNED AUTOS				PROPERTY DAMAGE (Per accident) \$
	<input checked="" type="checkbox"/> Dealer Blanket						Dealer Comp/Collision \$ 1,000,000
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR			48-830-108-01	5/18/2013	5/18/2014	EACH OCCURRENCE \$ 2,000,000
	<input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE						AGGREGATE \$ 2,000,000
	<input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000						\$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						WC STATUTORY LIMITS OTHER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)		<input type="checkbox"/> Y/N				E.L. EACH ACCIDENT \$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$
							E.L. DISEASE - POLICY LIMIT \$
A	Garage Keepers Liability			48-830-108-02	5/18/2013	5/18/2014	1,000,000
A	Garage Keepers Phys Dmg			48-830-108-02	5/18/2013	5/18/2014	Comp & Collision Ded Each 1,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)  
The City and County of Denver, its elected and appointed officials, employees and volunteers as Additional Insured for the Comprehensive General Liability and Auto Liability insurance policies.

<b>CERTIFICATE HOLDER</b> (720) 913-1805 terri.goodwin@denvergov.or City and County of Denver Department of Public Works 201 West Colfax, Dept #611 Denver, CO 80202	<b>CANCELLATION</b> 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 Maricor Price/MPRICE <i>Maricor D. Price</i>
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# CERTIFICATE OF LIABILITY INSURANCE

OJWAT-1

OP ID: TV

DATE (MM/DD/YYYY)

01/17/2014

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 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).

PRODUCER CRS Insurance Brokerage Commercial Risk Solutions DBA 6600 E. Hampden Ave. Denver, CO 80224 Jeffrey Berven	CONTACT NAME: _____ PHONE (A/C, No, Ext): _____ E-MAIL ADDRESS: _____ FAX (A/C, No): _____													
	<table border="1"> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> <tr> <td>INSURER A : <b>Pinnacol Assurance</b></td> <td></td> </tr> <tr> <td>INSURER B :</td> <td></td> </tr> <tr> <td>INSURER C :</td> <td></td> </tr> <tr> <td>INSURER D :</td> <td></td> </tr> <tr> <td>INSURER E :</td> <td></td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : <b>Pinnacol Assurance</b>		INSURER B :		INSURER C :		INSURER D :		INSURER E :		INSURER F :
INSURER(S) AFFORDING COVERAGE	NAIC #													
INSURER A : <b>Pinnacol Assurance</b>														
INSURER B :														
INSURER C :														
INSURER D :														
INSURER E :														
INSURER F :														
INSURED <b>O J Watson Co Inc.</b> <b>DBA: OJ Watson Equip. CO</b> <b>5335 Franklin St</b> <b>Denver, CO 80216</b>														

**COVERAGES****CERTIFICATE NUMBER:****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.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	<b>GENERAL LIABILITY</b> <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR _____ GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC			<b>NO COVERAGE WITH CRS</b>			EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS			<b>NO COVERAGE WITH CRS</b>			COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (PER ACCIDENT) \$ \$
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED _____ RETENTIONS _____			<b>NO COVERAGE WITH CRS</b>			EACH OCCURRENCE \$ AGGREGATE \$ \$
<b>A</b>	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <b>N</b>	N/A	<b>X 4066145</b>	<b>07/01/2013</b>	<b>07/01/2014</b>	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ <b>100,000</b> E.L. DISEASE - EA EMPLOYEE \$ <b>100,000</b> E.L. DISEASE - POLICY LIMIT \$ <b>500,000</b>

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Workers Compensation coverage includes a waiver of subrogation.  
 All policy terms, conditions and exclusions apply.

**CERTIFICATE HOLDER****CANCELLATION**

CITYDIA

City & County of Denver, Dept  
 of Public Works  
 201 W Colfax Ave Dept 611  
 Denver, CO 80202

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

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**Contract Control Number:**

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:

By \_\_\_\_\_

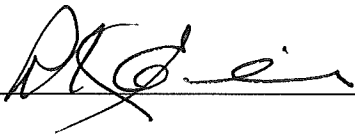
By \_\_\_\_\_

By \_\_\_\_\_



**Contract Control Number:** PWADM-201414666-00

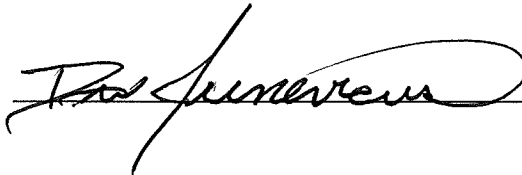
**Contractor Name:** O J WATSON COMPANY INC

By: 

Name: R. K. Eckrich  
(please print)

Title: President  
(please print)

**ATTEST: [if required]**

By: 

Name: Dan Junevics  
(please print)

Title: Parts Manager  
(please print)

