

	Bid Deposit Required All bids shall be accompanied by a bid deposit in the form of a certified, treasurers check (no cash) issued by a responsible bank or trust company made payable to the City of Cambridge or a bid bond, in an amount not less then 5% of the value
FILE NO: 5266	
COMMODITY: To Furnish and Deliver qty of one (1) new Custom Built 1250 G.P.M. Triple Combination Pumper for the City of Cambridge Fire Department	
NAME OF BIDDER:	
BIDDER'S FED. ID.	

TO: Cynthia H. Griffin, Purchasing Agent PH: (617)349-4310 FX: (617)349-4008
795 Massachusetts Avenue, Room 303
Cambridge, MA 02139

The undersigned submits this sealed bid to provide the commodity or services identified above, described in the specifications herein and advertised in the **CAMBRIDGE CHRONICLE** on **THURSDAY, JULY 15, 2010** which is to be opened and publicly read at the Office of the Purchasing Agent, City Hall, 795 Mass. Ave., Room 303, Cambridge, MA at 11:00 a.m. on **THURSDAY, JULY 29, 2010**. **This bid may be downloaded from the City's web site, www.CambridgeMA.gov, Online Services, Current Bid List, Formal, File no. 5266. Parking is limited at this location. It is strongly recommended that bids are mailed or delivered in advanced of the due date and time. Late proposals will not be accepted.**

The undersigned certifies that this bid is made without collusion with any other person, firm or corporation making any other bid or who otherwise would make a bid. The undersigned agrees to furnish the commodity or services in strict accordance with the bid documents, which consist of this Formal Bid and all attachments hereto.

The envelope containing the bid must be labeled: "This envelope contains a bid for **To Furnish and Deliver qty of one (1) Triple Combination Pumper for the City of Cambridge Fire Department opened at 11:00 A.M. on Thursday, July 29, 2010**". The bid and all documents submitted with it are public records.

All bids shall be accompanied by a bid deposit in the form of a certified, treasurers check (no cash) issued by a responsible bank or trust company made payable to the City of Cambridge or a bid bond, in an amount not less then 5% of the value of the bid.

This bid process and the award of the contract are made in conformity with M.G.L. c. 30B, unless otherwise stated.

See other side of this form for General Terms and Conditions that shall become part of any Contract awarded through this Formal Bid.

This bid includes addenda numbered: _____

SIGNATURE OF BIDDER: _____

TITLE OF SIGNATORY _____

ADDRESS OF BIDDER _____

TELEPHONE NUMBER _____ FAX NUMBER: _____

Please check one of the following and insert the requested information:

() Corporation, incorporated in the State of: _____

() Partnership. Names of partners: _____

() Individual: _____

Name of Bidder: _____

GENERAL TERMS AND CONDITIONS

LAWS: All deliveries shall conform in every respect with all applicable laws of the Federal government, Commonwealth of Massachusetts and City of Cambridge.

EQUAL OPPORTUNITY: The Vendor in the performance of the contract shall not discriminate on the grounds of race, color, religious creed, national origin or ancestry, age, disability, sexual orientation, marital status, family status, military status, source of income, or sex in employment practices or in the selection or retention of subcontractors, and in the procurement of materials or rental of equipment. The City may cancel, terminate or suspend the contract in whole or in part for any violation of this paragraph

TAXES: Purchases made by the City are exempt from the payment of Federal excise tax and the payment of Commonwealth of Massachusetts sales tax (except for gasoline) and any such taxes must not be included in the bid prices.

QUANTITIES: Unless otherwise stated, the quantities set forth herein are ESTIMATES ONLY. The City reserves the right to purchase the commodity(ies) specified in any amount less than the estimated amount.

BID PRICES: Bid prices shall include transportation and delivery charges fully prepaid to the City of Cambridge destination. Where the unit price and the total price are at variance, the unit price will prevail.

DELIVERY AND PACKAGING: Deliveries must be made in such quantities as called for in the purchase order and in the manufacturer's original packages. All deliveries must be "inside" delivery with no assistance from City personnel. Tailgate deliveries will not be accepted. Rejected material will be returned to the vendor at the vendor's expense.

MODIFICATION OF BIDS: Prior to bid opening, a bidder may correct, modify or withdraw its bid by making the request in writing prior to the time and date for the bid opening. All corrections and modifications must be delivered to the Purchasing Department in a sealed envelope indicating that it contains a modification or correction of the original bid submitted for the particular commodity and indicating the time and date of the bid opening.

REJECTION OF BIDS: The City reserves the right to reject any and all bids if it is in best interest of the City to do so.

AWARD OF CONTRACT: Contract(s) will be awarded within forty-five days of the bid opening unless award date is extended by consent of all parties concerned.

INDEMNITY: Unless otherwise provided by law, the Vendor will indemnify and hold harmless the City against any and all liability, loss, damages, costs or expenses for personal injury or damage to real or tangible personal property which the City may sustain, incur or be required to pay, arising out of or in connection with the performance of the Contract by reason of any negligent action/inaction or willful misconduct by the Contractor, its agents, servants or employees

TERMINATION OF CONTRACT: Except as otherwise provided in the Articles of Agreement, the City may terminate the contract upon seven days notice.

ASSIGNABILITY: The Vendor shall not assign, sell, subcontract or otherwise transfer any interest in this contract without the prior written consent of the City.

MATERIAL SAFETY DATA SHEETS: Pursuant to M.G.L. c. 111F, ss. 8, 9, and 10, any vendor who receives a contract resulting from this invitation agrees to submit a Material Safety Data Sheet for each toxic or hazardous substance or mixture containing such substance when deliveries are made. The vendor agrees to comply with all requirements set forth in the pertinent laws above.

Name of Bidder: _____

**City of Cambridge
Purchasing Department**

TO: Cynthia H. Griffin, Purchasing Agent
City Hall, Cambridge, Massachusetts 02139

The undersigned hereby proposes to furnish, and deliver One (1) new Custom Built 1250 G.P. M. Triple Combination Pumper for the Cambridge Fire Department, all in accordance with the attached specifications and following proposal schedule.

Prices must remain FIRM during the entire contract period. One award will be made as a result of this Invitation to Bid. The contract will be awarded to the responsive and responsible bidder offering the lowest price for the Qty of One (1) new One (1) new Custom Built 1250 G.P. M. Triple Combination Pumper.

Contract will be awarded within forty-five days, unless award date is extended by consent of all parties concerned.

Prior to bid opening, a bidder may correct, modify or withdraw its bid by making the request in writing prior to the time and date for the bid opening. All corrections and modifications must be delivered to the Purchasing Department in a sealed envelope with a notation on the envelope indicating that it contains a modification or correction of the original bid submitted for the particular commodity and indicating the date and time of the bid opening.

A sample contract is attached hereto. The bidder must be willing to sign the City's contract. The City will not accept a bidder's terms & conditions.

Living Wage Requirements

The City of Cambridge has a Living Wage Requirement that establishes minimum hourly rates for all personnel providing contract services to the City. The City of Cambridge's Living Wage as of March 1, 2010 is \$13.69 per hour. The Living Wage requirements are attached.

Attention is called to the insurance and bond requirements herein.

PLEASE SUBMIT YOUR BID IN DUPLICATE.

Bid Deposit

All bids shall be accompanied by a bid deposit in the form of a certified, treasurers check (no cash) issued by a responsible bank or trust company made payable to the City of Cambridge or a bid bond, in an amount not less than 5% of the value of the bid.

Performance Bond

The successful bidder will be required to furnish a Performance Bond in the amount of one hundred (100%) of the contract sum. Bonds shall be obtained from a surety licensed to do business in the Commonwealth of Massachusetts and the form shall be satisfactory to the City of Cambridge.

Proposals received from bidders who do not manufacture the chassis shall provide a warranty that shall be issued jointly and severally by, and signed by, both the bidder and the chassis manufacturer.

If the successful bidder does not manufacture the chassis, the bidder shall supply a separate warranty bond, in addition to their performance bond, along with their signed contract. This warranty bond shall guarantee all terms and conditions of the warranty and names both the bidder and chassis manufacturer as co-principals. This warranty bond shall be issued for the contract amount and shall remain in force for a term which is consistent with the term of the warranty quoted in the bid.

Name of Bidder: _____

Questions

Questions concerning this Invitation to Bid **including any exceptions to the specifications** must be submitted in writing and faxed to Cynthia H. Griffin, Fax # 617-349-4008. All questions must be submitted no later than **Thursday, July 22, 2010 by 4:00 p.m.** An addendum will be posted to the website to notify all bidders of the questions and answers.

Please check on the website for Addendums before submitting your bid to the City. Bidders will not be notified individually of Addendums. Please check the bidders list on the website. If your firm is not listed on the bidders list please click on "Registry" and notify us that you have downloaded the bid document.

Bid Results

The tab sheet and the contract award information will not be mailed to the bidders individually. A tab sheet with the bid results will be posted to the website soon after the bid opening. The tab sheet will include the "contract award" information as soon as it is determined.

Confidentiality and Public Records Law

All bids or other materials submitted by the vendor in response to this Invitation to Bid will be open for inspection by any person and in accordance with the Massachusetts Public Records Law.

Quality Requirements

A "NO" response or a failure to respond to any of the following Quality Requirements will result in a rejection of your bid. Circle Yes or No for EACH of the following Quality Requirements.

- | | | |
|--|-----|----|
| 1. Bidder has been in business for minimum of ten years. | Yes | No |
| 2. Apparatus proposed by the bidder meets the requirements of the National Fire Protection Association (NFPA) as stated in current Pamphlet 1901 for Fire Apparatus except where amended herein. | Yes | No |
| 3. The successful bidder has and will maintain a factory authorized service center within 50 miles of the end user. | Yes | No |
| 4. Bidder can provide, upon request, proof of financial solvency. | Yes | No |
| 5. The bidder has the following qualifications: | | |
| A. Minimum of eight years of continuous ownership and management. | Yes | No |
| B. Bidder has access to sheet metal fabrication and assembly. | Yes | No |
| C. In house paint facility large enough to accommodate Fire apparatus | Yes | No |
| D. Certified pump mechanics. | Yes | No |
| E. Certified welders. | Yes | No |
| F. International air terminal within thirty mile for Receipt of air shipments of service parts. | Yes | No |
| G. Available engineer with a minimum of 20 years experience in automotive fire apparatus and aerial design. | Yes | No |
| H. PRO-LINK 9000 or equivalent diesel engine reader and analytical Device with ATEC Option for transmissions on Premises- owned by the service center. | Yes | No |

Name of Bidder: _____

Bid Submissions

Failure to submit documents requested may result in the determination that your bid is non-responsive unless the City deems such failure to be a minor informality.

1. Bidder shall furnish evidence satisfactory to the City of its ability to construct the apparatus specified and shall state the location of the factory where the apparatus is to be built.
2. Bidder shall state minimum turn around time for repairs and parts.
3. Bidder shall submit a set of contractor's specifications consisting of a detailed description of the apparatus and equipment proposed, indicated size, type, model and make of all component parts and equipment.
4. Bidder shall detail the location of the dedicated service facility within its manufacturing locations.
5. Bidder shall submit copies of certificates referenced under quality requirements 5D and 5E.
- 5. Bidder shall complete the specification sheets 1-90 Answer Bidder Complies yes or no for each paragraph and submit with your bid.**

Price Proposal

The contract will be awarded to the responsive and responsible bidder offering the lowest price for the One (1) new Custom Built 1250 G.P. M. Triple Combination Pumper for the City of Cambridge Fire Department all in accordance to the attached specifications.

Furnish and deliver Qty of One (1) new Custom Built 1250 G.P. M. Triple Combination Pumper as per the attached specifications for the

Delivery charge must be included in proposal price.

All prices are to remain firm.

Total Lump Sum of

\$ _____
Total Lump Sum

Total Lump Sum in Words: _____

Signature of Bidder: _____

Note: Please refer to the attached Cambridge Fire Department Apparatus Specifications. Answer Bidder Complies yes or no for each paragraph and sign each page and submit with your bid.

Name of Bidder: _____

**Americans with Disabilities Act (42 U.S.C. 12131)
Section 504 of the Rehabilitation Act of 1973
Tax Compliance/Anti-Collusion Statement**

The Americans with Disabilities Act (the "Act") applies to all employers of fifteen or more employees. All vendors that are subject to the Act must comply with its provisions. In further compliance with the Act, all Contractors who enter into contracts with the City are prohibited from discrimination against the City's employees, regardless of the size of the Contractor.

The Act protects against discrimination on the basis of "disability", which is defined as a physical or mental impairment that substantially limits at least one "major life activity"; discrimination against a person having a history or record of such impairment; and discrimination against an individual regarded - even if inaccurately - as having such an impairment. The Act also expressly prohibits discrimination that is based on an individual's relationship or association with a disabled person.

The bidder shall not discriminate against any qualified employee or job applicant with a disability and will make the activities, programs and services covered by any contract awarded through this procurement readily accessible to and usable by individuals with disabilities. To be qualified for a job, or to avail oneself of the bidder's services, the individual with the disability must meet the essential eligibility requirements for receipt of the bidder's services or participation in the bidder's programs or activities with or without: 1) reasonable modifications to the bidder's rules, policies and practices; 2) removal of architectural, communication, or transportation barriers; or, 3) provisions of auxiliary aids and services.

By submitting its bid, the bidder certifies to the City of Cambridge that it understands and will comply with all applicable provisions of the Act, including compliance with applicable provisions of Section 504 of the Rehabilitation Act of 1973, if the bidder is receiving federal funds.

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals

As required by M.G.L. c. 62C, §49A, the undersigned certifies under the penalties of perjury that the bidder has complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

(Print Name of person signing bid)

(Signature & Title)

Name of Company

Address

City

State

Zip Code

This form must be submitted with your bid

Name of Bidder: _____

CORI COMPLIANCE FORM

Persons and businesses supplying goods and/or services to the City of Cambridge ("Vendors"), who are required by law to perform CORI checks, are further required by Section 2.112.060 of the Cambridge Municipal Code to employ fair policies, practices and standards relating to the screening and identification of persons with criminal backgrounds through the CORI system. Such Vendors, when entering into contracts with the City of Cambridge, must affirm that their policies, practices and standards regarding CORI information are consistent with the policies, practices and standards employed by the City of Cambridge as set forth in the City of Cambridge CORI Policy ("CORI Policy") attached hereto.

CERTIFICATION

The undersigned certifies under penalties of perjury that the Vendor employs CORI related policies, practices and standards that are consistent with the provisions of the attached CORI Policy. **All Vendors must check one of the three lines below.**

1. _____ CORI checks are not performed on any Applicants.
2. _____ CORI checks are performed on some or all Applicants. The Vendor, by affixing a signature below, affirms under penalties of perjury that its CORI policies, practices and standards are consistent with the policies, practices and standards set forth in the attached CORI Policy.
3. _____ CORI checks are performed on some or all Applicants. The Vendor's CORI policies, practices and standards are not consistent with the attached CORI Policy. Please explain on a separate sheet of paper.

(Typed or printed name of person
signing quotation, bid or Proposal)

Signature

(Name of Business)

NOTE:

The City Manager, in his sole discretion may grant a waiver to any Vendor on a contract by contract basis.

Instructions for Completing CORI Compliance Form:

A Vendor should not check Line 1 unless it performs NO CORI checks on ANY applicant. A Vendor who checks Line 2 certifies that the Vendor's CORI policy conforms to the policies, practices and standards set forth in the City's CORI Policy. A Vendor with a CORI policy that does NOT conform to the City's CORI Policy must check Line 3 and explain the reasons for its nonconformance in writing. Vendors, who check Line 3, will not be permitted to enter into contracts with the City, absent a waiver by the City Manager.

This form must be submitted with your bid

Name of Bidder: _____

Cambridge Fire Department Apparatus Specification	Bidder Complies	
	Yes	No
<p style="text-align: center;">Cambridge Fire Department 491 Broadway Cambridge, Massachusetts 02138</p> <p style="text-align: center;">SPECIFICATIONS FOR A CUSTOM BUILT 1250 G.P.M. TRIPLE COMBINATION PUMPER</p> <p><u>INTENT OF SPECIFICATIONS</u></p> <p>It shall be the intent of these specifications to cover the furnishing and delivery of a complete fire apparatus. These detailed specifications cover the requirements as to the type of construction and test to which the apparatus shall conform, together with certain details as to finish, equipment and appliances with which the successful bidder shall conform. Minor details of construction and materials, which are not otherwise specified, are left to the discretion of the contractor. The manufacturer shall provide loose equipment only when specified by the customer. Otherwise, in accordance with NFPA 1901, 2009 edition, the proposal shall specify whether the fire department or apparatus dealership shall provide required loose equipment.</p> <p>Bids shall only be considered from companies that have an established reputation in the field of fire apparatus construction and have been in business for a minimum of 20 years. Further, bidder shall maintain dedicated service facilities for the repair and service of products. Evidence of such a facility shall be included in bidder proposal.</p> <p>Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified and shall state the location of the factory where the apparatus is to be built. The bidder shall also show that the company is in position to render prompt service and to furnish replacement parts.</p> <p>Each bid shall be accompanied by a detailed set of "Contractor's Specifications" consisting of a detailed description of the apparatus and equipment proposed, and to which the apparatus furnished under contract shall conform. These specifications shall indicate size, type, model and make of all component parts and equipment.</p> <p><u>QUALITY AND WORKMANSHIP</u></p> <p>The design of the apparatus shall embody the latest approved automotive engineering practices. The workmanship shall be of the highest quality in its respective field. Special consideration shall be given to the following points: Accessibility of the various units which require periodic maintenance; ease of operation (including both pumping and driving); and symmetrical proportions. Construction shall be rugged and ample safety factors shall be provided to carry the loads specified and to meet both on and off road requirements and speed conditions as set forth under "Performance Tests and Requirements". Welding shall not be employed in the assembly of the apparatus in a manner that shall prevent the ready removal of any component</p>		

Cambridge Fire Department Apparatus Specification	Bidder Complies	
	Yes	No
<p>part for service or repair. All steel welding shall follow American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding shall follow American Welding Society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding shall follow American Welding Society B2.1-2000 requirements for structural welding of sheet metal. Flux core arc welding to use alloy rods, type 7000, American Welding Society standards A5.20-E70T1. Employees classified as welders are tested and certified to meet American Welding Society codes upon hire and every three (3) years thereafter. The manufacturer shall be required to have an American Welding Society certified welding inspector in plant during working hours to monitor weld quality.</p>		
<p><u>DELIVERY</u> Apparatus, to insure proper break in of all components while still under warranty, shall be delivered under its own power - rail or truck freight shall not be acceptable. A qualified delivery engineer representing the contractor shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in the proper operation, care and maintenance of the equipment delivered.</p>		
<p><u>INFORMATION REQUIRED</u> The manufacturer shall supply at time of delivery, complete operation and maintenance manuals covering the completed apparatus as delivered. A permanent plate shall be mounted in the driver's compartment which specifies the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.</p>		
<p><u>SAFETY VIDEO</u> Documentation provided at the time of delivery shall also include an apparatus safety video, in DVD format. This video shall address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus. Safety procedures for the following shall be included: vehicle pre-trip inspection, chassis operation, pump operation, and maintenance.</p>		
<p><u>PERFORMANCE TESTS AND REQUIREMENTS</u> A road test shall be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts, and rear axles shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. Vehicle shall adhere to the following parameters:</p> <p>A) The apparatus, when fully equipped and loaded, shall have not less than 25% nor more than 50% of the weight on the front axle, and not less than 50% nor more than 75% on the rear axle.</p> <p>B) The apparatus shall be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine.</p>		

Cambridge Fire Department Apparatus Specification	Bidder Complies	
	Yes	No
<p>C) The service brakes shall be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway. The air brake system shall conform to Federal Motor Vehicle Safety Standards (FMVSS) 121.</p> <p>D) The apparatus, fully loaded, shall be capable of obtaining a speed of 50 mph on a level concrete highway with the engine not exceeding its governed rpm (full load).</p> <p><u>FAILURE TO MEET TEST</u> In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the bidder within 30 days of the date of the first trial. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the bidder of such changes, shall also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser or its use by the purchaser during the above-specified period with the permission of the bidder shall not constitute acceptance.</p> <p><u>LIABILITY</u> The successful bidder shall defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.</p> <p><u>SPECIFICATION BID REQUIREMENTS</u> Bidders shall also indicate in the "yes/no" column if their bid complies on each item (PARAGRAPH) specified. Exceptions shall be allowed if they are equal to or superior to that specified and provided they are listed and fully explained on a separate page.</p> <p>Proposals taking total exception to specifications shall not be acceptable.</p> <p>Also, bidders shall submit a detailed proposal. A letter only, even though written on a company letterhead, shall not be sufficient. Bid proposals shall be submitted in the same sequence as specifications for ease of evaluation, comparison and checking of compliance. An exception to these requirements shall not be tolerated.</p> <p><u>EXCEPTIONS</u> All exceptions shall be stated no matter how seemingly minor. Any exceptions not taken shall be assumed by the purchaser to be included in the proposal, regardless of the cost to the bidder.</p> <p><u>GENERAL CONSTRUCTION</u> The apparatus shall be designed with due consideration to distribution of load between the front and rear axles. Weight balance and distribution shall be in accordance with the recommendations of the National Fire Protection Association.</p>		

Cambridge Fire Department Apparatus Specification	Bidder Complies															
	Yes	No														
<p><u>COMMERCIAL GENERAL LIABILITY INSURANCE</u></p> <p>The successful bidder shall, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Each Occurrence</td> <td style="width: 50%; text-align: right;">\$1,000,000</td> </tr> <tr> <td>Products/Completed Operations Aggregate</td> <td style="text-align: right;">\$1,000,000</td> </tr> <tr> <td>Personal and Advertising Injury</td> <td style="text-align: right;">\$1,000,000</td> </tr> <tr> <td>General Aggregate</td> <td style="text-align: right;">\$5,000,000</td> </tr> </table> <p>Coverage shall be written on a Commercial General Liability form. The policy shall be written on an occurrence form and shall include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy shall include owner as an additional insured when required by written contract.</p> <p><u>COMMERCIAL AUTOMOBILE LIABILITY INSURANCE</u></p> <p>The successful bidder shall, during the performance of the contract keep in force at least the following minimum limits of commercial automobile liability insurance:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Each Accident Combined Single Limit:</td> <td style="width: 50%; text-align: right;">\$1,000,000</td> </tr> </table> <p>Coverage shall be written on a Commercial Automobile liability form.</p> <p><u>UMBRELLA/EXCESS LIABILITY INSURANCE</u></p> <p>The successful bidder shall, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Aggregate:</td> <td style="width: 70%; text-align: right;">\$25,000,000</td> </tr> <tr> <td>Each Occurrence:</td> <td style="text-align: right;">\$25,000,000</td> </tr> </table> <p>The umbrella policy shall be written on an occurrence basis and at a minimum provide excess to the Bidder's General Liability, Automobile Liability and Employer's Liability policies. Owner shall be included as an additional insured on the General Liability policy when required by written contract.</p> <p>The required limits can be provided by one or more policies provided all other insurance requirements are met.</p> <p>Coverage shall be provided by a carrier(s) rated A- or better by A.M. Bests.</p> <p>Bidder agrees to furnish owner with a current Certificate of Insurance with the coverage's listed above along with its bid. The certificate shall show the purchaser as certificate holder. The Certificate of Insurance shall provide the following cancellation clause: Should any of the above described policies be cancelled before the expiration date thereof, the issuing insurer shall endeavor to mail 30 days written notice to the certificate holder named to the left, but failure to do so shall impose no obligation or liability of any kind upon the insurer, its agents or representatives.</p>	Each Occurrence	\$1,000,000	Products/Completed Operations Aggregate	\$1,000,000	Personal and Advertising Injury	\$1,000,000	General Aggregate	\$5,000,000	Each Accident Combined Single Limit:	\$1,000,000	Aggregate:	\$25,000,000	Each Occurrence:	\$25,000,000		
Each Occurrence	\$1,000,000															
Products/Completed Operations Aggregate	\$1,000,000															
Personal and Advertising Injury	\$1,000,000															
General Aggregate	\$5,000,000															
Each Accident Combined Single Limit:	\$1,000,000															
Aggregate:	\$25,000,000															
Each Occurrence:	\$25,000,000															

Cambridge Fire Department Apparatus Specification	Bidder Complies	
	Yes	No
<p><u>ISO COMPLIANCE</u> The manufacturer shall operate a Quality Management System under the requirements of ISO 9001. These standards sponsored by the "International Organization for Standardization (ISO)" specify the quality systems that shall be established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance shall be included with the bid.</p> <p><u>NFPA 2009 STANDARDS</u> This unit shall comply with the NFPA standards effective January 1, 2009, except for fire department specifications that differ from NFPA specifications. These exceptions shall be set forth in the Statement of Exceptions.</p> <p>Certification of slip resistance of all stepping, standing and walking surfaces shall be supplied with delivery of the apparatus.</p> <p>A plate that is highly visible to the driver while seated shall be provided. This plate shall show the overall height, length, and gross vehicle weight rating.</p> <p>The manufacturer shall have programs in place for training, proficiency testing and performance for any staff involved with certifications.</p> <p>An official of the company shall designate, in writing, who is qualified to witness and certify test results.</p> <p><u>NFPA COMPLIANCY</u> Apparatus proposed by the bidder shall meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications shall be indicated in the proposal as "non-NFPA".</p> <p><u>TOTAL VEHICLE ASSESSMENT CERTIFICATION</u> The apparatus shall be third-party, independent, audit-certified through Underwriters Laboratory (UL) to the current edition of NFPA 1901 standards. The certification includes: all design, production, operational, and performance testing of the apparatus. (No exception)</p> <p><u>PUMP TEST</u> The pump shall be tested, approved, and certified by Underwriter's Laboratory at the manufacturer's expense. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the manufacturer's record of pump construction details shall be forwarded to the Fire Department.</p> <p><u>GENERATOR TEST</u> If the unit has a generator, the generator shall be tested, approved, and certified by Underwriters Laboratories at the manufacturer's expense. The test results shall be provided to the Fire Department at the time of delivery.</p> <p><u>BREATHING AIR TEST</u> If the unit has breathing air, Underwriters Laboratories shall draw an air sample from the air system and certify that the air quality meets the requirements of</p>		

Cambridge Fire Department Apparatus Specification	Bidder Complies	
	Yes	No
<p>NFPA 1989, <i>Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection.</i></p> <p><u>INSPECTION TRIP(S)</u> The bidder shall provide two (2) factory inspection trip(s) for three (3) members of the Cambridge Fire Department. The inspection trip(s) shall be scheduled at times mutually agreed upon between the manufacturer's representative and the customer. All costs such as travel, lodging and meals shall be the responsibility of the bidder.</p> <p><u>SERVICE CENTER</u> In order to minimize out of service time the bidder shall have the capability to repair all major components with-out the need to transport the apparatus to other locations. The bidder shall maintain a factory authorized service center with-in 50 miles of the Cambridge Fire Department. The service center shall have the following minimum qualifications:</p> <ol style="list-style-type: none"> 1. Minimum 10 years of continuous ownership and management 2. Total in-house body shop capability 3. Minimum 40 foot down draft paint booth with environmental approval 4. Pump mechanics certified by the pump manufacturer 5. Automotive electricians trained by the apparatus factory 6. PRO-LINK 9000 analytical device with current software 7. Lap top shop computer with current multiplex analytical software and wireless modem for direct truck to factory communication 8. Full time body repair and automotive paint staff 9. Certified Master ASE and EVT Technicians 10. Warranty center for Caterpillar®, Cummins®, Detroit Diesel®, Allison® Transmission, Hendrickson®, Meritor®, Waterous® and Hale® Pumps 11. Computerized parts listing 12. Aerial and hydraulic repair specialists 13. 24 Hour Road & Towing service vehicle 14. VIS® Check Diagnostic analyzer for driveline inspections 15. DOT & Massachusetts Inspection Station 16. Hunter® Laser Truck Alignment System 17. Robinair® Air Conditioning Analyzer 18. Massachusetts Certified Air Conditioning Technician <p>Current Certifications shall be furnished at time of bid (NO EXCEPTIONS).</p> <p><u>TRAINING</u> A qualified training engineer shall be provided by the bidder. The training engineer shall instruct the Cambridge Fire Department personnel in the operation and maintenance of the chassis, and pump operation for a period of not less than four (4) days. The training shall incorporate modern training techniques. An “as built” Power Point® presentation shall be included as part of the instruction. A copy shall be left with the fire department to use for future instruction.</p>		

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	Yes	No
<p><u>CONTRACT</u> The contract for the specified apparatus shall be directly with the City of Cambridge, Massachusetts and the manufacturer. Contracts with dealers or representatives of the manufacturer will not be executed.</p> <p><u>NEW AND UNUSED</u> All components shall be new and unused (with the exception of use incidental to the construction, testing, transport and delivery of the apparatus). Any old or used components shall constitute grounds for automatic rejection of the entire apparatus.</p> <p>Bidders must identify by manufacturer and model number purchased components utilized in the apparatus proposed in the bid submission. In order to make valid comparisons between bids, components must be accurately identified. Therefore any bid or technical proposal which does not so identify the components being offered will not be considered.</p> <p>Any potential to utilize progress payment discounts must be defined clearly in the (“bidder’s) proposal.</p> <p><u>AFTERMARKET SUPPORT WEBSITE</u> A Customer Service website shall provide authorized dealers access to comprehensive information pertaining to the maintenance and service of their customer's apparatus. This tool shall provide the authorized dealer the ability to service and support their customers to the best of their ability with factory support at their fingertips.</p> <p>This website shall also be accessible to the end user through the guest login. Limited access is available and vehicle specific parts information accessible by entering a specific VIN number. All end users should see their local authorized dealer for additional support and service.</p> <p>The website shall provide the following to the designated individuals:</p> <ul style="list-style-type: none"> - Authorized dealer only - ability to access truck detail information on the major components of the vehicle, warranty information, available vehicle photographs, vehicle drawings, sales options, applicable vehicle software downloads, etc. - Authorized dealer and customer - parts look-up capability, with the aid of digital photographs, part drawings, and assembly drawings. - Authorized dealer only - ability to electronically submit warranty claims directly to the factory for reimbursement. - Authorized dealer only - accessibility to multiple dealer reports that allow the dealership to maintain communication with the customer on the status of orders, claims, and phone contacts. - Authorized dealer and customer - access to all currently published Operation and Maintenance and Service publications. 		

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<p>- Authorized dealer only - access to manufacturer Service Bulletins and Work Instructions containing information on current service topics and recommendations provided.</p> <p>- Authorized dealer and customer - access to upcoming training classes offered by the manufacturer.</p> <p>- Authorized dealer only - access to interactive electronic learning modules (Operators Guides) covering the operation of major vehicle components.</p> <p>- Authorized dealer only - access to customer service articles, corporate news, quarterly newsletters, and key contacts.</p> <p><u>MAXIMUM OVERALL HEIGHT</u> The maximum overall height of the apparatus shall be 9 feet 3 inches.</p> <p><u>MAXIMUM OVERALL LENGTH</u> The maximum overall length of the apparatus shall be 30 feet.</p> <p><u>APPROVAL DRAWING</u> A drawing of the proposed apparatus shall be provided for approval before construction begins. The sales representative shall also have a copy of the same drawing. The finalized and approved drawing shall become part of the contract documents. This drawing shall indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.</p> <p>A "revised" approval drawing of the apparatus shall be prepared and submitted by the manufacturer to the purchaser showing any changes made to the approval drawing.</p> <p><u>ONE (1) YEAR MATERIAL AND WORKMANSHIP</u> Each new piece of apparatus shall be provided with a minimum one (1) year basic apparatus material and workmanship limited warranty. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.</p> <p>The Cambridge Fire Department will perform warranty repairs at warranty rates with prior approval from the manufacturer.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (No Exception).</p> <p><u>FIFTY (50) YEAR STRUCTURAL INTEGRITY</u> The chassis frame shall be provided with a fifty (50) year material and workmanship limited warranty. The warranty shall cover the chassis frame as being free from defects in material and workmanship that would arise under normal use and service.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (No Exception).</p>		

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<p><u>TWO (2) YEAR MATERIAL AND WORKMANSHIP</u> A Meritor™ Axle 2 year limited warranty shall be provided.</p> <p><u>TWO (2) YEAR MATERIAL AND WORKMANSHIP</u> A Meritor™ Axle 2 year limited warranty shall be provided.</p> <p><u>TEN (10) YEAR STRUCTURAL INTEGRITY</u> The new cab shall be provided with a ten (10) year material and workmanship limited warranty. The warranty shall cover such portions of the cab built by the manufacturer as being free from structural failures caused by defects in material and workmanship that would arise under normal use and service.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (No Exception).</p> <p><u>LIFETIME MATERIAL AND WORKMANSHIP</u> The UPF poly water tank shall be provided with a lifetime material and workmanship limited warranty.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (No Exception).</p> <p><u>TEN (10) YEAR STRUCTURAL INTEGRITY</u> Each new piece of apparatus shall be provided with a ten (10) year material and workmanship limited warranty on the apparatus body. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (No Exception).</p> <p><u>PUMP WARRANTY</u> A Waterous five (5) year warranty shall be provided for the pump.</p> <p><u>TEN (10) YEAR PAINT AND CORROSION NON PRO RATED</u> Each new piece of apparatus shall be provided with a ten (10) year paint and corrosion limited warranty on the apparatus cab. The warranty shall cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (No Exception).</p> <p><u>TWELVE (12) YEAR PAINT AND CORROSION NON PRO RATED</u> Each new piece of apparatus shall be provided with a twelve (12) year paint and corrosion limited warranty on the apparatus body. The warranty shall cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service.</p>		

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<p>A copy of the warranty certificate shall be submitted with the bid package (No Exception).</p> <p><u>THREE (3) YEAR MATERIAL AND WORKMANSHIP</u></p> <p>The gold leaf lamination shall be provided with a three (3) year material and workmanship limited warranty. The warranty shall cover the gold leaf lamination as being free from defects in material and workmanship that would arise under normal use and service.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (No Exception).</p> <p><u>BID BOND</u></p> <p>All bidders shall provide a bid bond as security for the bid in the form of a 15% bid bond to accompany their bid. This bid bond shall be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond shall be issued by an authorized representative of the Surety Company and shall be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond shall include language, which assures that the bidder/principal shall give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.</p> <p>Proposals received from bidders who do not manufacture the chassis shall provide a warranty that shall be issued jointly and severally by, and signed by, both the bidder and the chassis manufacturer.</p> <p>If the successful bidder does not manufacture the chassis, the bidder shall supply a warranty bond, in addition to their performance bond, along with their signed contract. This warranty bond shall guarantee all terms and conditions of the Basic One (1) Year Limited Warranty and names both the bidder and chassis manufacturer as co-principals. This warranty bond shall be issued for the contract amount and shall remain in force for a term which is consistent with the term of the Basic One (1) Year Limited Warranty.</p> <p>Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle shall apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle shall not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision shall prevail.</p> <p><u>PERFORMANCE BOND</u></p> <p>The successful bidder shall provide, within thirty (30) days after award of contract, and along with a signed copy of the contract, a performance bond, which guarantees performance of all terms and conditions of the contract and of</p>		

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<p>the Basic One (1) Year Limited Warranty agreement. The performance bond shall specifically cover the performance of the contract according to its terms and conditions, as well as payment of all related bills and encumbrances. This performance bond shall be issued by a surety company who is listed by the U.S. Treasury Department's list of approved sureties, as published in Circular 570, as of the bid date. The performance bond shall be issued in an amount equal to 100% of the contract amount and shall be dated concurrent to, or subsequent to, the date of the contract.</p> <p>Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle shall apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle shall not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision shall prevail.</p>		

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<p><u>CHASSIS</u> Chassis provided shall be a new, tilt-type custom fire apparatus. The chassis shall be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis shall be designed and manufactured for heavy-duty service, with adequate strength, capacity for the intended load to be sustained, and the type of service required.</p> <p><u>SEATING CAPACITY</u> The seating capacity in the cab shall be five (5).</p> <p><u>WHEELBASE</u> The wheelbase of the vehicle shall be no greater than 179 inches.</p> <p><u>GVW RATING</u> The gross vehicle weight rating shall be a minimum of 40,000 lbs.</p> <p><u>FRAME</u> The chassis frame shall be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails shall be heat-treated steel measuring 10.13" x 3.06" x .31". Each rail shall have a section modulus of 13.48 in.³, yield strength of 120,000 psi, and a resisting bending moment (rbm) of 1,617,600 inch-pounds.</p> <p><u>FRAME REINFORCEMENT</u> In addition to the chassis frame rails, an inverted "L" type outside frame reinforcement shall be provided. The frame reinforcement shall start 19.00" to the rear of the front axle centerline and shall extend back to the rear spring shackles. The frame reinforcement shall be heat-treated steel measuring 9.50" x 3.31" x .25". Total rbm at the wheelbase center shall be 2,140,613 pounds per rail.</p> <p><u>FRONT AXLE</u> The front axle shall be a reverse "I" beam type with inclined king pins. It shall be a Meritor™ axle, Model FL-941, with a rated capacity of 16,000 pounds. A viewing window shall be provided on each side of the axle for checking the oil level.</p> <p><u>OIL SEALS</u> Oil seals with viewing window shall be provided on the front axle.</p> <p><u>SHOCK ABSORBERS</u> Heavy-duty telescoping shock absorbers shall be provided on the front axle.</p> <p><u>REAR AXLE</u> The rear axle shall be a Meritor™, Model RS-24-160, with a capacity of 24,000 pounds.</p> <p><u>TOP SPEED OF VEHICLE</u> A rear axle ratio shall be furnished to allow the vehicle to reach a top speed of 60 MPH.</p>		

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<p><u>OIL SEALS</u> Oil seals shall be provided on the rear axle.</p> <p><u>SUSPENSION, FRONT</u> Front springs shall be semi-elliptical, 4.00" x 54.00" seven (7)-leaf, constant rate type with a ground rating of 16,000 pounds.</p> <p>Kaiser spring pins shall be provided, with double "figure-eight" grease grooves and a layer of electrolyses nickel plating, 1.0 mil thick around the entire pin. The bushing that holds the spring pin in place shall also have a grease groove.</p> <p><u>REAR SUSPENSION</u> The rear springs shall be semi-elliptical, 3.00" x 55.00", 14 leaves main with a ground rating of 31,000 pounds. Spring hangers shall be castings with provisions for lubrication. The grease fittings shall be 90-degree type and shall be accessible without removing the wheels or cutting any sheet metal.</p> <p>Kaiser spring pins shall be provided, with double "figure-eight" grease grooves and a layer of electrolyses nickel plating, 1.0 mil thick, around the entire pin. The bushing that holds the spring pin in place shall also have a grease groove.</p> <p><u>TURNING RADIUS REPORT</u> Supplied with the bid shall be a turning radius analysis of the vehicle being proposed. This analysis shall provide the inside turning radius, the outside turning radius, the curb to curb turning radius, and the wall to wall turning radius.</p> <p><u>ANTI-LOCK BRAKE SYSTEM</u> The vehicle shall be equipped with a Wabco 4S4M, anti-lock braking system. The ABS shall provide a four (4) channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology shall control the anti-lock braking system. Each wheel shall be monitored by the system. When any particular wheel begins to lockup, a signal shall be sent to the control unit. This control unit then shall reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system shall eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.</p> <p><u>ANTI-LOCK BRAKE SYSTEM WARRANTY</u> The Wabco ABS system shall come with a three (3) year or 300,000 mile parts and labor warranty provided by Meritor Wabco Vehicle Control Systems.</p> <p><u>BRAKES</u> The service brake system shall be full air type by Meritor™.</p> <p>Front brakes shall be EX225 Disc Plus, disc type with automatic pad wear adjustment and 17.00" ventilated rotors for improved stopping distance.</p> <p>The rear brakes shall be Meritor™ 16.50" x 7.00" cam operated with automatic slack adjusters.</p>		

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<p><u>ENGINE BRAKE</u> A Jacobs Engine Brake is to be installed with the controls located on the instrument panel within easy reach of the driver.</p> <p>The driver shall be able to turn the engine brake system on/off and have a high, medium and low setting.</p> <p>The engine brake shall be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated.</p> <p>The ABS system shall automatically disengage the auxiliary braking device, when required.</p> <p><u>AIR COMPRESSOR, BRAKE SYSTEM</u> The air compressor shall be a Cummins/Wabco with 18.7 cubic feet per minute output.</p> <p><u>BRAKE SYSTEM</u> The brake system shall include:</p> <ul style="list-style-type: none"> - Bendix-Westinghouse dual brake treadle valve with vinyl covered foot surface - A heated automatic moisture ejector on air dryer - Total air system capacity of 4,362 cubic inch - Two (2) air pressure gauges with red warning light and audible alarm, that activates when air pressure falls below 60 psi - MGM spring set parking brake system - Parking brake operated by a Bendix-Westinghouse PP-1 control valve - A parking "brake on" indicator light on instrument panel - Bendix-Westinghouse SR-1 valve, in conjunction with a double check valve system, shall be provided with an automatic spring brake application at 40 psi - Wabco System Saver 1200 air dryer <p><u>BRAKE LINES</u> Color-coded nylon brake lines shall be provided. The lines shall be wrapped in a heat protective loom where necessary in the chassis.</p> <p><u>AIR INLET</u> One (1) air inlet with male coupling shall be provided. It shall allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet shall be located in the driver side lower step well of cab. A check valve shall be provided to prevent reverse flow of air. The inlet shall discharge into the "wet" tank of the brake system. A mating female coupling shall also be provided with the loose equipment.</p> <p><u>AIR OUTLET</u> One (1) air outlet shall be installed with a female coupling and shut off valve, located on the driver side pump panel. This system shall tie into the "wet" tank</p>		

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<p>of the brake system and include an 85-psi pressure protection valve in the outlet line to prevent the brake system from losing all air.</p> <p>A mating male fitting shall be provided with the loose equipment.</p> <p><u>ENGINE</u></p> <p>The chassis shall be powered by a Cummins electronic engine as described below:</p> <ul style="list-style-type: none"> - Model: ISL - Number of Cylinders: Six (6) - Bore and Stroke: 4.49" x 5.69" - Displacement: 543 cubic inches - Maximum Horsepower: 425 hp at 2100 rpm - Torque: 1200 lb-ft at 1300 rpm - Compression Ratio: 16.6:1 - Governed rpm: 2200 <p>Standard equipment on the engine shall include the following:</p> <ul style="list-style-type: none"> - Air Cleaner: Farr or equal - Fuel Filters: Dual, with check valve, integrated water separator, and water in fuel sensor - Coolant Filter: Spin-on with shut off valves on the supply and return line - Governor: Limiting speed type - Injectors: Cam operated, unit type, clean tip - Lube Oil Cooler - Lube Oil Filter: Full flow - Starting Motor: 12-volt - Turbocharger - Charge Air Cooled <p><u>ENGINE WARRANTY</u></p> <p>The engine shall have a five (5) year or 100,000 mile warranty provided by the engine manufacturer. This warranty shall provide the same coverage for the Diesel Particulate Filter "DPF" that is an integral component of the exhaust emissions system. The engine manufacturer shall add a \$100.00 deductible during the extended basic coverage period in years 3, 4, and 5. There shall be no deductible in the first 2 years of warranty.</p>		

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<p><u>ENGINE INSTALLATION CERTIFICATION</u></p> <p>The fire apparatus manufacturer shall provide, at the time of bid, a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The approval of the engine installation shall be at full horsepower rating in a continuous duty application under all operating conditions, including road and pump. No type of automatic horsepower reduction feature shall be allowed.</p> <p>There shall be no exception to any portion of the engine installation certification. Nonconformance shall lead to immediate rejection of bid.</p> <p><u>CONTROLS AND INDICATOR LIGHTS</u></p> <p>The following amber indicator lights shall be located on the driver's side of the cab to denote engine information:</p> <ul style="list-style-type: none"> - Diesel Particulate Filter (DPF) - High Exhaust Temperature (HET) <p>A switch to initiate the diesel particulate filter regeneration cycle shall be located on the driver's side instrument panel.</p> <p><u>ENGINE INSTALLATION CERTIFICATION</u></p> <p>The fire apparatus manufacturer shall provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification shall be provided at the time of bid.</p> <p><u>ENGINE AIR INTAKE</u></p> <p>The air intake with ember separator shall be mounted on the passenger side of the apparatus, to the front of the engine. The ember separator is designed to prevent road dirt and recirculating hot air from entering the engine.</p> <p>The ember separator shall be easily accessible by tilting the cab.</p> <p><u>EXHAUST SYSTEM</u></p> <p>The exhaust system shall be stainless steel from the turbo to the inlet of the diesel particulate filter and shall be 4.00" in diameter. The exhaust system shall include a diesel particulate filter and a diesel oxidation catalyst. The exhaust shall terminate horizontally ahead of the passenger side rear wheels. A tailpipe diffuser shall be provided to reduce the temperature of the exhaust as it exits. An insulation wrap shall be provided on the exhaust pipe between the turbo and DPF inlet to minimize the transfer of heat to the cab. Heat deflector shields shall be provided to isolate chassis and body components from the heat of the tailpipe diffuser.</p> <p><u>EXHAUST MODIFICATION</u></p> <p>The exhaust pipe shall be brought out from under the body at a 90 degree angle from the truck. The tail pipe shall extend a minimum of 2.00" past the body, adaptable for the Plymovent system. The diameter of the pipe shall be 6.00". There shall be a clearance of 4.00" completely around the pipe once past the side of the body. A stop shall be provided on the tail pipe that shall prevent the nozzle from sliding too far on.</p>		

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<p><u>COVER, EMERGENCY SHUTDOWN</u> There shall be a stainless steel hinged cover provided over the emergency shutdown switch in the cab. The stainless steel cover shall be provided to prevent accidental actuation of the emergency shutdown switch.</p> <p><u>ENGINE SHUTDOWN W/RESET</u> An emergency engine shutdown, by means of incorporating a flapper over the engine air intake, shall be provided with a pneumatic push-to-activate control inside the cab. A protective guard shall be supplied to avoid unnecessary activation.</p> <p>The push-to-active control inside the cab can also be used to release the emergency shutdown, without having to tilt the cab.</p> <p><u>FUEL SEPARATOR</u> The engine shall be equipped with a Racor in-line spin-on fuel and water separator in addition to the engine fuel filters.</p> <p>A warning light shall be provided on the cab instrument panel to indicate water in the fuel system.</p> <p><u>HIGH IDLE</u> A high idle switch shall be provided, inside the cab, on the instrument panel, that shall automatically maintain a preset engine rpm. A switch shall be installed, at the cab instrument panel, for activation/deactivation.</p> <p>The high idle shall be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light shall be provided adjacent to the switch. The light shall illuminate when the above conditions are met. The light shall be labeled "OK to Engage High Idle".</p> <p><u>COOLANT LINES</u> Gates, or Goodyear, rubber hose shall be used for all engine coolant lines installed by the chassis manufacturer.</p> <p>Hose clamps shall be stainless steel "constant torque type" to prevent coolant leakage. They shall react to temperature changes in the cooling system and expand or contract accordingly while maintaining a constant clamping pressure on the hose.</p> <p><u>RADIATOR</u> The radiator and the complete cooling system shall meet or exceed NFPA and engine manufacturer cooling system standards.</p> <p>For maximum cooling performance, the radiator core shall be made of brass tubes with copper fins having a serpentine design. The tubes shall be welded to brass headers using the patented "Beta-Weld" process for increased strength, longer road life and solder-bloom corrosion protection. The radiator core shall have a minimum frontal area of 1063 square inches. Steel supply and return tanks shall be bolted to the core headers and steel side channels to complete the radiator assembly. The radiator shall be compatible with commercial antifreeze solutions.</p>		

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<p>The radiator shall be mounted in such a manner as to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven ground. The radiator assembly shall be isolated from the chassis frame rails with rubber isolators.</p> <p>The radiator shall include an integral deaeration/expansion tank. For visual coolant level inspection, the radiator shall have a built-in sight glass. The radiator shall be equipped with a 15 psi pressure relief cap.</p> <p>A drain port shall be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.</p> <p>A heavy-duty fan shall draw in fresh, cool air through the radiator. Shields or baffles shall be provided to prevent recirculation of hot air to the inlet side of the radiator.</p> <p><u>CLUTCH FAN</u></p> <p>A Kysor air actuated clutch fan shall be provided. Clutch fan shall be automatic when the pump transmission is in "Road" and engaged constantly when in "Pump" position.</p> <p>The exterior surface of the engine hood shall have a Tuff-Tex padded cover. A flap shall be provided over the hinged access door leading to the fluid level dip sticks. The flap shall be secured with Velcro.</p> <p><u>FUEL TANK</u></p> <p>A 65-gallon fuel tank shall be provided and mounted at rear of chassis. The tank shall be constructed of 12-gauge, hot rolled steel. It shall be equipped with swash partitions and a vent. The tank will be held in place with stainless steel straps.</p> <p>A .75" drain plug shall be provided in a low point of the tank for drainage.</p> <p>A fill inlet shall be located on the driver's side of the body and be covered with a hinged, spring loaded, stainless steel door that is marked "Diesel Fuel Only".</p> <p>A .50" diameter vent shall be provided running from top of tank to just below fuel fill inlet.</p> <p>The tank shall meet all FHWA 393.67 requirements including a fill capacity of 95% of tank volume.</p> <p>All fuel lines shall be provided as recommended by the engine manufacturer.</p> <p><u>FUEL SHUTOFF</u></p> <p>A shutoff valve shall be installed in the fuel line, near the filter.</p> <p><u>AUXILIARY FUEL COOLING SYSTEM</u></p> <p>A supplementary fuel cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the chassis engine fuel. The heat exchanger shall be a cylindrical type and shall be a separate unit. The cooler shall operate any time the pump is discharging water and shall be plumbed to the master drain valve.</p>		

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<p><u>TRANSMISSION</u> An Allison Gen IV, model EVS 3000P, electronic torque converting automatic transmission shall be provided.</p> <p>Two (2) PTO openings shall be located on left side and top of converter housing (positions 9 o'clock and 3 o'clock).</p> <p>A transmission temperature gauge with red light and audible alarm shall be installed on the cab dash.</p> <p><u>TRANSMISSION SHIFTER</u> A five (5)-speed push button shift module shall be mounted to right of driver on console. Shift position indicator shall be indirectly lit for after dark operation.</p> <p>The transmission ratio shall be 1st - 3.49 to 1.00, 2nd - 1.86 to 1.00, 3rd - 1.41 to 1.00, 4th - 1.00 to 1.00, 5th - 0.75 to 1.00, R - 5.03 to 1.00.</p> <p><u>TRANSMISSION COOLER</u> A transmission oil cooler shall be provided in the lower tank of the radiator.</p> <p><u>TRANSMISSION WARRANTY</u> The transmission shall have a five (5) year/unlimited mileage warranty covering 100% parts and labor. The warranty is to be provided by Allison Transmission and not the apparatus builder.</p> <p><u>DRIVELINE</u> Drivelines shall be a heavy-duty metal tube and be equipped with Spicer 1710 universal joints.</p> <p>The shafts shall be dynamically balanced before installation.</p> <p>A splined slip joint shall be provided in each driveshaft, slip joint shall be coated with Glidecoat or equivalent.</p> <p><u>STEERING</u> A Ross TAS-85 steering gear, with integral heavy-duty power steering, shall be provided. For reduced system temperatures, the power steering shall incorporate a Vickers V20F three (3)-line hydraulic pump with integral pressure and flow control.</p> <p>The steering wheel shall be 18.00" in diameter, and capable of tilting and telescoping to improve fit for a broader range of driver configurations.</p> <p>A letter from the hydraulic pump manufacturer stating they approve of the hydraulic pump selection and its operating temperature and flow shall be furnished with the bidder's proposal.</p> <p><u>TIRES</u> Front tires shall be Goodyear 315/80R22.50 radials, 20 ply G291 tread.</p> <p>The tires shall be mounted on 22.50" x 9.00" steel disc-type wheels with a ten (10) stud, 11.25" bolt circle.</p> <p>Rear tires shall be four (4) Goodyear 12R22.50 radials, 16 ply "all season" G124 tread.</p>		

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	Yes	No
<p>The tires shall be mounted on 22.50" x 8.25" steel disc-type wheels with a ten (10)-stud 11.25" bolt circle.</p> <p><u>LUG NUT COVERS</u> Chrome plated lug nut covers shall be installed on all lug nuts.</p> <p><u>TIRE BALANCE</u> All tires shall be balanced with Counteract balancing beads. The beads shall be inserted into the tire and eliminate the need for wheel weights.</p> <p><u>WHEEL CHOCKS</u> There shall be one (1) set(s) of folding Ziamatic SAC-44-E, aluminum alloy, Quick-Choc wheel blocks with easy-grip handle provided.</p> <p><u>WHEEL CHOCK BRACKETS</u> There shall be one (1) set(s) of Ziamatic SQCH-44-H horizontal mounting wheel chock brackets provided for the Ziamatic SAC-44-E folding wheel chocks. The brackets shall be mounted on the left (driver's) side ahead of the rear wheels.</p> <p><u>HUB COVERS (front)</u> Stainless steel hub covers shall be provided on the front axle. An oil level viewing window shall be provided.</p> <p><u>HUB COVERS (rear)</u> Stainless steel baby moon covers shall be provided over the rear axle hubs.</p> <p><u>AUTOMATIC TIRE CHAINS</u> One (1) pair of "On Spot" automatic tire chains shall be provided at the rear. System shall be electric over air operated with switch on cab instrument panel. System to be operable at speeds up to 35 mph.</p> <p><u>MUD FLAPS</u> Mud flaps shall be installed behind the front and rear wheels of the apparatus.</p> <p><u>MUD FLAPS</u> Mud flaps shall be installed ahead of the rear wheels on the apparatus.</p> <p><u>TIRE PRESSURE MANAGEMENT</u> There shall be a VECSAFE LED tire alert pressure management system provided that shall monitor each tire's pressure. A chrome plated brass sensor shall be provided on the valve stem of each tire for a total of six (6) tires.</p> <p>The sensor shall calibrate to the tire pressure when installed on the valve stem for pressures between 20 and 120 psi. The sensor shall activate an integral battery operated LED when the pressure of that tire drops 8 psi.</p> <p>Removing the cap from the sensor shall indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED shall immediately start blinking.</p> <p><u>CAB</u> The cab shall be designed specifically for the fire service.</p>		

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	Yes	No
<p>Construction of the cab shall consist of 5052-H32 .125" aluminum welded to extruded aluminum framing.</p> <p>The cab shall be installed and warranted by the apparatus manufacturer. (No exceptions)</p> <p>The cab shall be approximately 96.00" wide, with an interior width of approximately 87.50".</p> <p>The overall height (from the cab roof to the ground) shall be approximately 99.00". The overall height listed shall be calculated based on a truck configuration with the lowest suspension weight ratings, the smallest diameter tires for the suspension, no water weight, no loose equipment weight and no personnel weight. Larger tires, wheels and suspension shall increase the overall height listed.</p> <p>The cab shall be a full tilt design, allowing easy maintenance of the engine compartment. The engine shall be easily accessible and capable of being removed with the cab tilted.</p> <p>Provisions for checking the transmission, oil and power steering fluid levels shall be placed so that they are accessible without raising the cab.</p> <p>The engine hood shall be constructed of insulated aluminum.</p> <p>The engine hood shall be insulated for protection from heat and sound. The noise insulation shall keep the DBA level within the limits stated in the current NFPA series 1900 pamphlet.</p> <p>The cab shall have 3-point rubber mounting and shall be tilted by a hydraulic pump connected to two (2) cab lift cylinders. The cab shall then be locked down by a 2-point automatic locking mechanism that actuates after the cab has been lowered.</p> <p>All cab access steps shall be 22.00 wide x 8.00" minimum depth, located inside the door, protecting the step from weather elements.</p> <p>A 20.00", slip resistant, handrail shall be provided adjacent to all door openings to assist with entrance into the cab.</p> <p>The cab doors shall be approximately 35.00" wide x 68.00" high.</p> <p>The cab and crew cab doors shall be constructed of extruded aluminum with a nominal material thickness of .125". The exterior door skins shall be constructed from .090" aluminum.</p> <p>All cab and crew cab doors shall contain a conventional roll down window.</p> <p>The crew cab shall be of the totally enclosed design.</p> <p>Crew cab entrance doors shall be located on the side of the cab behind the front wheels.</p> <p>The crew cab doors shall be double pan type and measure approximately 35.00" wide x 68.00" high.</p>		

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	Yes	No
<p>The cab and crew cab shall be completely open to allow visual and audio communication with the passengers.</p> <p>Flush mounted, chrome plated paddle type door handles shall be provided on the exterior of the cab and crew cab doors.</p> <p>All interior cab and crew cab door handles shall also have flush paddle handles.</p> <p>The cab doors shall be provided with both interior (rotary knob) and exterior (keyed) locks as required by FMVSS 206. The locks shall be capable of activating when the doors are open or closed. The doors shall remain locked if locks are activated when the doors are opened, then closed.</p> <p>The door hinges shall be a stainless steel piano type with a .25" pin.</p> <p>There shall be double automotive type rubber seals around the perimeter of all cab and crew cab doors to ensure a weather tight fit.</p> <p>Polished stainless steel scuffplates shall be installed on the inside of all cab doors, extending from the bottom of the door to 9.00 above the floor line.</p> <p>Bright aluminum treadplate shall be overlaid on the outside rear wall of the crew cab except for areas that are not typically visible when the cab is lowered.</p> <p>Full circular inner fender liners, in the wheel wells, shall be provided.</p> <p>A curved, safety glass windshield shall provide over 2,754 square inches of clear viewing area.</p> <p>The cab windshield shall have bright trim inserts in the rubber molding holding the glass in place.</p> <p>All cab glass shall be tinted.</p> <p>Economical windshield replacement glass shall be readily available from local auto glass suppliers.</p> <p>Two (2) sunvisors, 28.00" long, shall be provided. The sunvisors shall be located above the windshield with one (1) mounted on each side of the cab.</p> <p>The two (2) windshield wipers shall be electrically controlled and meet FMVSS requirements.</p> <p>Each wiper shall be individually controlled and have a speed modulation feature allowing the driver to adjust the speed of the wiper. The windshield wipers shall also be furnished with a "return to park" feature, which allows the wiper to return to the stored position when the wiper is not in use.</p> <p>Each wiper shall be equipped with a washer and wiper control.</p> <p>The washer reservoir shall be able to be filled without raising the cab.</p> <p><u>CAB INTEGRITY CERTIFICATION</u></p> <p>The fire apparatus manufacturer shall provide a cab integrity certification with this proposal. The certification shall state that a specimen representing the substantial structural configuration of the cab has been tested and certified by</p>		

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<p>an independent third party test facility. Testing events shall be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer shall provide a state licensed professional engineer to witness and certify all testing events. Testing shall meet or exceed the requirements below:</p> <ul style="list-style-type: none"> - European Occupant Protection Standard ECE Regulation No.29. - SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks. - SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks. - Roof Crush <p>The cab shall be subjected to a roof crush force of 22,500 lbs. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of 10 metric tons.</p> <ul style="list-style-type: none"> - Side Impact <p>The same cab shall be subjected to dynamic preload where a 13,275 lb moving barrier is slammed into the side of the cab at 5.5 mph, striking with an impact of 13,000 ft-lbs of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab shall see in a rollover incident.</p> <ul style="list-style-type: none"> - Frontal Impact <p>The same cab shall withstand a frontal impact of 32,600 ft-lbs of force using a moving barrier in accordance with SAE J2420.</p> <ul style="list-style-type: none"> - Additional Frontal Impact <p>The same cab shall withstand a frontal impact of 65,200 ft-lbs of force using a moving barrier. (Twice the force required by SAE J2420)</p> <p>The same cab shall withstand all tests without any measurable intrusion into the survival space of the occupant area.</p> <p>There shall be no exception to any portion of the cab integrity certification. Nonconformance shall lead to immediate rejection of bid.</p> <p><u>CAB MODIFICATION</u></p> <p>The engine tunnel shall be designed to provide maximum occupant space, and required clearance to the engine and related components. The engine tunnel shall include a modification on the passenger side to accommodate the Turbo and related components.</p> <p><u>CAB FLOOR</u></p> <p>The cab and crew cab floor areas shall be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler.</p>		

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<p>The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a .25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.</p> <p><u>CREW CAB WINDOWS</u> On each side of the crew cab, a window with tinted glass shall be provided.</p> <p>The rear wall of the crew cab shall have two (2) windows, each being 4.50" wide x 14.00" high.</p> <p><u>LOGO AND CUSTOMER DESIGNATION ON HORN BUTTON</u> The steering wheel shall have an emblem containing the fire apparatus manufacturer's logo and customer name. The emblem shall have three (3) rows of text for the customer's department name. There shall be a maximum of eight (8) characters in the first row, eleven (11) characters in the second row and eleven (11) characters in the third row.</p> <p>The first row of text shall be: Cambridge The second row of text shall be: Fire The third row of text shall be: Department</p> <p><u>CREW CAB ROOF HATCHES</u> Two (2) 24.00" x 24.00" crew cab roof hatches shall be provided, one (1) each side over the crew cab seating area. Hatches constructed of .125 aluminum and secured with a butterfly latch from inside the crew cab. The hatch covers shall be held open with pneumatic cylinders. Two (2) grab handles shall be provided, one (1) on the inside of each hatch door.</p> <p><u>FENDER CROWNS</u> Stainless steel fender crowns shall be installed at the cab wheel openings.</p> <p><u>SCUFFPLATE</u> A polished stainless steel scuffplate shall be provided on the entire rear vertical surface of the engine tunnel.</p> <p><u>DOOR JAM SCUFFPLATES</u> All cab door jambs shall be furnished with a polished stainless steel scuffplate, mounted on the striker side of the jam.</p> <p><u>MOLDING (on sides of cab)</u> Chrome molding shall be provided on both sides of cab.</p> <p><u>MAP BOX</u> A map box with four (4) bins, open from top, shall be installed Location to be determined by the Cambridge Fire Department and will be shipped loose by manufacturer with the apparatus. The map box shall be divided into four (4) bins, each being 12.50" wide x 2.25" high x 12.00" deep. Each bin shall slant 30 degrees from horizontal. The map box shall be constructed of .125" aluminum and shall be painted to match the cab interior.</p>		

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<p><u>CAB LIFT</u> A hydraulic cab lift system shall be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves.</p> <p>Hydraulic pump shall have a manual override for backup in the event of electrical failure.</p> <p>Lift controls shall be located on the front area of the body in a convenient location within an enclosed compartment.</p> <p>The cab shall be locked down by a two (2)-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system shall be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring loaded latch mechanisms shall return to the normally closed and locked position.</p> <p><u>MIRRORS</u> A Velvac, model 2010, west coast mirror shall be mounted on each side of the front cab door. Mirror dimensions shall be 7.00" wide x 16.00" high, and shall be heated and motorized. The shell shall be bright annealed stainless steel.</p> <p>Both mirrors shall be heated and have a remote control that is convenient to the driver.</p> <p><u>CONVEX MIRRORS</u> An 8.00" diameter round convex mirror shall be installed below each west coast mirror head.</p> <p><u>BUMPER</u> A one (1) piece bumper manufactured from .25" formed steel with a .38" bend radius shall be provided. The bumper shall be a minimum of 10.00" high with a 1.50" top and bottom flange, and shall extend 22.00" from the face of the cab. The bumper shall be 95.28" wide with 45 degree corners and side plates. The bumper shall be metal finished and painted job color.</p> <p>To provide adequate support strength, the bumper shall be mounted directly to the front of the C channel frame. The frame shall be a bolted modular extension frame constructed of 50,000 psi tensile steel.</p> <p><u>GRAVEL PAN</u> A gravel pan, constructed of bright aluminum treadplate, shall be furnished between the bumper and the cab face. The pan shall be properly supported from the underside to prevent flexing and vibration.</p> <p><u>STAINLESS STEEL SCUFFPLATE</u></p>		

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<p>A stainless steel scuffplate shall be provided on the top edge of the painted bumper. The scuffplate shall be bent on 90 degrees and protect the top corner.</p> <p><u>HOSE TRAY</u> A hose tray, constructed of aluminum, shall be placed in the center of the bumper extension.</p> <p>The tray shall have a capacity of 30' of 6.00" double jacket cotton-polyester hose.</p> <p>Black rubber grating shall be provided at the bottom of the tray. Drain holes are also provided.</p> <p><u>GRAVEL PAN</u> A gravel pan, constructed of bright aluminum treadplate, shall be furnished between the bumper and cab face.</p> <p>The gravel pan shall be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate.</p> <p><u>SIGHT RODS</u> Two (2) Bores, model BG48-10, lighted sight rods shall be mounted to the outside corners of the front bumper extension. The rods shall be polished stainless steel.</p> <p><u>HOSE HOLD DOWN STRAP</u> There shall be one (1) hose tray(s) that shall have a pair of 2.00" wide black nylon strap(s), with Velcro fasteners, provided. The strap(s) shall be used to secure the hose in the tray.</p> <p><u>TOW EYES</u> Two (2) chromed steel tow eyes shall be installed under the bumper and attached to the front frame members. The inner and outer edges of the tow eyes shall have a .25" radius.</p> <p>The tow eyes shall be designed and positioned to allow up to a 6,000 pound straight horizontal pull in line with the centerline of the vehicle. The tow eyes shall not be used for lifting of the apparatus.</p> <p><u>CAB INTERIOR</u> The dash, gauge and switch control housings shall be a black one-piece molded ABS plastic design.</p> <p>Door panels shall be covered with a padded, leather grain vinyl resistant to oil, grease and mildew.</p> <p>Headliner shall be installed in both forward and rear cab sections. Headliner material shall be vinyl. A sound barrier shall be part of its composition. Material shall be installed on aluminum sheet and securely fastened to interior cab ceiling.</p> <p>Forward portion of cab headliner shall permit easy access for service of electrical wiring or other maintenance needs.</p>		

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<p><u>CAB INTERIOR UPHOLSTERY</u> The cab interior upholstery shall be black.</p> <p><u>INTERIOR PAINT (Cab)</u> The cab interior metal surfaces shall be painted black, vinyl texture paint.</p> <p><u>GRAB HANDLE</u> A black rubber covered grab handle shall be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handle shall be securely mounted to the post area between the door and windshield.</p> <p>The driver's grab handle shall be 3.00" higher than the officer's grab handle, to allow additional clearance between the steering wheel and grab handle.</p> <p><u>HANDRAIL (Instrument Panel)</u> A 16.00" long x 1.25" diameter handrail shall be mounted on the instrument panel across from the officer's seating position. The handrail shall be securely mounted in a location that is helpful for entering the cab. The handrail shall be an anodized aluminum extrusion with a ribbed design to provide a positive gripping surface.</p> <p><u>DRIVER SEAT</u> An HO Bostrom Sierra, model 30FX "scissors-action" air-ride high-back style seat shall be provided in the cab for the driver.</p> <p>The driver's seat shall be furnished with three (3)-point shoulder type seat belt. The seat belt shall be furnished with automatic retractor. Extension shall be provided with the seat belt so the male end can be easily grasped and the female end easily located while sitting in a normal position.</p> <p><u>OFFICER SEAT</u> An HO Bostrom Tanker 400CT SCBA fixed seat with high-back shall be provided in the cab for the officer. The SCBA cavity in each seat shall be adjustable front to rear in 1.50" increments to accommodate different size SCBA bottles.</p> <p>Moving the SCBA cavity shall be accomplished by unbolting, relocating and rebolting in the desired location.</p> <p>Officer seat shall be furnished with three point shoulder type seat belts. The seat belts shall be furnished with automatic retractors. Extensions shall be provided with the seat belts so the male end can be easily grasped and the female end easily located while sitting in a normal position.</p> <p><u>REAR FACING PASSENGER SIDE OUTBOARD SEAT</u> One (1) rear facing, HO Bostrom Tanker 400CT SCBA seat shall be provided in the passenger side outboard position in crew cab. The SCBA cavity shall be adjustable front to rear in 1.50" increments to accommodate different size SCBA bottles.</p> <p>Moving the SCBA cavity shall be accomplished by unbolting, relocating and rebolting in the desired location.</p>		

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<p>Seat shall be furnished with three-point shoulder type seat belt. The seat belt shall be furnished with automatic retractors. Extension shall be provided with the seat belt so the male end can be easily grasped and the female end easily located while sitting in a normal position.</p> <p><u>EMS COMPARTMENT</u></p> <p>A rear facing EMS compartment shall be provided in the crew cab at the driver side outboard position.</p> <p>The compartment shall be 23.00" wide x 42.00" high x 22.00" deep with one (1) Gortite roll up door, locking, with anodized finish. The clear door opening of the compartment shall be 32.00" high x 16.00" wide.</p> <p>The compartment shall be constructed of smooth aluminum, and painted to match the cab interior.</p> <p><u>COMPARTMENT LIGHT</u></p> <p>There shall be two (2) On Scene Solutions strip lights installed one (1) each side of the compartment opening. The lights shall be controlled by an automatic door switch.</p> <p>This storage compartment shall be compliant per NFPA standard for automotive fire apparatus.</p> <p><u>SHELVING</u></p> <p>There shall be one (1) shelf provided in the EMS compartment.</p> <p>Each shelf shall be constructed of 0.090" aluminum with a 1.25" up-turned lip.</p> <p>Shelving shall be infinitely adjustable by means of a threaded tightener sliding in a track.</p> <p>One (1) compartment light and mounting bracket shall be provided and mounted to the underside of each shelf. The light shall be controlled by an automatic door switch.</p> <p>The shelving shall be located as may be possible.</p> <p><u>FORWARD FACING CENTER SEATS</u></p> <p>There shall be two (2) forward facing, Bostrom Tanker 400CT SCBA seats provided at the center position in the crew cab. The SCBA cavity shall be adjustable front to rear in 1.50" increments to accommodate different size SCBA bottles. Moving the SCBA cavity shall be accomplished by unbolting, relocating and rebolting in the desired location. The seats shall be furnished with a three three-point, shoulder type seat belt. The seat belts shall be furnished with automatic retractors. Extensions shall be provided with the seat belts so the male end can be easily grasped and the female end easily located while sitting in a normal position.</p> <p><u>RADIO COMPARTMENT</u></p> <p>A radio compartment shall be provided under the officer's seat.</p> <p>The inside compartment dimensions shall be 14.50" deep x 14.50" across x 9.00" high.</p>		

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<p>A drop-down door with a chrome plated lift and turn latch shall be provided for access.</p> <p>The compartment shall be constructed of smooth aluminum and painted to match the cab interior.</p> <p><u>SEAT UPHOLSTERY</u> All seat upholstery shall be black Dura-Wear, waterproof fabric.</p> <p><u>AIR BOTTLE HOLDERS</u> All SCBA type seats in the cab shall have a Ziamatic model ULLH SCBA holder bracket. This bracket shall be compliant with the current NFPA 1901 standards and shall include a backplate, two (2) seats, a footplate and the model LLS ("Load & Lock") strap to hold the bottle in the bracket. The bracket seats shall be a "one size fits all" style seat and shall accommodate SCBA cylinders from the high pressure 30-minute to the high pressure 60-minute. Seats shall be adjustable up and down by unbolting, relocating, and rebolting in the desired position.</p> <p><u>SEAT BELTS</u> All seating positions in the cab and crew cab shall have orange seat belts.</p> <p><u>SEAT BELT MONITORING SYSTEM</u> A seat belt monitoring system (SBMS) shall be provided. The SBMS shall be capable of monitoring up to ten (10) seat positions indicating the status of each seat position with a green or red LED indicator as follows:</p> <p>Driver Seat:</p> <p>Seat Occupied Buckled Green</p> <p>No Occupant Unbuckled Not Illuminated</p> <p>The driver seat shall not include an occupant sensor. The display indication for the driver seat shall illuminate red any time the parking brake is released and the driver seat belt is not buckled.</p> <p>All Other Seats:</p> <p>Seat Occupied Buckled Green</p> <p>Seat Occupied Unbuckled Red</p> <p>No Occupant Buckled Red</p> <p>No Occupant Unbuckled Not Illuminated</p> <p>Alarm:</p> <p>The SBMS shall include an audible alarm that shall be activated when a red illumination condition exists and the parking brake is released, or a red illumination condition exists and the transmission is not in park.</p> <p><u>HELMET HOLDER</u> There shall be five (5) Zico UHH-1 helmet holder bracket(s) provided in the cab. The brackets shall provide quick access and secure storage of the</p>		

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<p>helmet(s). The bracket location(s) shall be determined at time of final inspection.</p> <p><u>FOLD UP STEPS</u> Two (2) fold up steps shall be provided on the rear wall, in the outboard positions.</p> <p>The steps shall be constructed of aluminum tread plate, with a 2.00" downward flange and shall be size to fit on fold-down seat style brackets.</p> <p>The words "No Seat" shall be installed on the bottom surface of each in black vinyl</p> <p><u>ENGINE COMPARTMENT LIGHT</u> An engine compartment light shall be installed under the engine hood, of which the switch is an integral part. Light shall have a .125" diameter weep hole in its lens to prevent moisture retention.</p> <p><u>CAB INTERIOR LIGHTING</u> Auxiliary lights shall be provided in the cab and consisting of:</p> <ul style="list-style-type: none"> - One (1) Clear Dome Light: Located in the center, controlled by automatic door switches. - Two (2) Adjustable Map Lights: With switches mounted on the cab ceiling. - A Courtesy Light at Each Door Opening: Controlled by automatic door switches. <p><u>CREW CAB INTERIOR LIGHTING</u> Auxiliary lights shall be provided in the crew cab and consist of:</p> <ul style="list-style-type: none"> - Two (2) Weldon, Model 8081, red/clear dome lights located one (1) each side, controlled by the following: <p>Clear forward light controlled by the door switch and the lens switch.</p> <p>Red rearward light controlled by the lens switch.</p> <ul style="list-style-type: none"> - A courtesy light at each door opening, controlled by automatic door switches <p><u>CAB HEATER/DEFROSTER</u> Two (2)-29,000 BTU fresh air heater/defroster units shall be provided inside the cab. Three (3)-speed blower and temperature control shall be provided with the heating units. Blower control shall allow for independent control of defrost and heat for driver and passenger.</p> <p><u>CREW CAB HEATER</u> An auxiliary heater with 50,000 BTU shall be provided inside the crew cab. The heater shall have a three (3) speed blower, and temperature controls located adjacent to the heater.</p> <p>Heater shall be mounted in seat riser.</p>		

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	Yes	No
<p><u>HEATER CONTROL ACCESS DOOR</u> An access door shall be provided to protect the forward facing crew cab heater control knobs from damage.</p> <p><u>ROOF VENT</u> Two (2) manual roof vents shall be installed in the crew cab ceiling for fresh air ventilation.</p> <p><u>CAB INSTRUMENTATION</u> The cab instrument panel shall include gauges, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches shall be identified by a label adjacent to each item. Actuation of the headlight switch shall illuminate the labels in low light conditions. Telltale indicator lamps shall not be illuminated unless necessary. The cab instruments and controls shall be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership.</p> <p><u>GAUGES</u> The gauge panel shall include the following nine (9) black faced gauges with black bezels to monitor vehicle performance:</p> <p>Voltmeter gauge (volts): Low volts (11.9 VDC) Amber telltale light on indicator light display with steady tone alarm High volts (15.1 VDC) Amber telltale light on indicator light display with steady tone alarm Engine Tachometer (RPM) Speedometer MPH Fuel level gauge (Empty - Full in fractions): Low fuel (1/8 full) Amber telltale light on indicator light display with steady tone alarm Engine Oil pressure Gauge (PSI): Low oil pressure to activate engine warning lights and alarms Red telltale light on indicator light display with steady tone alarm Front Air Pressure Gauges (PSI): Low air pressure to activate warning lights and alarm Red telltale light on indicator light display with steady tone alarm Rear Air Pressure Gauges (PSI):</p>		

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	Yes	No
<p>Low air pressure to activate warning lights and alarm</p> <p>Red telltale light on indicator light display with steady tone alarm</p> <p>Transmission Oil Temperature Gauge (Fahrenheit):</p> <p>High transmission oil temperature activates warning lights and alarm</p> <p>Red telltale light on indicator light display with steady tone alarm</p> <p>Engine Coolant Temperature Gauge (Fahrenheit):</p> <p>High engine temperature activates an engine warning light and alarms</p> <p>Red telltale light on indicator light display with steady tone alarm</p> <p><u>INDICATOR LAMPS</u></p> <p>To promote safety, the following telltale indicator lamps shall be located on the instrument panel in clear view of the driver. The indicator lamps shall be "dead-front" design that is only visible when active. The colored indicator lights shall have descriptive text or symbols.</p> <p>The following amber telltale lamps shall be present:</p> <p>Low coolant</p> <p>Trac cntl (traction control) (where applicable)</p> <p>Check engine</p> <p>Check trans (check transmission)</p> <p>Air rest (air restriction)</p> <p>PMC (Pierce micro-controller fault)</p> <p>Air inlet heater (wait to start) (where applicable)</p> <p>DPF (engine diesel particulate filter regeneration)</p> <p>HET (engine high exhaust temperature) (where applicable)</p> <p>ABS (antilock brake system)</p> <p>MIL (engine emissions system malfunction indicator lamp) (where applicable)</p> <p>Regen inhibit (engine emissions regeneration inhibit) (where applicable)</p> <p>Trans temp (transmission temperature)</p> <p>Side roll fault (where applicable)</p> <p>Front air bag fault (where applicable)</p> <p>Retard overheat (retarder temperature high) (where applicable)</p> <p>The following red telltale lamps shall be present:</p> <p>Ladder rack down</p>		

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	Yes	No
<p>Parking brake</p> <p>Stop engine</p> <p>Driver door open</p> <p>Passenger door open</p> <p>Tower (tower raised) (where applicable)</p> <p>The following green telltale lamps shall be present:</p> <p>Left turn</p> <p>Right turn</p> <p>Battery A on</p> <p>Batter B on</p> <p>Ignition</p> <p>Retard engine (retarder engaged) (where applicable)</p> <p>The following blue telltale lamps shall be present:</p> <p>High beam</p> <p><u>ALARMS</u></p> <p>Audible steady tone warning alarm: A steady audible tone alarm shall be provided whenever a warning message is present.</p> <p>Audible pulsing tone caution alarm: A pulsing audible tone alarm (chime/chirp) shall be provided whenever a caution message is present for the door open, light tower raised, or ladder rack down.</p> <p>Alarm silence: Any active audible alarm shall be able to be silenced by holding foot on brake pedal, releasing and activating the park brake and then activating the ignition switch to the top position within five (5) seconds. Any new warning or caution condition shall enable the steady or pulsing tones respectively.</p> <p><u>INDICATOR LAMP AND ALARM PROVE-OUT</u></p> <p>A system shall be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms shall perform prove-out at initial power-up and/or when the ignition switch is held in the up position for three (3) to five (5) seconds to ensure proper performance.</p> <p><u>CONTROL SWITCHES</u></p> <p>For ease of use, the following controls shall be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches shall have backlit labels for low light applications.</p> <p>Headlight/Parking light switch: A three (3)-position maintained rocker switch shall be provided. The first switch position shall deactivate all parking and</p>		

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	Yes	No
<p>headlights. The second switch position shall activate the parking lights. The third switch shall activate the headlights.</p> <p>Panel backlighting intensity control switch: A variable voltage control switch shall be provided. The switch moved in the up direction increases the panel backlighting intensity to a maximum and the switch moved in a down direction decreases the panel backlighting intensity to a minimum level.</p> <p>Ignition switch: A three (3)-position maintained/momentary rocker switch shall be provided. The first switch position shall deactivate vehicle ignition. The second switch position shall activate vehicle ignition. The third momentary position shall perform prove-out on the telltale indicators and alarms when the ignition switch is held in the up position for three (3) to five (5) seconds to ensure proper performance. A green indicator lamp is activated with vehicle ignition.</p> <p>Engine start switch: A two (2)-position momentary rocker switch shall be provided. The first switch position is the default switch position. The second switch position shall activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.</p> <p>Hazard switch shall be incorporated into the steering column.</p> <p>Heater and defroster controls.</p> <p>Turn signal arm: A self-canceling turn signal with high beam headlight controls.</p> <p>Windshield wiper control shall have high, low, and intermittent modes.</p> <p>Parking brake control: An air actuated push/pull park brake control.</p> <p>Chassis horn control: Activation of the chassis horn control shall be provided through the center of the steering wheel.</p> <p><u>CUSTOM SWITCH PANELS</u></p> <p>The design of cab instrumentation shall allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There shall be positions for up to five (5) switch panels in the engine tunnel console. All switches have backlit labels for low light applications.</p> <p>High idle engagement switch: A maintained rocker switch with integral indicator lamp shall be provided. The switch shall activate and deactivate the high idle function. The "Ok To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch shall indicate when the high idle function is engaged.</p> <p>"Ok To Engage High Idle" indicator lamp: A green indicator light shall be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.</p> <p>Diesel particulate filter regeneration switch (where applicable).</p>		

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	Yes	No
<p>Diesel particulate filter regeneration inhibit switch (where applicable).</p> <p><u>DIAGNOSTIC PANEL</u></p> <p>A diagnostic panel shall be accessible while standing on the ground and shall be located inside the driver's side door left of the steering column. The diagnostic panel shall allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches shall allow engine and ABS systems to provide blink codes should a problem exist. The diagnostic panel shall include the following:</p> <p>Engine diagnostic port</p> <p>Transmission diagnostic port</p> <p>ABS diagnostic port</p> <p>Roll sensor diagnostic port</p> <p>Engine diagnostic switch (blink codes flashed on check engine telltale indicator)</p> <p>An ABS diagnostic switch shall be accessible while standing on the ground and located inside the passenger's cab side door. The diagnostic switch shall allow ABS system blink codes should a problem exist. The diagnostic panel shall include the following:</p> <p>ABS diagnostic switch (blink codes flashed on ABS telltale indicator)</p> <ul style="list-style-type: none"> - High Air Restriction Warning Indicator Light (electronic). - Officer Speedometer, A Class I digital display speedometer shall be provided on the officer side on the dash area. The speedometer shall be mounted in a fabricated aluminum housing, which shall be painted to match the cab interior. - Two (2)-speed Individual Windshield Wiper Controls with Intermittent Feature - Windshield Washer Controls. <p>The wipers shall turn off when the parking brake is set.</p> <p><u>WINDSHIELD WIPER DURABILITY CERTIFICATION</u></p> <p>Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers shall survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 <i>Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles</i>. The bidder shall certify that the wiper system design has been tested and that the wiper system has met these criteria.</p> <p><u>LABEL, EMERGENCY LIGHT SWITCHES</u></p> <p>The emergency light switch labels shall have the "NFPA" text omitted. Each switch shall be labeled for its normal function (example: Roof Light, Front Warning, etc.).</p>		

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	Yes	No
<p><u>ELECTRICAL POWER CONTROL SYSTEM</u></p> <p>A compartment shall be provided in or under the cab to house the vehicle's electrical power and signal circuit protection and control components. The power and signal protection and control compartment shall contain circuit protection devices, power control devices, and a programmable logic controller. Power and signal protection and control components shall be protected against corrosion, excessive heat, excessive vibration, physical damage and water spray.</p> <p>Serviceable components shall be readily accessible.</p> <p>Circuit protection devices, which conform to SAE standard, shall be utilized to protect each circuit. All circuit protection devices shall be sized to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers shall be Type-I automatic reset (continuously resetting) and conform to SAE J553 or J258. PTO power circuits shall be protected by Type III manual reset non-cycling circuit breakers conforming to SAE J553 or J258 which remain open until manually reset. When required, automotive type fuses conforming to SAE J554, J1284, J1888 or J2077 shall be utilized to protect electronic equipment.</p> <p>Power control relays and solenoids shall have a direct current (dc) rating of 125 percent of the maximum current for which the circuit is protected.</p> <p>A microprocessor-based programmable logic controller shall be utilized to control safety interlocks and vehicle system status indicators. In addition to visual status indicators, the logic controller shall activate audible alarms designed to provide early warning of problems before they become critical. The programmable logic controller shall include the following attributes:</p> <ul style="list-style-type: none"> On-board self diagnostic input status indicators Automatic self test on startup with provision for manual activation Eliminate control logic relays wherever possible Provide logic control for NFPA 1901 mandated safety interlocks and indicators Utilize system integration to eliminate redundant wiring and components Improve control system reliability by reducing relay and connector contacts Optically isolated inputs to eliminate transient electrical interference Customized control software programmed to reflect the vehicle's unique configuration Field reprogrammable to accommodate changes to the vehicle's operating parameters Fully documented hardware Complete operating and troubleshooting manual 		

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<p><u>ELECTRICAL SYSTEM ON-BOARD DIAGNOSTICS</u> On-board diagnostics indicators shall be provided to support rapid troubleshooting of the electrical power and signal system. The diagnostic indicators shall be located in a readily accessible area. A complete troubleshooting guide shall be provided with the vehicle to assist with interpretation of the diagnostic signals.</p> <p><u>INDICATOR LIGHT AND ALARM PROVE-OUT</u> A system shall be provided which shall automatically test indicator lights and alarms located on the cab instrument panel when the ignition switch is activated. Provisions shall be provided to allow a manual retest when the ignition switch is "on" and before the parking brake is released or the split-shaft PTO is engaged.</p> <p><u>VOLTAGE MONITOR SYSTEM</u> A voltage monitor system shall be provided to indicate the status of each battery system connected to the vehicle's electrical load. The monitor system shall provide visual and audio warning when the system voltage is above or below optimum levels.</p> <p>Two (2) alarm stages shall be provided. The first stage shall activate intermittently if the system falls below 11.8 vdc or rises above 15 vdc. The second stage alarm shall activate continuously if the system voltage falls below 11.3 vdc or rises above 16 vdc. Input voltages shall be conditioned to avoid nuisance alarms.</p> <p><u>POWER AND GROUND STUD</u> A 12-volt power stud and a grounding stud shall be provided in the electrical component compartment for two-way radio equipment.</p> <p><u>EMI/RFI PROTECTION</u> The electrical system proposed shall include means to control undesired electromagnetic and radio frequency emissions. State of the art electrical system design and components shall be used to ensure radiated and conducted EMI (electromagnetic interference) and RFI (radio frequency interference) emissions are suppressed at their source.</p> <p>The apparatus proposed shall have the ability to operate in the electromagnetic environment typically found in fire ground operations. The contractor shall be able to demonstrate the EMI and RFI testing has been done on similar apparatus and certifies that the vehicle proposed meets SAE J551 requirements.</p> <p>EMI/RFI susceptibility shall be controlled by applying immune circuit designs, shielding, twisted pair wiring and filtering. The electrical system shall be designed for full compatibility with low level control signals and high powered two-way radio communication systems. Harness and cable routing shall be given careful attention to minimize the potential for conducting and radiated EMI-RFI susceptibility.</p> <p><u>VEHICLE DATA RECORDER</u> A vehicle data recorder (VDR) shall be provided. The VDR shall be capable of reading and storing vehicle information. The VDR shall be capable of</p>		

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	Yes	No
<p>operating in a voltage range from 8VDC to 16VDC. The VDR shall not interfere with, suspend, or delay any communications that may exist on the CAN data link during the power up, initialization, runtime, or power down sequence. The VDR shall continue operation upon termination of power or at voltages below 8VDC for a minimum of 10ms.</p> <p>The information stored on the VDR can be downloaded through a USB port mounted in a convent location determined by cab model. A CD provided with the apparatus shall include the programming to download the information from the VDR. A USB cable can be used to connect the VDR to a laptop to retrieve required information.</p> <p>The vehicle data recorder shall be capable of recording the following data via hardwired and/or CAN inputs:</p> <p>Vehicle Speed - MPH</p> <p>Acceleration - MPH/sec</p> <p>Deceleration - MPH/sec</p> <p>Engine Speed - RPM</p> <p>Engine Throttle Position - % of Full Throttle</p> <p>ABS Event - On/Off</p> <p>Seat Occupied Status - Yes/No by Position (7-12 Seating Capacity)</p> <p>Seat Belt Buckled Status - Yes/No by Position (7-12 Seating Capacity)</p> <p>Master Optical Warning Device Switch - On/Off</p> <p>Time - 24 Hour Time</p> <p>Date - Year/Month/Day</p> <p><u>AUTOMATIC CHASSIS LUBRICATION</u></p> <p>A Vogel Automatic Lubrication System shall be provided. The lubrication shall be supplied while the vehicle ignition switch is active to allow a uniform application of grease to the locations listed. The electronic control unit that forms part of the system shall activate the pump after an adjustable interval time. The unit shall control and monitor pump operation and report any faults via an indicator light on the driver's dashboard of the cab.</p> <p>The lubrication system reservoir, which requires a 15.00" wide x 14.50" high x 6.25" deep mounting area, shall be located in the pump module, accessed from the right (officer's) side of the apparatus on the apparatus.</p> <ul style="list-style-type: none"> - Slack Adjusters - Brake Cam Screws - Steering Miter Box - Cab Hinge Pins 		

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<ul style="list-style-type: none"> - Steering Assist Cylinder (if applicable) - Tie Rods - Drag Link - King Pins - Spring Pins - Shackle Pins - Walking Beam Pins (Tandem axle, if applicable) <p><u>BATTERY SYSTEM</u> Six (6) 12 volt, Delphi batteries that include the following features shall be provided:</p> <ul style="list-style-type: none"> - 700 CCA (cold cranking amps) - 180 reserve capacity - High cycle - Maintenance free - Group 31 - Rating of 4200 CCA at 0 degrees Fahrenheit - 1080 minutes of reserve capacity - Threaded posts <p><u>BATTERY SYSTEM</u> A single starting system shall be provided.</p> <p>An ignition switch and starter button shall be located on the instrument panel.</p> <p><u>MASTER BATTERY SWITCH</u> A master battery switch, to activate the battery system, shall be provided inside the cab within easy reach of the driver.</p> <p>An indicator light shall be provided on the instrument panel to notify the driver of the status of the battery system.</p> <p><u>BATTERY COMPARTMENTS</u> The batteries shall be placed on non-corrosive mats and be stored in well-ventilated compartments located under the cab. The compartments shall be totally enclosed with removable covers.</p> <p>Heavy-duty, 2/0 gauge, color coded, battery cables shall be used to provide maximum power to the electrical system. The cables shall be color-coded.</p> <p>The battery terminal connections shall be coated with anti-corrosion compound. Battery solenoid terminal connections shall be encapsulated with semi-permanent rubberized compound.</p>		

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<p><u>STAINLESS STEEL BATTERY TRAYS</u> Stainless steel battery trays shall be provided for the batteries to sit in.</p> <p><u>BATTERY CHARGER/ AIR COMPRESSOR</u> A Kussmaul Pump Plus 1200, model 091-9-1200 single output battery charger/air compressor system shall be provided. A display bar graph indicating the state of charge shall be included.</p> <p>The automatic charger shall maintain one (1) set of batteries with a maximum output current of 40 amps.</p> <p>The 12-volt air compressor shall be installed to maintain the air system pressure when the vehicle is not in use.</p> <p>The battery charger shall be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.</p> <p>Battery charger/compressor shall be located in the crew cab seat riser.</p> <p>The battery charger indicator shall be located on the driver's seat riser.</p> <p><u>KUSSMAUL AUTO EJECT FOR SHORELINE</u> One (1) shoreline receptacle shall be provided to operate the dedicated 120-volt circuits on the truck without the use of the generator.</p> <p>The shoreline receptacle (s) shall be provided with a NEMA 5-15, 120 volt, 15 amp, straight blade Kussmaul Super auto eject plug with a yellow weatherproof cover. The cover is spring loaded to close, preventing water from entering when the shoreline is not connected.</p> <p>The unit is completely sealed to prevent road dirt contamination.</p> <p>A solenoid wired to the vehicle's starter is energized when the engine is started. This instantaneously drives the plug from the receptacle.</p> <p>An internal switch arrangement shall be provided to disconnect the load prior to ejection to eliminate arcing of the connector contacts.</p> <p>The shoreline shall be connected to battery charger.</p> <p>A mating connector body shall also be supplied with the loose equipment.</p> <p>The shoreline receptacle shall be located in the driver side lower step well of cab.</p> <p><u>ALTERNATOR</u> A C.E. Niehoff, model C620, alternator shall be provided. It shall have a rated output current of 340 amp as measured by SAE method J56. Also, it shall have a custom three (3)-set point voltage regulator, manufactured by C. E. Niehoff. The alternator shall be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.</p>		

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<p><u>RADIO ANTENNA MOUNT</u> Antenna mounting base(s), Model MATM with 25 feet of coax cable and weatherproof cap, shall be provided for a two way radio. The mount(s) shall be located spaced evenly to the rear of the lightbar on the cab roof just to the rear of the front cab seats. The cable shall be routed to the center dash board area under the access panel.</p> <p>There shall be three (3) provided.</p> <p><u>SPARE CIRCUIT</u> There shall be two (2) pair of wires, including a positive and a negative, installed on the apparatus.</p> <p>The above wires shall have the following features:</p> <p>The positive wire shall be connected directly to the battery power.</p> <p>The negative wire shall be connected to ground.</p> <p>Wires shall be protected to 30 amps at 12 volts DC.</p> <p>Power and ground shall terminate near the power distribution panel.</p> <p>Termination shall be with six (6) position terminal strip.</p> <p>Wires shall be sized to 125% of the protection.</p> <p>This circuit(s) may be load managed when the parking brake is set.</p> <p><u>ELECTRONIC LOAD MANAGEMENT</u> A Kussmaul electronic load management (ELM) system shall be provided that monitors the vehicles 12-volt electrical system, and automatically reduces the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system.</p> <p>The ELM shall monitor the vehicle's voltage while at the scene (parking brake applied). It shall sequentially shut down individual electrical loads when the system voltage drops below a preset value. Five (5) separate electrical loads shall be controlled by the load manager. The ELM shall sequentially re-energize electrical loads as the system voltage recovers.</p> <p>The (ELM) also includes sequencer function for the five (5) managed loads and two (2) additional.</p> <p><u>AMP DRAW REPORT</u> The bidder shall provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.</p> <p>The manufacturer of the apparatus shall provide the following:</p> <ol style="list-style-type: none"> 1) Documentation of the electrical system performance tests. 2) A written load analysis, which shall include the following: <ol style="list-style-type: none"> A) The nameplate rating of the alternator. 		

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<p>B) The alternator rating under the conditions specified per: Applicable NFPA 1901 or 1906 (Current Edition).</p> <p>C) The minimum continuous load of each component that is specified per: Applicable NFPA 1901 or 1906 (Current Edition).</p> <p>D) Additional loads that, when added to the minimum continuous load, determine the total connected load.</p> <p>E) Each individual intermittent load.</p> <p>All of the above listed items shall be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).</p> <p><u>EXTERIOR LIGHTING</u> Exterior lighting shall meet or exceed Federal Department of Transportation, Federal Motor Vehicle Safety Standards and National Fire Protection Association requirements.</p> <p>Front headlights shall be halogen type, rectangular shaped, quad style mounted in a chrome and polished aluminum housing.</p> <p>Seven (7) LED clearance and marker lights shall be installed across the leading edge of the cab.</p> <p><u>DIRECTIONAL (Front)</u> Front turn signals to be Whelen, populated sequencing LED arrow shape 600 series amber lamps housed in chrome bezels. The turn signals shall be housed in the same common bezel as the front warning light and be located above the headlights.</p> <p>In addition to the front facing directional, a Weldon, Model: 9186-8560-20, marker/turn indicator shall be provided on each side of the cab.</p> <p><u>LIGHTS, FRONT ZONE LOWER</u> One (1) pair of Whelen model 60*02F*R, flashing "Super" LED lights shall be installed on the cab face above the headlights, in a common bezel with the directional lights.</p> <p>The color of these lights shall be red Super LED/red lens.</p> <p>These lights shall meet or exceed NFPA front lower zone requirements.</p> <p>Per NFPA, these lights shall be activated by a switch in the cab.</p> <p><u>MIDSHIP DIRECTIONAL LIGHT</u> Two (2) Whelen, Model 600, LED amber arrow directional lights shall be provided on the exterior back of the cab, one (1) on each side.</p> <p>These lights shall be mounted low on the back wall of the crew cab in 15 degree angle brackets.</p>		

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<p><u>BACK-UP ALARM</u> An ECCO, Model SA917-PM2, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse shall be provided. The device shall sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum five (5) dBA above surrounding environmental noise levels.</p> <p><u>MANUAL, FIRE APPARATUS PARTS</u> Two (2) custom parts manuals for the complete fire apparatus shall be provided in hard copy with the completed unit.</p> <p>One (1) compact disc (CD) shall also be provided that shall include all of the information from the above manual.</p> <p>The manual shall contain the following:</p> <ul style="list-style-type: none"> - Job number - Part numbers with full descriptions - Table of contents - Parts section sorted in functional groups reflecting a major system, component, or assembly - Parts section sorted in Alphabetical order - Instructions on how to locate a parts <p>The manual shall be specifically written for the chassis and body model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.</p> <p><u>SERVICE PARTS INTERNET SITE</u> The service parts information included in this manual is also available on the factory website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.</p> <p><u>MANUALS, CHASSIS SERVICE</u> Two (2) chassis service manuals containing parts and service information on major components shall be provided with the completed unit.</p> <p>One (1) compact disk (CD) shall also be provided that shall include all of the information from the above manual.</p> <p>The manuals shall contain the following sections:</p> <ul style="list-style-type: none"> - Job number - Table of contents - Troubleshooting - Front Axle/Suspension 		

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<ul style="list-style-type: none"> - Brakes - Engine - Tires - Wheels - Cab - Electrical, DC - Air Systems - Plumbing - Appendix <p>The manual shall be specifically written for the chassis model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.</p> <p><u>MANUALS, CHASSIS OPERATION</u> Two (2) chassis operation manuals shall be provided.</p> <p>One (1) compact disk (CD) shall also be provided that shall include all of the information from the above manual.</p> <p><u>ELECTRICAL WIRING DIAGRAMS</u> Two (2) electrical wiring diagrams, prepared for the model of chassis and body, shall be provided.</p>		

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<p><u>SPECIAL WATER TANK</u></p> <p>Booster tank shall have a capacity of 500 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated.</p> <p>The Special tank shall be T-shaped to provide for deep side compartments and to serve as a large sump to limit the amount of undraftable water.</p> <p>The tank shall be 60.00" in length and a special height, located forward of the hose bed, to achieve a very low hose bed area to the rear of the water tank.</p> <p>Tank joints and seams shall be nitrogen welded inside and out.</p> <p>Tank shall be baffled in accordance with NFPA Bulletin 1901 requirements.</p> <p>Baffles shall have vent openings at both the top and bottom to permit movement of air and water between compartments.</p> <p>Longitudinal partitions shall be constructed of .38" polypropylene plastic and shall extend from the bottom of the tank through the top cover to allow for positive welding.</p> <p>Transverse partitions shall extend from 4.00" off the bottom of the tank to the underside of the top cover.</p> <p>All partitions shall interlock and shall be welded to the tank bottom and sides.</p> <p>Tank top shall be constructed of .50" polypropylene. It shall be recessed .38" and shall be welded to the tank sides and the longitudinal partitions.</p> <p>Tank top shall be sufficiently supported to keep it rigid during fast filling conditions.</p> <p>Construction shall include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels shall be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes.</p> <p>A sump that is 8.00" long x 8.00" wide x 6.00" deep shall be provided at the bottom of the water tank.</p> <p>Sump shall include a drain plug and the tank outlet.</p> <p>Tank shall have a combination vent and 14.00" fill tower.</p> <p>Tank shall be installed in a special size fabricated cradle assembly constructed of structural steel.</p> <p>Sufficient crossmembers shall be provided to properly support bottom of tank. Crossmembers shall be constructed of steel flat bar or rectangular tubing.</p> <p>Tank shall "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, shall be placed on all horizontal surfaces that the tank rests on.</p> <p>Stops or other provision shall be provided to prevent an empty tank from bouncing excessively while moving vehicle.</p>		

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<p>Mounting system to be approved by the tank manufacturer.</p> <p>Fill tower shall be constructed of .50" polypropylene and shall be a minimum of 8.00" wide x 14.00" long.</p> <p>Fill tower shall be furnished with a .25" thick polypropylene screen and a hinged cover.</p> <p>An overflow pipe, constructed of 4.00" schedule 40 polypropylene, shall be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.</p> <p>Tank shall be installed in a fabricated cradle assembly constructed of structural steel.</p> <p>Sufficient crossmembers shall be provided to properly support bottom of tank. The crossmembers shall be channel and supported by steel flat bar.</p> <p>Tank shall "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, shall be placed on all horizontal surfaces that the tank rests on.</p> <p>Full length angles shall be provided to hold the tank in position.</p> <p>Stops or other provision shall be provided to prevent an empty tank from bouncing excessively while moving vehicle.</p> <p><u>WATER TANK RESTRAINT</u></p> <p>A heavy-duty water tank restraint shall be provided.</p>		

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<p><u>HOSE BED</u></p> <p>The hose body shall be fabricated of corrosion resistant, low carbon austenitic, brushed and painted 304L stainless steel. Due to superior corrosion resistance of 300 stainless grades, other grades of austenitic stainless steels, or any grade of ferritic or martensitic stainless, shall not be acceptable.</p> <p>The hosebed shall be special designed to achieve a low hosebed to ground height.</p> <p>Hose body width shall be a minimum of 68.00" inside.</p> <p>Upper and rear edges of side panels shall have a double break for rigidity, a split tube finish shall not be acceptable.</p> <p>The upper inside area of the beavertails shall be covered with brushed stainless steel to prevent damage to painted surface when hose is removed.</p> <p>Flooring of the hose bed shall be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats shall be a minimum of .50" x 4.50" with spacing between slats for hose ventilation.</p> <p>The hosebed floor shall be as may be possible in order to have space in the rear compartment for the rear suction inlet inches from the ground when the truck is fully loaded.</p> <p>Hose bed shall accommodate Bay #1 - two (2) lengths of lard suction, Bay #2 - 500' of 2.5", Bay #3 - 850' of 2.5", Bay #4 - 1000' of 4.0" LDH.</p> <p>Three (3) adjustable hosebed dividers shall be furnished for separating hose.</p> <p>Partition construction shall consist of a .125" aluminum sheet fitted and welded into a slotted, radiused extrusion along the top, bottom and rear edge. The divider shall be painted job color.</p> <p>Partition shall be fully adjustable by sliding in tracks located at the front and rear of the hose bed.</p> <p>Divider shall be held in place by tightening two (2) bolts, one (1) at each end.</p> <p>Acorn nuts shall be installed on all bolts in the hose bed which have exposed threads.</p> <p><u>HOSE RESTRAINT</u></p> <p>The hose in the hosebed shall be restrained by black nylon Velcro straps at the top of the hosebed and a black nylon web strap netting at the top and rear of the hosebed. The netting shall include quick release fasteners.</p> <p><u>HOSE BED COVER</u></p> <p>A two (2) section hose bed cover, constructed of .125" bright aluminum treadplate shall be furnished. The cover shall be hinged with full length stainless steel piano hinge. The sides shall be slanted down.</p> <p>The cover shall be reinforced so that it can support the weight of a man walking on the cover.</p>		

Cambridge Fire Department Apparatus Specification	Bidder Complies	
	Yes	No
<p>If access to water tank fill tower is blocked by the hose bed cover, then a hinged door shall be provided in it so that tank may be filled without raising cover doors.</p> <p>Chrome grab handles and four (4) gas filled cylinders shall be provided to assist in opening and closing the cover. A handrail is to be provided at the rear, in the center of the support, to assist in opening the cover.</p> <p>The hosebed cover shall extend to the front of the fire body.</p> <p><u>HOSEBED END FLAP</u></p> <p>A pair of red vinyl flaps shall be installed on the rear, one for each of the aluminum treadplate hose bed covers.</p> <p>Each vinyl flap shall have three (3) nylon tie down straps, with quick release thumb spring buckles. Fauna model 207668 stainless steel buckles shall be attached to the flaps. These vinyl end skirts shall be installed directly to the hosebed frame.</p> <p>Rubber coated hooks and stainless steel footman loops shall secure the end skirts/bed covers to the main body.</p> <p><u>RUNNING BOARDS</u></p> <p>Running boards shall be fabricated of .125" bright aluminum treadplate.</p> <p>Each running board shall be supported by a welded 2.00" square tubing and channel assembly, which shall be bolted to the pump compartment substructure.</p> <p>Running boards shall be 12.75" deep and spaced .50" away from the pump panel.</p> <p>A splashguard shall be provided above the running board treadplate.</p> <p><u>TAILBOARD</u></p> <p>Rear step shall also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly.</p> <p>The rear tailboard shall be 16.00" deep.</p> <p>The exterior side shall be flanged down and in.</p> <p>Flanges shall not be notched.</p> <p>Entire rear surface between the beavertails shall be covered with smooth aluminum.</p> <p>Inside surface of each beavertail in the hose bed area shall be covered with stainless steel to protect the paint finish.</p> <p>The remaining inside surface of the beavertails shall be covered with bright aluminum treadplate.</p> <p><u>TOW BARS</u></p> <p>Two (2) tow bars shall be installed under the tailboard.</p>		

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	Yes	No
<p>Tow bars shall be fabricated of 1.00" CRS bar rolled into a 3.00" radius.</p> <p>Tow bar assemblies shall be constructed of .38" structural angle. When force is applied to the bar, it shall be transmitted to the frame rail.</p> <p>Tow bar assemblies shall be designed and positioned to allow up to a 30 degree upward angled pull of 17,000 pounds, or a 20,000 pound straight horizontal pull in line with the centerline of the vehicle.</p> <p>Tow bar design shall have been fully tested and evaluated using strain gauge testing and finite element analysis techniques.</p> <p><u>HITCH RECEIVER</u></p> <p>A hitch receiver shall be installed at the rear of the apparatus.</p> <p>The hitch shall be constructed of heavy steel tubing and reinforced to the truck framework, for the receiving portion. This shall be a Class III/IV trailer hitch. A class IV rating shall be obtained only when a weight distributing hitch is used.</p> <p>Slide-in portion shall be held in place by one (1) safety pin with clip.</p> <p>The trailer electrical connection shall be a seven way flat blade recreational vehicle connector for trailer wiring compatible with electric or hydraulic brake systems, and a second connector with inverted ground meeting SAE J560 standards providing an auxiliary connection for warning devices.</p> <p><u>STRAP, VELCRO</u></p> <p>One (1) hose tray shall have two (2) Velcro straps to secure items located in the hose tray. The location shall be in the driver side running board.</p> <p><u>RUNNING BOARD TRAY</u></p> <p>One (1) hose tray shall be recessed in the driver side running board.</p> <p>Each tray shall be 4.00" deep with Morton Cass inserts in the bottom.</p>		

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	Yes	No
<p><u>COMPARTMENTATION</u></p> <p>Body and compartments shall be fabricated of corrosion resistant, low carbon austenitic, brushed and painted 304L stainless steel. Due to superior corrosion resistance of 300 stainless grades, other grades of austenitic stainless steels, or any grade of ferritic or martensitic stainless, shall not be acceptable.</p> <p>Side compartments shall be an integral assembly with the rear fenders.</p> <p>Circular fender liners shall be provided for prevention of rust pockets and ease of maintenance.</p> <p>Compartment flooring shall be of the sweep out design with the floor higher than the compartment door lip.</p> <p>The compartment door opening shall be framed by flanging the edges in 1.75" and bending out again .75" to form an angle.</p> <p>Drip protection shall be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate or polished stainless steel.</p> <p>The top of the compartment shall be covered with bright aluminum treadplate rolled over the edges on the front, rear and outward side. These covers shall have the corners "TIG" welded.</p> <p>Side compartment covers shall be separate from the compartment tops.</p> <p>Front facing compartment walls shall be covered with bright aluminum treadplate.</p> <p>All screws and bolts which protrude into a compartment shall have acorn nuts on the ends to prevent injury.</p> <p><u>UNDERBODY SUPPORT SYSTEM</u></p> <p>Due to the severe loading requirements of this pumper a method of body and compartment support suitable for the intended load shall be provided.</p> <p>The backbone of the support system shall be the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads.</p> <p>The support system shall include .375" thick steel vertical angle supports bolted to the chassis frame rails with .625" diameter bolts.</p> <p>Attached to the bottom of the steel vertical angles shall be horizontal angles, with gussets welded to the vertical members, which extend to the outside edge of the body.</p> <p>A steel frame shall be mounted on the top of these supports to create a "floating substructure" which shall result in a 500 pound equipment support rating per lower compartment.</p> <p>The "floating substructure" shall be separated from the horizontal members with neoprene elastomer isolators. These isolators shall reduce the natural flex stress of the chassis from being transmitted to the body.</p>		

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	Yes	No
<p>The isolators shall have a broad load range, proven viability in vehicular applications, be of a failsafe design and allow for all necessary movement in three (3) transitional and rotational modes.</p> <p>The neoprene isolators shall be installed in a modified "V" three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body.</p> <p>A design with body compartments simply hanging on the chassis in an unsupported fashion shall not be acceptable.</p> <p><u>AGGRESSIVE WALKING SURFACE</u></p> <p>All exterior surfaces designated as stepping, standing, and walking areas shall comply with the required average slip resistance of the current NFPA standards.</p> <p><u>LOUVERS</u></p> <p>All body compartments shall have a minimum of one (1) set of louvers stamped into a wall to provide the proper airflow inside the compartment and to prevent water from dripping into the compartment. These louvers shall be formed into the metal and not added to the compartment as a separate plate.</p> <p><u>TESTING OF BODY DESIGN</u></p> <p>Body structural analysis shall be fully tested. Proven engineering and test techniques such as finite element analysis, model analysis, stress coating and strain gauging have been performed with special attention given to fatigue, life and structural integrity of the cab, body and substructure.</p> <p>The body shall be tested while loaded to its greatest in-service weight.</p> <p>The criteria used during the testing procedure shall include:</p> <ul style="list-style-type: none"> - Raising opposite corners of the vehicle tires 9.00" to simulate the twisting a truck may experience when driving over a curb. - Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions. - Driving the vehicle on at 35 mph on a "washboard" road. - Driving the vehicle at 55 mph on a smooth road. - Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement. <p>Evidence of the actual testing techniques shall be made available upon request.</p> <p><u>COMPARTMENTATION, DRIVER'S SIDE</u></p> <p>A vertically hinged, single door compartment in the lower area ahead of the rear wheels shall be provided. The interior dimensions of this compartment shall be 34.50" wide x 34.63" high x 25.88" deep in the lower 26.00" of the compartment and 12.00" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 30.00" wide x 29.00" high.</p>		

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	Yes	No
<p>A positive door holder shall be furnished with this compartment.</p> <p>A horizontally hinged, single lift-up door compartment in the upper area ahead of the rear wheels shall be provided. The interior dimensions of this compartment shall be 64.00" wide x 32.88" high x 12.00" deep. The depth of the compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 59.50" wide x 28.25" high.</p> <p>The lift-up door shall be furnished with two gas-charged cylinders to assist in the opening of the door and to maintain the door in an open position. There shall be a field adjustable, three-position bracket mounted on the vertical side door opening that shall allow the door to be held open at 87°, 90°, or 93°.</p> <p>Closing of the door shall not require releasing, unlocking, or unlatching any mechanism.</p> <p>A horizontally hinged, single lift-up door compartment in the upper area behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 71.63" wide x 32.88" high x 12.00" deep. The depth of the compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 59.50" wide x 28.25" high.</p> <p>The lift-up door shall be furnished with two gas-charged cylinders to assist in the opening of the door and to maintain the door in an open position. There shall be a field adjustable, three-position bracket mounted on the vertical side door opening that shall allow the door to be held open at 87°, 90°, or 93°.</p> <p>Closing of the door shall not require releasing, unlocking, or unlatching any mechanism.</p> <p>A vertically hinged, single door compartment in the lower area behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 31.50" wide x 34.63" high x 25.88" deep in the lower 26.00" of the compartment and 12.00" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 30.00" wide x 29.00" high.</p> <p>A positive door holder shall be furnished with this compartment.</p> <p><u>COMPARTMENTATION, PASSENGER'S SIDE</u></p> <p>A vertically hinged, single door compartment in the lower area ahead of the rear wheels shall be provided. The interior dimensions of this compartment shall be 34.50" wide x 33.63" high x 25.88" deep in the lower 26.00" of the compartment and 12.00" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 30.00" wide x 29.00" high.</p> <p>A positive door holder shall be furnished with this compartment.</p> <p>A vertically hinged, single door compartment in the lower area behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 31.50" wide x 33.63" high x 25.88" deep in the lower 26.00" of the compartment and 12.00" deep in the remaining upper portion. The depth of the</p>		

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	Yes	No
<p>compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 30.00" wide x 29.00" high.</p> <p>A positive door holder shall be furnished with this compartment.</p> <p><u>DOORS, SIDE COMPARTMENT</u></p> <p>All hinged compartment doors shall be lap style with double panel construction and shall be a minimum of 1.50" thick. To provide additional door strength a "C" section reinforcement shall be installed between the outer and interior panels.</p> <p>Doors shall be provided with a closed cell rubber gasket around the surface that laps onto the body. A second heavy-duty automotive rubber molding with a hollow core shall be installed on the door framing that seals onto the interior panel, to ensure a weather resisting compartment.</p> <p>All compartment doors shall have polished stainless steel continuous hinge with a pin diameter of .25" that is bolted or screwed on with stainless steel fasteners. (Hinges which are welded on shall not be acceptable.)</p> <p>All door lock mechanisms shall be fully enclosed within the door panels to prevent fouling of the lock in the event equipment inside shifts into the lock area.</p> <p>Doors shall be latched with recessed, polished stainless steel "D" ring handles and Eberhard 106 locks.</p> <p>To prevent corrosion caused by dissimilar metals, compartment door handles shall not be attached to outer door panel with screws. A rubber gasket shall be provided between the "D" ring handle and the door.</p> <p><u>COMPARTMENTATION, REAR</u></p> <p>A roll-up door compartment above the rear tailboard shall be provided.</p> <p>Interior dimensions of this compartment shall be 40.00" wide x 40.63" high x 25.88" deep in the lower 32.38" of height and 15.75" deep in the remaining upper portion. Depth of the compartment shall be calculated with the compartment door closed.</p> <p>A louvered, removable access panel shall be furnished on the back wall of the compartment.</p> <p>Rear compartment shall be open into the rear side compartments.</p> <p>Clear door opening of this compartment shall be 33.25" wide x 32.38" high.</p> <p>Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.</p> <p><u>ROLL-UP DOOR, REAR COMPARTMENT</u></p> <p>The roll-up door shall be of an anodized satin finish, double faced, aluminum construction and manufactured by A&A Manufacturing (Gortite).</p> <p>Lath sections shall be an interlocking rib design and shall be individually replaceable without complete disassembly of door.</p>		

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	Yes	No
<p>Between each slat at the pivoting joint shall be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments. Seals shall allow door to operate in extreme temperatures ranging from plus 180 to minus 40 degrees Fahrenheit. Side, top and bottom seals shall be provided to resist ingress of dirt and weather and be made of Santoprene.</p> <p>All hinges, barrel clips and end pieces shall be nylon 66. All nylon components shall withstand temperatures from plus 300 to minus 40 degrees Fahrenheit. Hardened plastic shall not be acceptable.</p> <p>A polished stainless steel lift bar shall be provided for opening door. Lift bar shall be located at the bottom of door and have latches on the outer extrusion of the doors frame. A ledge shall be supplied over lift bar for additional area to aid in closing the door.</p> <p>Door(s) shall be constructed from an aluminum box section. The exterior surface of each slat shall be flat. The interior surfaces shall be concave to provide strength and prevent loose equipment from jamming the door from inside.</p> <p>To conserve space in the compartment(s), the spring roller assembly shall not exceed 3.00" in diameter. A roll-up door that retracts below the compartment ceiling (garage door style) shall not acceptable.</p> <p>The header for the roll-up door assembly shall not exceed 4.00".</p> <p>A heavy-duty magnetic switch shall be used for control of "open compartment door" warning lights.</p> <p>All mechanical components of the door shall be warranted to be free from defects in materials and workmanship for the lifetime of the vehicle. All parts covered under this warranty shall be to the original owner.</p> <p><u>PULL STRAP, DOORS</u></p> <p>Two (2) compartment doors, located the two (2) lift up doors on the left (driver's) side, shall be provided with pull straps.</p> <p><u>DOOR FRAME SCUFFPLATE</u></p> <p>Six (6) scuffplates shall be provided for the lower door frame of each equipment compartment lap door. Each scuffplate shall be polished stainless steel with a .38" lip down.</p> <p><u>SCUFFPLATE ON INTERIOR OF COMPARTMENT DOOR(S)</u></p> <p>Four (4) compartment doors shall include a polished stainless steel scuffplate to cover the entire width and height on the inside panel of each door pan.</p> <p>Scuffplate shall be located on each lower equipment compartment lap door.</p> <p><u>MATTING, COMPARTMENT FLOOR</u></p> <p>Turtle Tile compartment matting shall be provided in seven (7) compartments on the compartment floor. The locations are, the floor of each equipment compartment.</p>		

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<p>The Turtle Tile shall be red and the leading edge of the matting shall include the beveled edge.</p> <p><u>MATTING, COMPARTMENT SHELVING</u> Turtle Tile compartment matting shall be provided in four (4) shelves. The locations are, all shelves.</p> <p>The color of Turtle Tile shall be red.</p> <p><u>PARTITION, VERTICAL COMPARTMENT</u> One (1) partition shall be bolted in the rear compartment as shown on the approval print. Each partition shall be the full vertical height of the compartment.</p> <p><u>ADJUSTABLE SHELVES</u> There shall be four (4) shelves, with a minimum capacity of 215 pounds provided. The shelf construction shall consist of .125" pan-shaped aluminum with 2.00" sides. Each shelf shall be infinitely adjustable by means of a threaded fastener, which slides in a track.</p> <p>The location shall be each lower side compartment and one (1) in the rear compartment to the left of the partition.</p> <p><u>MOUNTING TRACKS</u> There shall be four (4) sets of tracks for mounting shelf(s) in each required compartment. These tracks shall be installed vertically to support the adjustable shelf(s).</p> <p><u>RUB RAIL</u> Bottom edge of the side compartments shall be trimmed with a bright aluminum extruded rub rail.</p> <p>Trim shall be 2.12" high with 1.38" flanges turned outward for rigidity.</p> <p>The rub rails shall not be an integral part of the body construction, which allows replacement in the event of damage.</p> <p><u>BODY FENDER CROWNS</u> Stainless steel fender crowns shall be provided around the rear wheel openings.</p> <p>A rubber welting shall be provided between the body and the crown to seal the seam and restrict moisture from entering.</p> <p>A dielectric barrier shall be provided between the fender crown fasteners (screws) and the fender sheet metal to prevent corrosion.</p> <p><u>HARD SUCTION HOSE</u> Two (2) lengths of 6.00" clear corrugated PVC hard suction hose, 10' in length, shall be provided. The hose shall be equipped with a long handle female coupling on one (1) end and a rocker lug male coupling on the other end. Couplings shall be hard coated aluminum.</p>		

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<p><u>HOSE TROUGHS</u> Hard suction hose shall be carried in two (2) V-shaped troughs, one (1) each side, and held in place by Velcro fasteners.</p> <p>Troughs shall be constructed of steel and painted job color.</p> <p><u>HANDRAILS</u> The handrails shall be 1.25" diameter anodized aluminum extrusion, with a ribbed design, to provide a positive gripping surface.</p> <p>Chrome plated end stanchions shall support the handrail. Plastic gaskets shall be used between end stanchions and any painted surfaces.</p> <p>Drain holes shall be provided in the bottom of all vertically mounted handrails.</p> <ul style="list-style-type: none"> - Four (4) handrails shall be provided, two above each side pump panel. - One (1) vertical handrail shall be provided on the driver's side body, on the front bulkhead door frame. - One (1) vertical handrail, not less than 29.00" long, shall be located on each rear beavertail. - One (1) full width horizontal handrail shall be provided below the hose bed at the rear of the apparatus. - Eight (8) handrails shall be provided mounted underneath each windshield to aid in washing the apparatus and one (1) each side above the pump panel and one (1) each side underneath the rear facing seats at a 45 degree angle, and one (1) each side of the hosebed cover □. <p><u>AIR BOTTLE STORAGE</u> A total of four (4) air bottle compartments shall be provided. two (2) each side of the fire body. The air bottle compartment shall be in the form of a round tube (7.63" diameter minimum) and of adequate depth to accommodate different size air bottles. Flooring shall be Dur-a-Surf lined and have a drain hole. A stainless steel door with a chrome plated latch shall be provided to contain the air bottle. A dielectric barrier shall be provided between the door hinge, hinge fasteners (screws) and the body sheet metal.</p> <p><u>AIR BOTTLE HOLDERS</u> Six (6) brackets shall be provided for mounting air bottles. Each bracket shall be a Ziamatic, model UH-6-30-3-SF, be mounted on tracks, and be used for adjusting the location of the bracket, within the compartment. Install three (3) in each highside compartment. Two (2) of the brackets will be for one hour bottles and four (4) brackets will be for SCOTT 30 minute bottles.</p> <p>A stainless steel scuffplate shall be provided around each air bottle compartment opening. The scuffplates shall not be visible when the air bottle compartment door is closed.</p> <p><u>EXTENSION LADDER</u> There shall be a 24', two (2) section, aluminum, Duo-Safety, Series 900-A extension ladder provided.</p>		

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<p><u>ROOF LADDER</u> There shall be a 14' aluminum, Duo-Safety, Series 775-A roof ladder provided.</p> <p><u>LADDER BRACKETS</u> The ladders shall be installed on the right side of the hose body in lined brackets and held in place by chrome plated, quarter-turn spring loaded clamps. The clamps shall be such that when the roof ladder is removed, the clamps can be moved a half turn to hold the extension ladder in place. The ladder brackets shall be adjustable up and down.</p> <p><u>FOLDING LADDER</u> One (1) 10' aluminum, Series 585-A Duo-Safety folding ladder shall be installed on top of the right side compartment.</p> <p><u>PIKE POLE, 8'</u> One (1) pike pole, 8' long Nupla with a fiberglass I-beam handle, shall be provided and located on the right side catwalk.</p> <p><u>PIKE POLE, 6'</u> One (1) pike pole, 6' long Nupla with a fiberglass I-beam handle, shall be provided and located on the right side catwalk.</p> <p><u>PIKE POLE STORAGE</u> Aluminum tubing shall be used for the storage of two (2) pike poles and shall be located on the right (officer's side) compartments. If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate shall be provided.</p> <p><u>STEPS</u> A step shall be provided on the front of each fender compartment. The front step shall be a bright finished, non-skid luminescent folding type. The luminescent coating is rechargeable from any light source and can hold a charge for up to 24 hours. The step can be used as a hand hold with two openings wide enough for a gloved hand.</p> <p><u>REAR ACCESS STEP</u> Wedge style steps shall be provided at the rear of the hose bed on each side for access to the hose bed. The steps shall be constructed of bright aluminum treadplate and be 12.00" wide x 12.00" deep providing an adequate surface for stepping on. The steps shall be located on the left inside beavertail to match the current Cambridge Fire Department apparatus.</p> <p>Four (4) additional folding steps shall be located shipped loose for local installation. The step(s) shall be bright finished, non-skid luminescent folding type. The luminescent coating is rechargeable from any light source and can hold a charge for up to 24 hours. The step(s) can be used as a hand hold with two openings wide enough for a gloved hand.</p> <p>An 10.00" deep, full width bright aluminum treadplate step shall be provided at the rear of the body. The step shall be located above the rear compartment door R-1.</p>		

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<p><u>PUMP</u></p> <p>Pump shall be a Waterous CS, 1250 gpm, single (1) stage midship mounted centrifugal type.</p> <p>Pump shall be the class "A" type.</p> <p>Pump shall deliver the percentage of rated discharge at pressures indicated below:</p> <ul style="list-style-type: none"> - 100% of rated capacity at 150 psi net pump pressure. - 70% of rated capacity at 200 psi net pump pressure. - 50% of rated capacity at 250 psi net pump pressure. <p>Pump body shall be close-grained gray iron, bronze fitted, and horizontally split in two (2) sections for easy removal of the entire impeller shaft assembly (including wear rings).</p> <p>Pump shall be designed for complete servicing from the bottom of the truck, without disturbing the pump setting or apparatus piping.</p> <p>Pump case halves shall be bolted together on a single horizontal face to minimize a chance of leakage and facilitate ease of reassembly. No end flanges shall be used.</p> <p>Discharge manifold of the pump shall be cast as an integral part of the pump body assembly and shall provide a minimum of three (3) 3.50" openings for flexibility in providing various discharge outlets for maximum efficiency.</p> <p>The three (3) 3.50" openings shall be located as follows: one (1) outlet to the right of the pump, one (1) outlet to the left of the pump, and one (1) outlet directly on top of the discharge manifold.</p> <p>Impeller shaft shall be stainless steel, accurately ground to size. It shall be supported at each end by sealed, anti-friction ball bearings for rigid precise support.</p> <p>Bearings shall be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals. No special or sleeve type bearings shall be used.</p> <p>Pump shall be equipped with a self-adjusting, maintenance-free, mechanical shaft seal.</p> <p>The mechanical seal shall consist of a flat, highly polished, spring fed carbon ring that rotates with the impeller shaft. The carbon ring shall press against a highly polished stainless steel stationary ring that is sealed within the pump body.</p> <p>In addition, a throttling ring shall be pressed into the steel chamber cover, providing a very small clearance around the rotating shaft in the event of a mechanical seal failure. The pump performance shall not deteriorate, nor shall the pump lose prime, while drafting if the seal fails during pump operation.</p>		

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<p>Wear rings shall be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.</p> <p><u>PUMP TRANSMISSION</u></p> <p>Pump transmission shall be made of a three (3) piece, aluminum, horizontally split casing. Power transfer to pump shall be through a high strength Morse HY-VO silent drive chain.</p> <p>Drive shafts shall be a minimum of 2.35" diameter hardened and ground alloy steel. All shafts shall be ball bearing supported. The case shall be designed as to eliminate the need for water cooling.</p> <p><u>AIR PUMP SHIFT</u></p> <p>Pump shift engagement shall be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control shall also be located on the driver's side pump panel.</p> <p>Two (2) indicator lights shall be provided adjacent to the pump shift inside the cab. One (1) green light shall indicate the pump shift has been completed and be labeled "pump engaged". The second green light shall indicate when the pump has been engaged, and that the chassis transmission is in pump gear. This indicator light shall be labeled "OK to pump".</p> <p>Another green indicator light shall be installed adjacent to the hand throttle on the pump panel and indicate either the pump is engaged and the road transmission is in pump gear, or the road transmission is in neutral and the pump is not engaged. This indicator light shall be labeled "Warning: Do not open throttle unless light is on".</p> <p>The pump shift control in the cab shall be illuminated to meet NFPA requirements.</p> <p><u>TRANSMISSION LOCK-UP</u></p> <p>The direct gear transmission lock-up for the fire pump operation shall engage automatically when the pump shift control, in the cab, is activated.</p> <p><u>AUXILIARY COOLING SYSTEM</u></p> <p>A supplementary heat exchange cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the engine water. Heat exchanger shall be cylindrical type and shall be a separate unit. It shall be installed in the pump or engine compartment with the control located on the pump operator's control panel. Exchanger shall be plumbed to the master drain valve.</p> <p><u>INTAKE RELIEF VALVE</u></p> <p>A Waterous relief valve, an integral part of the fire pump, shall be installed on the suction side of the pump, preset at 125 psig.</p> <p>Outlet shall terminate below the framrails with a 2.50" National Standard hose thread adapter and an "intake pressure relief outlet - do not cap" warning tag.</p> <p>Relief valve shall have a working range of 75 psig to 250 psig.</p>		

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	Yes	No
<p>A control mechanism to adjust the pressure shall be located behind an access door at the right (passenger) side pump panel.</p> <p><u>PRESSURE GOVERNOR</u></p> <p>This apparatus shall be equipped with a Class1 "Total Pressure Governor" engine/pump governor/throttle system that is connected directly to the Electronic Control Module (ECM) mounted on the engine. The "Total Pressure Governor" is to operate as a pressure sensor (regulating) governor (PSG).</p> <p>A special preset feature shall permit a predetermined pressure of RPM to be set. The preset pressure or RPM will be displayed on the message display of the "Total Pressure Governor". The preset shall be easily adjustable by the operator</p> <p>The pressure sensor governor system shall be operable only after the vehicle parking brake has been set, the transmission is the pumping mode, and the fire pump has been engaged.</p> <p>The pressure sensor governor system shall have two (2) modes of operation: pressure mode or rpm mode.</p> <p>When in the pressure mode, the PSG system shall automatically maintain the discharge pressure set by the operator regardless of flow (within engine/pump operating capabilities).</p> <p>In the rpm mode, the PSG system shall automatically maintain a set engine speed, regardless of engine load (within engine operation capabilities).</p> <p>A pump cavitation protection feature shall be provided which shall return the engine to idle should the pump cavitate.</p> <p><u>PRIMER</u></p> <p>An electric pump priming system shall be furnished with the apparatus. It shall consist of a rotary vane priming pump, driven by a 12 volt electric motor.</p> <p>All rotating parts of the pump shall be made of corrosion resistant aluminum, stainless steel, or laminated phenolic.</p> <p>Pump cylinder shall be made of aluminum alloy, hard anodized and Teflon coated, for corrosion resistance and long life.</p> <p>The primer shall be built by the manufacturer of the fire pump.</p> <p>A push-pull control located at the pump control panel shall operate a combination manual/electric priming valve. This valve shall utilize a switch arrangement so that as the valve is manually opened, a plunger closes the switch and the primer motor is energized.</p> <p>A priming oil tank shall automatically lubricate and seal the sliding rotor vanes, when the pump operates.</p> <p>It shall be accessible through an inspection door on the right (passengers) side of the apparatus.</p>		

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	Yes	No
<p>When dry, the pump system shall be capable of taking suction through 20 feet of hard suction hose and discharging water in not more than the time allowed by NFPA 1901. Also, rated capacity of the pump shall be achieved at the lift stated in NFPA 1901.</p> <p><u>IMPELLER HUB</u> The midship pump impeller hubs shall be flame plated.</p> <p><u>PRIMER OIL</u> 30w engine oil shall be provided in the primer tank.</p> <p><u>PUMP MANUALS</u> Two (2) pump manuals from the pump manufacturer shall be furnished in both paper and compact disc format with the apparatus. Manuals shall cover pump operation, maintenance, and parts.</p> <p><u>PLUMBING</u> All inlet and outlet plumbing, 3.00" and smaller, shall be plumbed with either stainless steel pipe or synthetic rubber hose reinforced with high-tensile polyester braid. If hose is used, it must have a minimum burst rating of 1,000 psi and be equipped with high pressure couplings. Larger inlets and outlets shall be threaded or welded black iron pipe. Small diameter secondary plumbing such as drain lines shall be stainless steel, brass or hose.</p> <p>Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping shall be equipped with victaulic or rubber couplings.</p> <p>All lines to drain through either a master drain valve or shall be equipped with individual drain valves. All individual drain lines for discharges shall be extended with a hose to drain below the chassis frame.</p> <p>All water carrying gauge lines shall be of flexible polypropylene tubing.</p> <p><u>PUMP PLUMBING WARRANTY</u> The stainless steel plumbing components and ancillary brass fittings used in the construction of the water/foam plumbing system shall be warranted for a period of ten (10) years or 100,000 miles. This covers structural failures caused by defective design or workmanship, or perforation caused by corrosion, provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original purchaser for a period of ten years from the date of delivery. A copy of the warranty shall be submitted with the bid. (no exception)</p> <p><u>MAIN PUMP INLETS</u> A 6.00" pump manifold inlet shall be provided on each side of the vehicle. The suction inlets shall include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.</p> <p>The main pump inlets shall have National Standard Threads with a long handle chrome cap.</p>		

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	Yes	No
<p>The cap shall be the VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected. (no exception)</p> <p><u>SHORT SUCTION TUBE</u> The suction tubes on the midship pump shall have "short" suction tubes to allow for installation of adapters without excessive overhang.</p> <p><u>VALVES</u> Waterous valves shall be used for the side 2.50" discharges. All remaining ball valves, 3.00" or less, shall be Akron Brass.</p> <p>The Waterous valves shall have a solid bronze ball that is chromium plated for a hard, durable surface. The spring loaded floating seal assembly shall require no adjustment, yet provides a tight seal against both pressure and vacuum pressures.</p> <p>The Akron valves shall be the 8000 series heavy-duty style with a nickel-chrome plated brass ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve.</p> <p><u>INLET (Left side)</u> On the left side pump panel shall be one (1) 2.50" auxiliary suction, terminating in 2.50" National Standard Hose Thread. The auxiliary suction shall be provided with a strainer, chrome swivel and plug.</p> <p>Inlet valve location shall be outside of the pump panel.</p> <p><u>ANODE, INLET</u> A pair of sacrificial zinc anodes shall be provided in the water pump inlets to protect the pump from corrosion.</p> <p><u>INLET CONTROL</u> Control for the side auxiliary inlet(s) shall be located at the inlet valve.</p> <p><u>INLET (Front)</u> A 6.00" Inlet front inlet with die cast zinc screens shall be provided using 5.00" welded black iron pipe and a 5.00" butterfly valve. Only radiused elbows shall be used in the piping, no mitered joints.</p> <p>Drains are furnished in all the low points of piping and have 3/4" ball valve with a handwheel control.</p> <p>A bleeder valve shall be located at the threaded connection.</p> <p>The front suction shall be located on the passenger side of the bumper extension.</p> <p><u>CONTROL, FRONT INLET</u> The front suction shall be gated with an electric operated control located at the pump operator's panel. The controller shall be an Akron Navigator Model 9313, which shall allow the valve to be gated for ease of operation. The controller shall have individual red, yellow and green lights to show the valve position.</p>		

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	Yes	No
<p>A manual override shall be provided on the valve and located behind a stainless steel access door, located on the passenger side pump panel.</p> <p>A manual override switch shall be provided next to the stainless steel access door. The switch shall cut off power to the valve, making turning the manual override on the valve much easier.</p> <p>Manual override shall be in an easily accessible location.</p> <p><u>INTAKE RELIEF VALVE</u></p> <p>An intake relief valve, preset at 125 psig, shall be installed on the inlet side of the valve.</p> <p>Relief valve shall have a working range of 75 psig to 250 psig.</p> <p>Outlet shall terminate below the frameraills.</p> <p>The front inlet shall have National Standard hose threads with a long handle chrome plated cap.</p> <p>The cap shall be the VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected. (no exception)</p> <p>The front suction shall have a 6.00" swivel with National Standard hose threads and a long handle chromed plated cap.</p> <p><u>INLET (Rear)</u></p> <p>A 5.00" rear inlet with screen shall be provided using 5.00" welded, black iron pipe and a 5.00" butterfly valve.</p> <p>Screen shall provide cathodic protection against corrosion in piping.</p> <p>Piping shall contain only large radiused elbows, no mitered joints.</p> <p>The inlet shall terminate in the rear compartment, above the tailboard.</p> <p>A bleeder valve shall be located at the threaded connection.</p> <p>The rear suction shall have a National Standard hose thread adapter with a long handle chrome plated cap.</p> <p>The cap shall be the VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected. (no exception)</p> <p>The rear suction valve shall have a chrome plated hand wheel control located at the pump operator's panel. A light shall be provided to indicate when the valve is closed.</p> <p><u>INTAKE RELIEF VALVE</u></p> <p>An intake relief valve, preset at 125 psig, shall be installed on the inlet side of the valve.</p> <p>Relief valve shall have a working range of 75 psig to 250 psig.</p>		

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	Yes	No
<p>Outlet shall terminate below the frameraills.</p> <p>A .75" bleccder shall be provided.</p> <p><u>6.00" STORZ ADAPTER</u> There shall be a 6.00" FNST x 5.00" Storz rigid adapter with a Storz blind cap, provided on the front inlet plumbing.</p> <p><u>ELBOW, REAR INLET</u> The inlet, located at the rear of the apparatus, shall be furnished with a 5.00" (F) National Standard hose thread x 4.00" Kochek K-Coat Storz elbow/adapter with a Storz cap.</p> <p><u>INLET BLEEDER VALVE</u> A .75" bleeder valve shall be provided for each side gated inlet. The valves shall be located behind the panel with a swing style handle control extended to the outside of the panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders shall be routed below the chassis frame rails.</p> <p><u>TANK TO PUMP</u> The booster tank shall be connected to the intake side of the pump with 3.00" piping and a quarter turn 3.50" Waterous valve with the control remotely located at the operator's panel. Tank to pump line shall run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling shall be included in this line to prevent damage from vibration or chassis flexing.</p> <p>A check valve shall be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.</p> <p><u>TANK REFILL</u> A 1.50" combination tank refill and pump re-circulation line shall be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.</p> <p><u>DISCHARGE OUTLETS (Left Side)</u> There shall be two (2) discharge outlets with a 2.50" valve on the left side of the apparatus, terminating with a male 2.50" National Standard hose thread adapter.</p> <p><u>DISCHARGE OUTLETS (Right Side)</u> There shall be two (2) discharge outlets 2.50" valve on the right side of the apparatus, terminating with a male 2.50" National Standard hose thread adapter.</p> <p><u>DISCHARGE OUTLET, 3.50"</u> There shall be a 3.50" discharge outlet with a 3.50" Waterous valve installed on the right side of the apparatus, terminating with male a 3.50" National Standard hose thread adapter. This discharge outlet shall be actuated with a handwheel control at the pump operator's control panel.</p>		

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	Yes	No
<p>An indicator shall be provided to show when the valve is in the closed position.</p> <p><u>DISCHARGE CAPS</u> Chrome plated, rocker lug, caps with chains shall be furnished for all side discharge outlets.</p> <p>The caps shall be the VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected. (no exception)</p> <p><u>OUTLET BLEEDER VALVE</u> A .75" bleeder valve shall be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application.</p> <p>The valves shall be located behind the panel with a swing style handle control extended to the outside of the side pump panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders shall be located at the bottom of the pump panel. They shall be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders shall be routed below the chassis frame rails.</p> <p><u>ELBOWS, LEFT SIDE OUTLETS</u> The 2.50" discharge outlets, located on the left side pump panel, shall be furnished with a 2.50"(F) National Standard hose thread x 2.50"(M) National Standard hose thread, chrome plated, 45 degree elbow.</p> <p>The elbow shall be the VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected. (no exception)</p> <p><u>ELBOWS, RIGHT SIDE OUTLETS</u> The 2.50" discharge outlets, located on the right side pump panel, shall be furnished with a 2.50"(F) National Standard hose thread x 2.50"(M) National Standard hose thread, chrome plated, 45 degree elbow.</p> <p>The elbow shall be the VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected. (no exception)</p> <p><u>ELBOW, 4.00" OUTLET</u> The 4.00" outlet shall be furnished with a 4.00"(F) National Standard hose thread x 4.00" Storz elbow adapter with Storz cap.</p> <p>There shall be one (1) adapter with 2.50" FNST x 1.50" MNST threads and a 1.50" chrome plated cap installed on the driver's side 2.5" discharge.</p> <p><u>DISCHARGE OUTLET CONTROLS</u> The discharge outlets shall incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism shall</p>		

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	Yes	No
<p>indicate the position of the valve or an indicator shall be provided to show when the valve is closed.</p> <p>Class One control rod bezels shall be used with stainless control rods. The quantity of control required is eight (8) discharge outlets.</p> <p><u>DELUGE RISER</u> A 3.00" deluge riser shall be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping shall be installed securely so no movement develops when the line is charged. The riser shall be gated and controlled at the pump operator's panel.</p> <p><u>TELESCOPIC PIPING</u> The deluge riser piping shall include a 18.00" Task Force Model XG18 Extend-A-Gun extension.</p> <p>This extension shall be telescopic to allow the deluge gun to be raised 18.00" increasing the range of operation.</p> <p>A position sensor shall be provided on the telescopic piping that shall activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.</p> <p><u>MONITOR</u> An Akron Model 3416 monitor shall be properly installed on the deluge riser.</p> <p>The monitor shall include both a fixed mounting base and a portable base with one (1) 4.00" Storz inlet.</p> <p>The monitor shall be painted to match the body.</p> <p><u>NOZZLE, DELUGE</u> Akron model #2499 Quad Stacked Pyrolite deluge tips shall be provided.</p> <p>The tip sizes shall be 1.375", 1.50", 1.75", and 2.00".</p> <p>This shall include an Akron 3488 Pyrolite stream shaper.</p> <p>The deluge riser shall have a 3.00" four (4)-bolt flange for mounting the monitor.</p> <p><u>CROSSLAY HOSE BEDS</u> Two (2) crosslays with 1.50" outlets shall be provided. Each bed to be capable of carrying 200 feet of 1.75" double jacketed hose and shall be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve.</p> <p>Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.</p> <p>The crosslay controls shall be at the pump operator's panel.</p> <p>The center crosslay dividers shall be a pan style, fabricated of .090 aluminum and shall provide adjustment from side to side. The divider shall be painted job color.</p>		

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	Yes	No
<p>The remainder of the crosslay bed shall be painted job color.</p> <p>Stainless steel vertical scuffplates shall be provided at hose bed ends (each side of vehicle). Bottom of hose bed ends (each side) shall also be equipped with a stainless steel scuffplate.</p> <p>Crosslay bed flooring shall consist of removable perforated brushed aluminum.</p> <p><u>CROSSLAY HOSE BED, 2.50"</u></p> <p>One (1) crosslay with a 2.50" outlet shall be provided. The bed to be capable of carrying 200 feet of 2.50" double jacketed hose and shall be plumbed with 2.50" i.d. pipe and gated with a 2.50" quarter turn ball valve.</p> <p>The outlet to be equipped with a 2.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.</p> <p>The crosslay control shall be at the pump operator's panel.</p> <p>The center crosslay dividers shall be a pan style, fabricated of .090 aluminum and shall provide adjustment from side to side. The divider shall be painted job color.</p> <p>The remainder of the crosslay bed shall be painted job color.</p> <p>Crosslay bed flooring shall consist of removable perforated brushed aluminum.</p> <p><u>CROSSLAY HOSE RESTRAINT</u></p> <p>A 1.00" nylon webbing design restraint shall be provided across the ends of three (3) crosslay(s) to secure the hose during travel. The webbing assembly is to be attached at the bottom of the crosslays with footman loops and is to loop through the upper footman loops at the top of the crosslays. The 1.00" web straps shall come down outboard and lock into a cam lock style buckle.</p> <p><u>CROSSLAY COVER</u></p> <p>A single panel aluminum treadplate cover shall be installed over each of the crosslay hose beds. It shall include a latch at each end of the cover to hold it securely in place, a chrome grab handle at each end for opening and closing the cover and a foam rubber gasket where the cover comes into contact to a painted surface. Each cover shall be hinged at the rear of the bed.</p>		

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Yes No

FOAM SYSTEM

The foam system shall be externally mounted.

FOAM OUTLET

There shall be one (1) foam outlet installed on the left (driver's) side pump panel. The outlet shall be piped to the foam tank with 1.00" stainless steel pipe or flexible hose capable of resisting the corrosion caused by foam concentrates, and shall have a 1.00" inline ball valve with the control handle located adjacent to the foam outlet.

A .375" valve shall be provided adjacent to the foam outlet and shall be plumbed into the foam line, after the valve, to allow flushing of the outlet plumbing.

The one (1) foam outlet shall terminate with a stainless steel quick disconnect male fitting with matching female stainless steel cap. A female stainless steel adapter shall be shipped loose for connection of the customer's foam eductor.

FOAM TANK

The foam tank shall be an integral portion of the polypropylene water tank. The cell shall have a capacity of 50 gallons of foam with the intended use of Class "B" foam. The brand of foam stored in this tank shall be AFFF. The foam cell shall not reduce the capacity of the water tank. The foam cell shall have a screen in the fill dome and a breather in the lid.

FOAM TANK DRAIN

The foam tank drain shall be a 1.00" drain valve located inside the pump compartment accessible through a door on the passenger's side pump panel.

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<p><u>PUMP COMPARTMENT</u></p> <p>The pump compartment shall be separate from the hose body and compartments so that each may flex independently of the other. It shall be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards.</p> <p>The pump compartment shall be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist.</p> <p>Pump compartment, pump, plumbing and gauge panels shall be removable from the chassis in a single assembly.</p> <p><u>PUMP MOUNTING</u></p> <p>Pump shall be mounted to a substructure which shall be mounted to the chassis frame rail using rubber isolators. The mounting shall allow chassis frame rails to flex independently without damage to the fire pump.</p> <p><u>PUMP CONTROL PANELS (Side Control)</u></p> <p>All pump controls and gauges shall be located at the left (driver's) side of the apparatus and properly marked.</p> <p>The pump panel on the right (passenger's) side shall be removable with lift and turn type fasteners. The left (driver's) side is fastened with screws.</p> <p>The control panels shall be 52.00" wide.</p> <p>The gauge and control panels shall be two (2) separate panels for ease of maintenance.</p> <p>The side gauge panel shall be hinged at the bottom with a full length stainless steel hinge. The fasteners used to hold the panel in the upright position shall be quarter turn type. Vinyl covered cable or chains shall be used to hold the gauge panel in the dropped position.</p> <p>Polished stainless steel trim collars shall be installed around all inlets and outlets.</p> <p>All push/pull valve controls shall have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods shall be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls shall be capable of locking in any position. The control rods shall pull straight out of the panel and shall be equipped with universal joints to eliminate binding.</p> <p>The identification tag for each valve control shall be recessed in the face of the tee handle.</p> <p>All discharge outlets shall have color coded identification tags, with each discharge having its own unique color. Color coding shall include the labeling of the outlet and the drain for each corresponding discharge.</p> <p>All line pressure gauges shall be mounted in individual chrome plated castings with the identification tag recessed in the casting below the gauge. All remaining identification tags shall be mounted on the pump panel in chrome</p>		

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<p>plated bezels. Mounting of the castings and identification bezels shall be done with a threaded peg cast on the back side of the bezel or screws.</p> <p><u>PUMP PANEL CONFIGURATION</u> The pump panel configuration shall be laid out per the following special instructions Pump panel should be designed to match previous unit for Cambridge Fire Department Truck # 18887TR.</p> <p><u>PUMP AND GAUGE PANEL</u> The pump and gauge panels shall be constructed of black vinyl covered aluminum, to allow easy identification of the gauges and controls and to eliminate glare.</p> <p>The black vinyl shall be bonded to the aluminum, by the company that supplies the product.</p> <p>A polished aluminum trim molding shall be provided around each panel.</p> <p>The passenger's side pump panel shall be removable and fastened with swell type fasteners.</p> <p><u>PUMP PANEL GAUGES AND CONTROLS</u> The following shall be provided on the pump and gauge panels in a neat and orderly fashion:</p> <ul style="list-style-type: none"> - Engine Oil Pressure Gauge: With visual and audible warning - Engine Water Temperature Gauge: With visual and audible warning - Tachometer: Electric - Master Pump Drain Control - Voltmeter <p><u>INDICATOR LIGHTS @ PUMP PANEL</u> The following indicator lights shall be provided at the pump panel. These shall be in addition to the indicators included with the pressure controller.</p> <ul style="list-style-type: none"> - Check Transmission Warning Indicator Light - Stop Engine Warning Indicator Light - Check Engine Warning Indicator Light. <p><u>DRAINS, ABOVE RUNNING BOARDS, DS & PS</u> Both the driver's side and passenger's side drains shall be installed above the running boards, on the pump panels.</p> <p><u>GAUGES, VACUUM and PRESSURE</u> The pump vacuum and pressure gauges shall be silicone filled and manufactured by Class 1, Inc.</p> <p>The gauges shall be a minimum of 6.00" in diameter and shall have white faces with black lettering, with a pressure range of 30.00"-0-600#.</p>		

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	Yes	No
<p>The pump pressure and vacuum gauges shall be installed adjacent to each other at the pump operator's control panel.</p> <p>Test port connections shall be provided at the pump operator's panel. One shall be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They shall have 0.25 in. standard pipe thread connections and polished stainless steel plugs. They shall be marked with a label.</p> <p><u>PRESSURE GAUGES</u></p> <p>The individual "line" pressure gauges for the discharges shall be interlube filled and manufactured by Class 1.</p> <p>The gauges shall be a minimum of 3.00" in diameter and shall have white faces with black lettering.</p> <p>Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.</p> <p>Gauges shall have a pressure range of 30"-0-400#.</p> <p>The individual pressure gauge shall be installed as close to the outlet control as practical.</p> <p>This gauge shall include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.</p> <p><u>WATER LEVEL GAUGE</u></p> <p>An electronic water level gauge shall be provided on the operator's panel that registers water level by means of five colored LED lights. The lights shall be durable, ultra-bright five LED design viewable through 180 degrees. The water level indicators shall be as follows:</p> <ul style="list-style-type: none"> - 100% = Green - 75% = Yellow - 50% = Yellow - 25% = Yellow - Refill = Red <p>The light shall flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights shall flash sequentially when the water tank is empty.</p> <p>The level measurement shall be based on the sensing of head pressure of the fluid in the tank.</p> <p>The display shall be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design shall provide complete protection from water and environmental elements. An industrial pressure</p>		

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<p>transducer shall be mounted to the outside of the tank. The field calibratable display measures head pressure to accurately show the tank level.</p> <p><u>FOAM LEVEL GAUGE</u> An electronic foam level gauge shall be provided on the operator's panel that registers foam level by means of five colored LED lights. The lights shall be durable, ultra-bright five LED design viewable through 180 degrees. The foam level indicators shall be as follows:</p> <ul style="list-style-type: none"> - 100% = Green - 75% = Yellow - 50% = Yellow - 25% = Yellow - Refill = Red <p>The light shall flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights shall flash sequentially when the foam tank is empty.</p> <p>The level measurement shall be based on the sensing of head pressure of the fluid in the tank.</p> <p>The display shall be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design shall provide complete protection from foam and environmental elements. An industrial pressure transducer shall be mounted to the outside of the tank. The display shall be able to be calibrated in the field and shall measure head pressure to accurately show the tank level.</p> <p><u>LIGHT SHIELD</u> Illumination shall be provided for controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus and the equipment provided on it. External illumination shall be a minimum of five (5) foot-candles on the face of the device. Internal illumination shall be a minimum of four (4) footlamberts.</p> <p>Lights shall be installed under a stainless steel shield. A light shall come on above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel. A green pump engaged indicator shall come on at the operator's panel when the pump is shifted into gear from inside the cab. One pump panel light shall also come on at the operator's panel when the pump is shifted into gear from inside the cab. The remaining lights to be actuated from a switch located on the pump panel.</p>		

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	Yes	No
<p><u>MICROPHONE & SPEAKER COMPARTMENT</u> A microphone and speaker compartment with a polished stainless steel door shall be furnished adjacent to the pump operator's panel. Compartment size shall be 12.00" high x 9.00" wide x 6.00" deep.</p>		

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	Yes	No
<p><u>ELECTRICAL</u></p> <p>All 12-volt electrical equipment installed by the apparatus manufacturer shall conform to modern automotive practices. All wiring shall be high temperature crosslink type. Wiring shall be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers shall be provided which conform to SAE Standards. Wiring shall be color, function and number coded. Function and number codes shall be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors shall be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.</p> <p>Electrical wiring and equipment shall be installed utilizing the following guidelines:</p> <p>(1) All holes made in the roof shall be caulked with silicon, rope caulk is not acceptable. Large fender washers, liberally caulked, shall be used when fastening equipment to the underside of the cab roof.</p> <p>(2) Any electrical component that is installed in an exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it. Exposed area shall be defined as any location outside of the cab or body.</p> <p>(3) Electrical components designed to be removed for maintenance shall not be fastened with nuts and bolts. Metal screws shall be used in mounting these devices. Also a coil of wire shall be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.</p> <p>(4) Corrosion preventative compound shall be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections shall require this compound in the plug to prevent corrosion and for easy separation (of the plug).</p> <p>(5) All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.</p> <p>(6) All electrical terminals in exposed areas shall have silicon (1890) applied completely over the metal portion of the terminal. All emergency light switches shall be mounted on a separate panel installed in the cab. A master warning light switch and individual switches shall be provided to allow preselection of emergency lights. The light switches shall be "rocker" type with an internal indicator light to show when switch is energized. All switches shall be properly identified and mounted in a removable panel for ease in servicing. Identification of the switches shall be done by either printing or etching on the switch panel. The switches and identification shall be illuminated.</p> <p>All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, shall be furnished. Rear identification lights shall be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads shall be protected from damage by installing a false bulkhead inside the rear compartments.</p>		

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	Yes	No
<p>An operational test shall be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.</p> <p>The results of the tests shall be recorded and provided to the purchaser at time of delivery.</p> <p><u>STEP LIGHTS</u> Four (4) Weldon, Model 9186-23882-30, step lights shall be provided.</p> <p>One (1) step light shall be provided on each side, on the front compartment face.</p> <p>Two (2) step lights at rear, shall illuminate the tailboard.</p> <p>These step lights shall be actuated with the pump panel light switch.</p> <p>All other steps on the apparatus shall be illuminated per the current edition of NFPA 1901.</p> <p><u>REAR FMVSS LIGHTING</u> The rear stop/tail and directional lighting shall consist of the following:</p> <p>Two (2) Whelen model 60R00BRR red LED stop/tail lights.</p> <p>Two (2) Whelen, Model 60A00TAR, amber LED populated arrow turn light.</p> <p>These lights shall be installed at the rear of the truck in a polished housing.</p> <p>Four (4) red reflectors shall be provided.</p> <p>A Weldon, Model 23882-2600-00, license plate bracket shall be mounted on the driver's side above the warning lights. A Weldon, Model 9186-23882-30, step lamp shall illuminate the license plate.</p> <p>Two (2) Whelen, Model: 60C00VCR, LED backup lights shall be provided.</p> <p>The three (3) identification lights located at the rear shall be installed per the following:</p> <p>Truck-Lite, Model 35, LED</p> <p>As close as practical to the vertical centerline.</p> <p>Centers spaced not less than six (6) inches or more than twelve (12) inches apart.</p> <p>Red in color.</p> <p>All at the same height.</p> <p>The four (4) clearance lights located at the rear shall be installed per the following:</p> <p>Truck-Lite, Model 35, LED</p> <p>To indicate the overall width of the vehicle.</p>		

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<p>One (1) each side of the vertical centerline.</p> <p>All at the same height.</p> <p>As near the top as practical.</p> <p>To be visible from the rear and the side.</p> <p>One (1) each side, facing the side.</p> <p>One (1) each side, facing the rear.</p> <p>Per FMVSS 108 and CMVSS 108 requirements.</p> <p><u>LIGHTING BEZEL</u></p> <p>Two (2) Whelen, model CAST3, three (3) light aluminum housings shall be provided for the rear tail, directional and scene lights.</p> <p><u>LIGHT, INTERMEDIATE</u></p> <p>There shall be one (1) pair, of Truck-Lite, Model: 60115Y, amber, LED, turn signal, marker lights furnished, one (1) each side, horizontally in the rear fender panel.</p> <p>A stainless steel trim shall be included with this installation.</p> <p><u>LIGHT, TURN SIGNAL MARKER</u></p> <p>one (1) pair, Truck-Lite, model 30080Y, amber, flange mounted LED, lights shall be mounted on each side of the cab, outside corner, horizontal, in place of the directional/marker light. The light shall double as a turn signal and marker light.</p> <p>This installation shall include a stainless steel cover.</p> <p><u>"DO NOT MOVE APPARATUS" INDICATOR</u></p> <p>A flashing red indicator light, located in the driving compartment, shall be illuminated automatically per the current NFPA requirements. The light shall be labeled "Do Not Move Apparatus If Light Is On".</p> <p>The same circuit that activates the Do Not Move Apparatus indicator shall activate a pulsing alarm when the parking brake is released.</p> <p><u>OPEN DOOR INDICATOR LIGHT</u></p> <p>Two (2) red indicator lights shall be provided and located in clear view of the driver, warning of an open passenger or equipment compartment door.</p> <p>One (1) light shall indicate status of doors on the driver's side of the vehicle and the other light shall indicate the status of the passenger side and rear compartment doors.</p> <p><u>COMPARTMENT LIGHTING</u></p> <p>There shall be seven (7) compartments with On Scene Solutions LED compartment light strips. The strips shall be centered vertically along each side of the door framing. The compartments with these strip lights shall be located in each compartment.</p>		

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<p>Opening the compartment door shall automatically turn the compartment lighting on.</p> <p><u>PUMP COMPARTMENT LIGHT</u> A pump compartment light shall be provided inside the right side pump enclosure and accessible through a door on the pump panel.</p> <p>A .125" weep hole shall be provided in each light lens, preventing moisture retention.</p> <p><u>PERIMETER SCENE LIGHTS, CAB</u> There shall be a Truck-lite, model 44042C, 4.00", LED, grommet mount weatherproof light provided for each cab door. Lighting shall be designed to provide illumination on areas under the driver, officer, and crew cab riding area exits, which shall be activated automatically when the exit doors are opened, by the door jam switch and by the same means as the body perimeter lights.</p> <p>The lighting shall be capable of providing illumination at a minimum level of two (2) foot-candles on ground areas within 30.00" of the edge of the apparatus in areas which personnel climb in or out of the apparatus or descend from the apparatus to the ground level.</p> <p><u>PERIMETER SCENE LIGHTS, BODY</u> There shall be a total of four (4) Truck-Lite, Model 44042C, LED lights provided on the apparatus. Each light shall consist of a 4.00" weatherproof LED light, rubber mount, and pigtail kit.</p> <p>The lights shall be mounted in the following locations:</p> <p>Two (2) lights shall be provided under the rear step area.</p> <p>One (1) light shall be provided each side under the pump panel running boards.</p> <p>The lighting shall be capable of providing illumination at a minimum level of two (2) foot-candles on ground areas within 30.00" of the edge of the apparatus in areas designed for personnel to climb onto the apparatus or descend from the apparatus to the ground level.</p> <p>The lights shall be activated by a parking brake control, transmission in reverse and turn signal with three (3) to five (5) second delay.</p> <p><u>REAR SCENE LIGHTS</u> one (1) pair of Weldon 2020-1190-30, 50 watt, rectangular, sealed beam rear scene lights shall be provided one (1) each side underneath the rear stop lights.</p> <p>The control for the lights shall be From the first switch feature, a control at the driver side switch panel and From the second switch feature, there is no control of this option.</p> <p><u>DECK LIGHTS</u> Two (2)-6.00" Unity AG deck lights with swivel mount shall be provided at the rear of the hose bed, one (1) each side.</p>		

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<p>One (1) light shall be furnished with a 160,000 candle power halogen spot bulb and the other shall be furnished with a 6,000 candle power halogen flood bulb.</p> <p><u>DECK LIGHTS ON BODY</u> A pair of Collins, model FX-12, lights shall be mounted one (1) on each side one (1) each side on the top edge of the pump house toward the fire body.</p> <p><u>SWITCH, ADDITIONAL FOR SCENE LIGHTS</u> Two (2) additional switches shall be provided for the 12 volt scene lights and shall be installed in the cab.</p> <p><u>CAB SPOTLIGHT</u> One (1) Federal VisiBeam spotlight, model VB12S1, shall be center mounted at the front of the cab roof. The light assembly is adjustable upward 105 degrees and downward 35 degrees from horizontal, and it can rotate a complete 360 degrees. The light shall move gradually at first and then speeds up. The spotlight shall be remote-controlled from inside the cab on the right (officer's) side.</p> <p><u>HAND HELD SPOTLIGHT</u> There shall be four (4) Koehler, Model: #5002*, light and charger units mounted shipped loose to be mounted by the Cambridge Fire Department.</p> <p>The color shall be orange.</p> <p>The charger shall be connected to a power point plug, 12 VDC.</p> <p><u>HAND HELD SPOTLIGHT</u> There shall be one (1) spotlight provided, model Collins CL-12, with a 9-foot coil cord and momentary switch. The housing shall be made from aircraft aluminum that is black powder coated. Location of the one (1) spotlight shall be shipped loose to be mounted by the Cambridge Fire Department.</p> <p><u>HAND HELD SPOTLIGHT</u> There shall be Koehler, Model: #5002*, light and charger units mounted shipped loose to be mounted by the Cambridge Fire Department. There shall be two (2) lights provided.</p> <p>The color shall be orange.</p> <p>The charger shall be connected to a power point plug, 12 VDC.</p>		

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<p><u>AIR HORN SYSTEM</u> Two (2) Grover air horns shall be provided and located, in the front bumper, recessed one (1) each side. The horn system shall be piped to the air brake system wet tank utilizing .38" tubing. A pressure protection valve shall be installed in-line to prevent loss of air, in the air brake system.</p> <p><u>AIR HORN CONTROL</u> The air horns shall be actuated by two (2) foot switches, one (1) located on the officer's side and one (1) on the driver's side.</p> <p><u>ELECTRONIC SIREN</u> A Federal, model 690010, PA300-012MSC, electronic siren with noise canceling microphone shall be provided. Siren head shall be located in the cab lower instrument panel centered as may be possible (to match the current apparatus). Siren shall be actuated by a foot switch on the officer's side and by the horn button in the steering wheel. The driver shall have the option to control the siren or the chassis horns from the horn button by means of a selector switch.</p> <p><u>SPEAKER</u> There shall be one (1) speaker provided. Each speaker shall be a Federal, model CP100-S, 100 watt, with chrome finish. Each speaker shall be connected to the siren amplifier. The speaker shall be mounted on top of the front bumper on the passenger's side. The speaker shall be set back 2.00" from standard mounting.</p> <p><u>MECHANICAL SIREN, (Auxiliary)</u> A Federal Q2B siren shall be furnished. A siren brake button shall be installed on the switch panel. The control solenoid shall be powered up after the emergency master switch is activated. The mechanical siren shall be mounted on the bumper deckplate, set back 2.00" from the front face of the bumper. It shall be mounted on the left side. The siren mounting shall include a reinforcement plate. The mechanical siren shall be actuated by a foot switch on the officer's side and by the horn button in the steering wheel. The driver shall have the option to control the siren or the chassis horns from the horn button by means of a selector switch located on the instrument panel.</p> <p><u>WARNING LIGHT (Cab Roof)</u> One (1) Federal Viewpoint FV2252 lightbar shall be mounted on the cab roof. This Viewpoint is configured in pairs, a left and a right, so that each half shall be located to the outside edges of the cab roof. This lightbar shall include the following three (3) pods per side:</p>		

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Pod 1 with red lens shall include a 95 FPM rotator.
 Pod 2 with clear lens shall include a 175 FPM rotator.
 Pod 3 with clear lens shall include a 175 FPM rotator.
 Pod 4 with clear lens shall include a 175 FPM rotator.
 Pod 5 with red lens shall include a 175 FPM rotator.
 Pod 6 with red lens shall include a 95 FPM rotator,
 One (1) switch located in the cab on the switch panel shall control this lightbar.
 To meet the NFPA requirements the pods 1, 6 and another colored warning light shall be active in the blocking mode. The rest of the colored warning lights shall be load managed when the parking brake is set or if clear, disabled when the parking brake is set..

SIDE ZONE LOWER LIGHTING

Six (6) flashing super LED lights shall be located at the following positions:
 Two (2) lights, one (1) each side on the bumper extension - red Super LED/red lens each side.
 Two (2) lights, above the front wheel well to match the previous unit - red Super LED/red lens each side.
 Two (2) lights, to the rear of the wheel well - red Super LED/red lens each side.
 The lights shall be controlled by a lighted switch on the cab instrument panel.
 These lights shall be installed with three (3) pairs of flange kits.

REAR ZONE LOWER LIGHTING

Two (2) Whelen model 60*02F*R, LED, red Super LED/red lens lights shall be located at the rear of the apparatus required to meet or exceed the lower level optical warning and optical power requirements of NFPA.
 Each light shall be mounted in a housing.

WARNING LIGHTS (Rear of Hose Bed)

Two (2) Federal, Model IVP100 rotating beacons, one red & one blue, shall be provided at the rear of the truck, located one (1) each side. Each beacon shall contain a 175 FPM rotator. The lights shall be located driver side dome blue and passenger side dome red.
 A switch located on the cab switch panel shall control these lights.

LIGHT, REAR UPPER ZONE, BLOCKING

The following Federal, LED warning lights shall be provided at the rear of apparatus as high as practical.
 One (1) model QL64XF-* on each side.
 The color of these lights shall be red LED/red lens.

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<p>These lights shall be provided with a flange.</p> <p>These LED lights shall be activated with the rear upper warning switch.</p> <p>The flash pattern of these lights shall be controlled by an internal flasher in the lighthouse.</p> <p>The rear warning lights shall be mounted on stainless steel brackets with all wiring totally enclosed. These brackets shall also support the clearance/marker lights.</p>		

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Yes

No

LOOSE EQUIPMENT

The following equipment shall be furnished with the completed unit:

- Three (3) bags of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit
- One (1) extinguisher, 2.50 gallon pressurized water
- One (1) extinguisher, 10 pound, CO2
- One (1) extinguisher,, Ansul, Model I-A-20-G, 20 lb, FORAY dry chemical
- One (1) 25' length of 6.0" Snap-Tire ATX Dura Lite Hose 4.5" Female Swivel X 5.0" Female Swivel.
- One (1) 6.0" NST Female Swivel X 5.0" Male Adapter.

The extinguisher brackets will be the truck mount type with a "swing-out" clasp. The extinguishers will be able to filled by the fire department with no special adapters.

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<p><u>NFPA REQUIRED LOOSE EQUIPMENT, PROVIDED BY THE CAMBRIDGE FIRE DEPARTMENT</u></p> <p>The following loose equipment as outlined in NFPA 1901, 2009 edition, section 5.8.2 and 5.8.3 shall be provided by the fire department. All loose equipment shall be installed on the apparatus before placed in emergency service, unless the fire department waives NFPA section 4.21.</p> <ul style="list-style-type: none"> - 800 ft (60 m) of 2½" (65 mm) or larger fire hose. - 400 ft (120 m) of 1½" (38 mm), 1¾" (45 mm), or 2" (52 mm) fire hose. - One (1) handline nozzle, 200 gpm (750 L/min) minimum. - Two (2) handline nozzles, 95 gpm (360 L/min) minimum. - One (1) playpipe with shutoff and 1" (25 mm), 1 1/8" (29 mm), and 1¼" (32 mm) tips. - One (1) SCBA complying with NFPA 1981, <i>Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services</i>, for each assigned seating position, but not fewer than four (4), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer. - One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space(s). - One (1) first aid kit. - Four (4) combination spanner wrenches mounted in bracket(s) fastened to the apparatus. - Two (2) hydrant wrenches mounted in brackets fastened to the apparatus. - Four (4) ladder belts meeting the requirements of NFPA 1983, <i>Standard on Fire Service Life Safety Rope and System Components</i> (if equipped with an aerial device). - One (1) double female 2½" (65 mm) adapter with National Hose threads, mounted in a bracket fastened to the apparatus. - One (1) double male 2½" (65 mm) adapter with National Hose threads, mounted in a bracket fastened to the apparatus. - One (1) rubber mallet, for use on suction hose connections, mounted in a bracket fastened to the apparatus. - Two (2) salvage covers each a minimum size of 12 ft × 14 ft (3.7 m × 4.3 m). - One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, 		

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<p><i>Standard for High Visibility Public Safety Vests</i>, and have a five-point breakaway feature that includes two at the shoulders, two at the sides, and one at the front.</p> <ul style="list-style-type: none"> - Five (5) fluorescent orange traffic cones not less than 28" (711 mm) in height, each equipped with a 6" (152 mm) retro-reflective white band no more than 4" (152 mm) from the top of the cone, and an additional 4" (102 mm) retro-reflective white band 2" (51 mm) below the 6" (152 mm) band. - Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities. - One automatic external defibrillator (AED). - If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, shall be carried mounted in brackets fastened to the apparatus. - If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side shall be carried. Any intake connection larger than 3 in. (75 mm) shall include a pressure relief device that meets the requirements of 16.6.6. - If the apparatus does not have a 2½" National Hose (NH) intake, an adapter from 2½" NH female to a pump intake shall be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake. - If the supply hose carried has other than 2½" National Hose (NH) threads, adapters shall be carried to allow feeding the supply hose from a 2½" NH thread male discharge and to allow the hose to connect to a 2½" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake. <p><u>SOFT SUCTION HOSE, PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, section 5.7.2 requires a minimum of 20 ft of suction hose or 15 ft of supply hose.</p> <p>Hose is not on the apparatus as manufactured. The fire department shall provide suction or supply hose.</p> <ul style="list-style-type: none"> - One (1)-6.00" National Standard hose thread barrel strainer, chrome plated <p><u>DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, section 5.8.3 requires one (1) approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus.</p> <p>The extinguisher is not on the apparatus as manufactured. The fire department shall provide and mount the extinguisher.</p>		

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<p><u>WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, section 5.8.3 requires one (1) 2.5 gallon or larger water extinguisher mounted in a bracket fastened to the apparatus.</p> <p>The extinguisher is not on the apparatus as manufactured. The fire department shall provide and mount the extinguisher.</p> <p><u>AXE, FLATHEAD, PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, Section 5.8.3 requires one (1) flathead axe mounted in a bracket fastened to the apparatus.</p> <p>The axe is not on the apparatus as manufactured. The fire department shall provide and mount the axe.</p> <p><u>AXE, PICKHEAD, PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, Section 5.8.3 requires one (1) pickhead axe mounted in a bracket fastened to the apparatus.</p> <p>The axe is not on the apparatus as manufactured. The fire department shall provide and mount the axe.</p>		

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<p><u>PAINT</u></p> <p>The exterior custom cab and body painting procedure shall consist of a seven (7) step finishing process as follows:</p> <ol style="list-style-type: none"> 1. <u>Manual Surface Preparation</u> - All exposed metal surfaces on the custom cab and body shall be thoroughly cleaned and prepared for painting. Surfaces that shall not be painted include all chrome plated, polished stainless steel, anodized aluminum and bright aluminum treadplate. Each imperfection on the exterior metal surface shall be removed or filled and then sanded smooth for a smooth appearance. All seams shall be sealed before painting. 2. <u>Chemical Cleaning and Treatment</u> - The metal surfaces shall be properly cleaned using a high pressure and high temperature cleaning system. Surfaces are chemically cleaned to remove all dirt, oil, grease and metal oxides to ensure the subsequent coatings bond well. An ultra pure water final rinse shall be applied to all metal surfaces at the conclusion of the metal treatment process. 3. <u>Primer/Surfacer Coats</u> - A two (2) component urethane primer/surfacer shall be hand applied to the chemically treated metal surfaces to provide a strong corrosion protective base coat and to smooth out the surface. 4. <u>Hand Sanding</u> - The primer/surfacer coat shall be lightly sanded to an ultra smooth finish. 5. <u>Sealer Primer Coat</u> - A two (2) component sealer primer coat shall be applied over the sanded primer. 6. <u>Topcoat Paint</u> - Urethane base coat shall be applied to opacity for correct color matching. 7. <u>Clearcoat</u> - Two (2) coats of an automotive grade two (2) component urethane shall be applied. Lap style doors shall be clear coated to match the body. Roll-up doors shall not be clear coated and the standard roll-up door warranty shall apply. <p>All removable items such as brackets, compartment doors, door hinges, trim, etc. shall be removed and painted separately to insure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly shall be finish painted before assembly.</p> <p>The cab shall be two-tone, with the upper section painted white and lower section of the cab and body painted red so as to match the Cambridge Apparatus.</p> <p><u>PAINT - ENVIRONMENTAL IMPACT</u></p> <p>Contractor shall meet or exceed all current State (his) regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water and soil. Controls shall include the following conditions:</p> <ul style="list-style-type: none"> - Topcoats and primers must be chrome and lead free. 		

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<p>- Metal treatment chemicals must be chrome free. The wastewater generated in the metal treatment process must be treated on-site to remove any other heavy metals.</p> <p>- Particulate emission collection from sanding operations must have a 99.99% efficiency factor.</p> <p>- Particulate emissions from painting operations must be collected by a dry filter or water wash process. If the dry filter means is used, it must have an efficiency rating of 98.00%. Water wash systems must be 99.97% efficient.</p> <p>- Water from water wash booths must be reused. Solids shall be removed mechanically on a continual basis to keep the water clean.</p> <p>- Paint wastes are disposed of in an environmentally safe manner. They are used as fuel in kilns used in the cement manufacturing process - thereby extracting energy from a waste material.</p> <p>- Empty metal paint containers must be cleaned, crushed and recycled to recover the metal.</p> <p>- Solvents used in cleanup operations must be collected, recycled on-site, or sent off-site for distillation and returned for reuse. Residue from the distillation operation shall be used as fuel in off-site cement kilns.</p> <p>Additionally, the finished apparatus shall not be manufactured with or contain products that have ozone depleting substances. Contractor shall, upon demand, present evidence that his manufacturing facility meets the above conditions and that it is in compliance with his State EPA rules and regulations.</p> <p><u>PAINT CHASSIS FRAME ASSEMBLY</u></p> <p>The chassis frame assembly shall be painted red before the installation of the cab and body, and before installation of the engine, drive shafts and transmission assembly, air brake lines, electrical wire harnesses, etc. Components that are included with the chassis frame assembly that shall be painted red are frame rails, cross members, axles, suspension, steering gear, fuel tank, body substructure supports, miscellaneous mounting brackets, etc.</p> <p><u>PAINT, WHEELS</u></p> <p>All wheel surfaces, inside and outside, shall be painted red to match the exterior truck color.</p> <p><u>PAINT, COMPARTMENT INTERIOR</u></p> <p>Interior of compartmentation shall be painted with a gray spatter type paint.</p> <p><u>REFLECTIVE BAND</u></p> <p>A 10.00" white reflective band shall be provided across the front of the vehicle and along the sides of the body.</p> <p>The reflective band provided on the cab face shall be at the headlight level.</p>		

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<p><u>CHEVRON STRIPING, REAR</u> There shall be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The entire rear surface, excluding the rear compartment door, shall be covered.</p> <p>The colors shall be red and fluorescent yellow green diamond grade.</p> <p>Each stripe shall be 6.00" in width.</p> <p>This shall meet the requirements of NFPA 1901, 2009 edition, which states that 50% of the rear surface shall be covered with chevron striping.</p> <p><u>REFLECTIVE STRIPE, CAB DOORS</u> A 6.00" x 16.00" white reflective stripe shall be provided across the interior of each cab door. The stripe shall be located approximately 1.00" up from the bottom, on the door panel.</p> <p>This stripe shall meet the NFPA 1901 requirement.</p> <p><u>GOLD LEAF STRIPE, BODY</u> A gold leaf stripe shall be provided on each side of the body, located along the top of the side compartmentation.</p> <p><u>CAB STRIPE</u> There shall be one (1) gold leaf stripe located just below the window line on each side of the cab.</p> <p><u>LETTERING</u> The lettering shall be totally encapsulated between two (2) layers of clear vinyl.</p> <p><u>LETTERING</u> Twenty-one (21) to forty (40) genuine gold leaf lettering, 3.00" high, outlining and double color shading shall be provided.</p> <p><u>LETTERING</u> There shall be two (2) letters 4.00" high gold leaf letters, with outline and shade, provided and installed cab doors. Each letter shall be genuine 22 karat gold leaf.</p> <p><u>6" GOLD LEAF LETTERING</u> One (1) letter 6" high shall be provided. Each letter shall be genuine 22 karat gold leaf totally encapsulated between two (2) layers of clear vinyl with an outline. Install driver's side bulkhead.</p> <p><u>REFLECTIVE LETTERING</u> Two (2) letters, 18.00" high black reflective shall be installed on roof numbers.</p> <p><u>REFLECTIVE LETTERING ON ROLL-UP DOORS</u> There shall be one (1) set/s of reflective lettering, "KEEP BACK 500 FEET", supplied and installed on the applied on scotchlite plate above rear roll up door roll-up door/s. The lettering shall be white in color.</p> <p><u>LETTERING</u> One (1) to twenty (20) reflective letters, 3.00" high, shall be provided.</p>		

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<p><u>LETTERING</u> One (1) to twenty (20) non-reflective vinyl letters, 3.00" high, shall be provided.</p> <p><u>REFLECTIVE PLATE/S FOR LETTERING</u> There shall be one (1) aluminum plate/s provided for department lettering. The plates shall be covered with ruby red reflective material and shall be mounted above rear roll-up door. They shall be approximately 3" x 24" in size.</p> <p><u>DECAL INSTALLATION</u> There shall be one (1) pair of decals furnished by the fire department and applied by the apparatus manufacturer.</p> <p><u>EMBLEM, FLEUR DE LIS</u> There shall be one (1) pair of fleur de lis emblems installed on each front cab door. The emblems shall be gold leaf.</p> <p><u>RUSTPROOFING/UNDERCOATING</u> The apparatus cab shall be properly treated by an authorized Ziebart dealer.</p> <p>The rustproofing material shall be a transparent coating of an organic based corrosion inhibitor for long-term protection against corrosion.</p> <p>The rustproofing material utilized shall be formulated to resist corrosion.</p> <p>Coating texture shall be waxy and pliable after drying so it shall not chip, crack, or peel off during normal vehicle operations. Minimum dry film thickness shall be in the range of 3.00 to 4.00 mils.</p> <p>The material shall be applied to the following areas:</p> <p>Interior of the cab doors.</p> <p>Interior of all double panel style body doors.</p> <p>The underside of the apparatus shall be undercoated with an asphalt petroleum based material, dark in color.</p> <p>The undercoating material utilized on the apparatus shall be formulated to resist corrosion and deaden unwanted sound or road noise.</p> <p>Coating texture shall appear firm, flexible, and resistant to abrasion. Minimum dry film thickness shall be in the range of 8.00 to 12.00 mils.</p> <p>The material shall be applied to the following areas:</p> <p>Body and cab wheel well fender liners, on the back side only.</p> <p>Underside of body and cab sheet metal, and structural components.</p> <p>Underside and vertical sides of all sheet metal compartmentation, including support angles.</p> <p>Structural support members under running boards, rear platforms, battery boxes, walkways, etc.</p>		

Cambridge Fire Department Apparatus Specification	Bidder Complies	
	Yes	No
<p>Inside surfaces of the pump heat enclosure, (when installed).</p> <p><u>RUSTPROOFING, CHASSIS FRAME ASSEMBLY</u></p> <p>The apparatus frame shall be properly treated by an authorized Ziebart dealer.</p> <p>The rustproofing material shall be a black coating of an organic based corrosion inhibitor for long-term protection against corrosion.</p> <p>The rustproofing material utilized shall be formulated to resist corrosion.</p> <p>Coating texture shall be waxy and pliable after drying so it shall not chip, crack, or peel off during normal vehicle operations. Minimum dry film thickness shall be in the range of 3.00 to 4.00 mils.</p> <p>The material shall be applied to the following areas:</p> <p>Inside of chassis frame rails and crossmembers:</p> <p>After normal chassis assemble is complete at the plant, the nearest Ziebart dealer shall apply a penetrant and rustproofing to the inside of the frame rails, and crossmembers.</p> <p>All harnesses, airlines etc shall be properly masked wherever possible.</p> <p>Components shall be pulled out of the way to provide access to the inside of the frame rails and crossmembers to achieve adequate coverage of the rustproofing material.</p> <p>Outside of chassis frame rails:</p> <p>After all body mounting angles, and tank cradle mount are installed onto the chassis frame assemble, the nearest Ziebart dealer shall apply a penetrant and rustproofing.</p> <p>The process shall cover the complete outside, top flange, and bottom flange of frame sealing all the joints between body mount angles and frame.</p>		

City of Cambridge CORI Policy

1. Where Criminal Offender Record Information (CORI) checks are part of a general background check for employment or volunteer work, the following practices and procedures will generally be followed.
2. CORI checks will only be conducted as authorized by Criminal History Systems Board (CHSB). All applicants will be notified that a CORI check will be conducted. If requested, the applicant will be provided with a copy of the CORI policy.
3. An informed review of a criminal record requires adequate training. Accordingly, all personnel authorized to review CORI in the decision-making process will be thoroughly familiar with the educational materials made available by the CHSB.
4. Prior to initiating a CORI check, the City will review the qualifications of the applicant to determine if the applicant is otherwise qualified for the relevant position. The City will not conduct a CORI check on an applicant that is not otherwise qualified for the relevant position.
5. Unless otherwise provided by law, a criminal record will not automatically disqualify an applicant. Rather, determination of suitability based on CORI checks will be made consistent with this policy and any applicable law or regulations.
6. If a criminal record is received from CHSB, the authorized individual will closely compare the record provided by CHSB with the information on the CORI request form and any other identifying information provided by the applicant, to ensure the record relates to the applicant.
7. If, in receiving a CORI report, the City receives information it is not authorized to receive (e.g. cases with dispositions such as not guilty or dismissal, in circumstances where the City is only authorized to receive convictions or case-pending information), the City will inform the applicant and provide the applicant with a copy of the report and a copy of CHSB's *Information Concerning the Process in Correcting a Criminal Record* so that the applicant may pursue correction with the CHSB.
8. If the City of Cambridge is planning to make an adverse decision based on the results of the CORI check, the applicant will be notified immediately. The applicant shall be provided with a copy of the criminal record and the City's CORI policy, advised of the part(s) of the record that make the individual unsuitable for the position and given an opportunity to dispute the accuracy and relevance of the CORI record.
9. Applicants challenging the accuracy of the criminal record shall be provided a copy of CHSB's *Information Concerning the Process in Correcting a Criminal Record*. If the CORI record provided does not exactly match the identification information provided by the applicant, the City of Cambridge will make a determination based on a comparison of the CORI record and documents provided by the applicant. The City of Cambridge may contact CHSB and request a detailed search consistent with CHSB policy.
10. If the City of Cambridge reasonably believes the record belongs to the applicant and is accurate, then the determination of suitability for the position will be made. Unless otherwise provided by law, factors considered in determining suitability may include, but not be limited to the following:
 - (a) Relevance of the crime to the position sought;
 - (b) The nature of the work to be performed;
 - (c) Time since the conviction;
 - (d) Age of the candidate at the time of offense;
 - (e) Seriousness and specific circumstances of the offense;
 - (f) The number of offenses;
 - (g) Whether the applicant has pending charges;
 - (h) Any relevant evidence of rehabilitation or lack thereof;
 - (i) Any other relevant information, including information submitted by the candidate or requested by the City.

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11. The Personnel Department will assist affected departments, in assessing the suitability of candidates in accordance with paragraph 10 a through i above, to ensure consistency, fairness, and protection of employment opportunities and the public interest.
12. The City of Cambridge will notify the applicant of the decision and the basis of the decision in a timely manner.
13. CORI information shall not be disseminated or shared with any unauthorized employees or other, but shall be maintained in confidence consistent with the obligations of law.

Revised May 5, 2007

Name of Bidder: _____

ORDINANCE NUMBER 1312

Final Publication Number 3155. First Publication in the Chronicle on December 13, 2007.

City of Cambridge

In the Year Two Thousand and Eight

AN ORDINANCE

In amendment to the Ordinance entitled "Municipal Code of the City of Cambridge"

Be it ordained that Cambridge Municipal Code Chapter 2.112 is hereby amended by adding a new Section 2.112.060 entitled "CORI Screening by Vendors of the City of Cambridge" as follows:

Adding after Section 2.112.050 the following new sections:

SECTION 2.112.060

CORI SCREENING BY VENDORS OF THE CITY OF CAMBRIDGE

Sections:

- 2.112.061 Purpose**
- 2.112.062 Definitions**
- 2.112.063 CORI-Related Standards of the City of Cambridge**
- 2.112.064 Waiver**
- 2.112.065 Applicability**

2.112.061 Purpose

These sections are intended to ensure that the persons and businesses supplying goods and/or services to the City of Cambridge deploy fair policies relating to the screening and identification of persons with criminal backgrounds through the CORI system.

2.112.062 Definitions

Unless specifically indicated otherwise, these definitions shall apply and control.

Awarding Authority means the City of Cambridge Purchasing Agent or designee.

Vendor means any vendor, contractor, or supplier of goods and/or services to the City of Cambridge.

2.112.063 CORI-Related Standards of the City of Cambridge

The City of Cambridge employs CORI-related policies, practices and standards that are fair to all persons involved and seeks to do business with vendors that have substantially similar policies, practices and standards. The City of Cambridge will do business only with vendors who, when required by law to perform CORI checks, employ CORI-related policies, practices, and standards that are consistent with policies, practices and standards employed by the City of

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Cambridge. The awarding authority shall consider any vendor's deviation from policies, practices and standards employed by the City of Cambridge as grounds for rejection, rescission, revocation, or any other termination of the contract.

2.112.064 Waiver

The City Manager may grant a waiver to anyone who or which has submitted a request for waiver if it is objectively reasonable; and the City Manager, or a delegate, shall report promptly in writing to the City Council all action taken with respect to every request for a waiver and the reasons for the decision.

2.112.065 Applicability

If any provision of these sections imposes greater restrictions or obligations than those imposed by any other general law, special law, regulation, rule, ordinance, order, or policy then the provisions of these sections shall control.

In City Council January 28, 2008.

Passed to be ordained by a ye and nay vote:-

Yeas 9; Nays 0; Absent 0.

Attest:- D. Margaret Drury, City Clerk.

A true copy;

ATTEST:-

D. Margaret Drury
City Clerk

Name of Bidder: _____

Chapter 2.121

LIVING WAGE ORDINANCE

Sections:

2.121.010	Title and Purpose
2.121.020	Definitions
2.121.030	Living Wage
2.121.040	Waivers and Exceptions
2.121.050	Notification Requirements
2.121.060	Duties of covered Employers
2.121.070	Community Advisory Board
2.121.080	Enforcement
2.121.090	Severability
2.121.100	Effective Date

2.121.010 Title and Purpose.

This Chapter shall be known as the "Cambridge Living Wage Ordinance". The purpose of this ordinance is to assure that employees of the City of Cambridge and employees of City contractors, subcontractors and beneficiaries of tax abatements, loans, grants, subsidies and other assistance provided by the City earn an hourly wage that is needed to support a family of four.

2.121.020 Definitions.

For the purposes of this ordinance, the term:

(a) **"Applicable Department"** means the Personnel Department for employees of the City of Cambridge, the Purchasing Department, with the advice and assistance of the appropriate department which receives the services, for Covered Employers who contract or subcontract with the City of Cambridge, the School Department for employees, contractors and subcontractors of the School Department, and the City Manager's Office for any other Person who is a Beneficiary of assistance other than a contract or subcontract.

(b) **"Assistance"** means:

(1) any grant, loan, tax incentive, bond financing, subsidy, or other form of assistance valued at least \$10,000 that an employer receives by or through the authority or approval of the City of Cambridge, including, but not limited to, c. 121A tax abatements, industrial development bonds, Community Development Block Grant (CDBG) loans and grants, Enterprise Zone designations awarded after the effective date of this Chapter, and the lease of city owned land or buildings below market value; and

(2) any service contract, as defined herein, of at least \$10,000 with the City of Cambridge that is made with an employer to provide services pursuant to G.L.c. 30B or other public procurement laws, awarded, renegotiated or renewed after the effective date of this Chapter.

(3) any service subcontract, as defined herein, of at least \$10,000.

(c) **"Beneficiary"** means:

(1) any person who is a recipient of Assistance;

(2) any company or person that is a tenant or sub-tenant, leaseholder or sub-leaseholder of a recipient of Assistance, provided that said company or person employs at least 25 persons and occupies property or uses equipment or property that is improved or developed as a result of Assistance, after the effective date of this Chapter; and

(d) **"Covered Employer"** means the City of Cambridge or a Beneficiary of Assistance.

(e) **"Covered Employee"** means:

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(1) a person employed by the City of Cambridge except for persons in those positions listed in Section 2.121.040(j) of this ordinance; and

(2) a person employed by a Covered Employer, or a person employed by an independent contractor doing business with a Covered Employer, who would directly expend any of his or her time on the activities funded by the contract or the activities for which the Beneficiary received the Assistance, except for persons in those positions listed in Section 2.121.040(j) of this ordinance..

(f) "Living Wage" has the meaning stated in Section 2.121.030.

(g) "Person" means one or more of the following or their agents, employees, servants, representatives, and legal representatives: individuals, corporations, partnerships, joint ventures, associations, labor organizations, educational institutions, mutual companies, joint-stock companies, trusts, unincorporated organizations, trustees, trustees in bankruptcy, receivers, fiduciaries, and all other entities recognized at law by the Commonwealth of Massachusetts.

(h) "Service Contract" means a contract let to a contractor by the City of Cambridge for the furnishing of services, to or for the City, except contracts where services are incidental to the delivery of products, equipment or commodities. A contract for the purchase or lease of goods, products, equipment, supplies or other property is not a "service contract" for the purposes of this definition.

(i) "Service Subcontract" means a subcontract primarily for the furnishing of services, to or for a recipient of Assistance, except where services are incidental to the delivery of products, equipment or commodities. A contract for the purchase or lease of goods, products, equipment, supplies or other property is not a "service subcontract" for the purposes of this definition.

2.121.030 Living Wage.

(a) Applicability. Covered Employers shall pay no less than the Living Wage to their employees.

(b) Amount of wage. The Living Wage shall be calculated on an hourly basis and shall be no less than \$10.00, subject to adjustment as provided herein. The Living Wage shall be upwardly adjusted each year no later than March first in proportion to the increase at the immediately preceding December 31 over the year earlier level of the Annual Average Consumer Price Index for All Urban Consumers (CPI -U) Boston-Lawrence-Salem, MA - NH, as published by the Bureau of Labor Statistics, United States Department of Labor applied to \$10.00.

(c) No reduction in collective bargaining wage rates. Nothing in this Chapter shall be read to require or authorize any beneficiary to reduce wages set by a collective bargaining agreement.

(d) Cuts in non-wage benefits prohibited. No Beneficiary will fund wage increases required by this Chapter, or otherwise respond to the provisions of this Chapter, by reducing the health, insurance, pension, vacation, or other non-wage benefits of any of its employees.

2.121.040 Waivers and Exceptions.

(a) Waivers. A Covered Employer may request that the City Manager grant a partial or whole waiver to the requirements of this Chapter.

(b) General Waivers. Waivers may be granted where application of this Chapter to a particular form of Assistance is found by the City Solicitor to violate a specific state or federal statutory, regulatory or constitutional provision or provisions, and the City Manager approves the waiver on that basis.

(c) Hardship Waivers for certain not-for-profit employers. An employer, who has a contract with the City of Cambridge which is not subject to the provisions of G.L. c. 30B, may apply to the City Manager for a specific waiver where payment of the Living Wage by a not-for-profit Covered Employer would cause a substantial hardship to the Covered Employer.

(d) Chapter 30B contract waivers. Prior to issuing an invitation for bids for a procurement contract subject to the provisions of G.L. c. 30B, any Applicable Department may apply to the City Manager for a waiver of the application of the Living Wage to the contract where payment of the Living Wage by a Covered Employer would make it inordinately expensive

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for the City to contract for the services or would result in a significant loss of services, because the contracted work cannot be segregated from the other work of the Covered Employer.

(e) General Waiver Request Contents. All General Waiver requests shall include the following:

- (1) The nature of the Assistance to which this Chapter applies;
- (2) The specific or official name of the Assistance and Assistance program, the statutory or regulatory authority for the granting of the Assistance, and a copy of that authority;
- (3) The conflicting statutory, regulatory, or constitutional provision or provisions that makes compliance with this Chapter unlawful, and a copy of each such provision; and
- (4) A factual explication and legal analysis of how compliance with this Chapter would violate the cited provision or provisions, and the legal consequences that would attach if the violation were to occur.

(f) Hardship Waiver Request Contents. All Hardship Waiver requests shall include the following:

- (1) The nature of the Assistance to which this Chapter applies;
- (2) A detailed explanation of why payment of the Living Wage would cause a substantial hardship to the Covered Employer; and
- (3) A statement of proposed wages below the Living Wage.

(g) Chapter 30B Contract Waiver Request Contents. A Chapter 30B contract waiver request shall include the following:

- (1) The nature of the Assistance to which this Chapter applies;
- (2) A detailed explanation of why the contracted work cannot be segregated from the other work of the bidding Covered Employers thereby making the cost of the contract with the payment of the Living Wage inordinately expensive or would result in a significant loss of services;

(h) Community Advisory Board review and recommendation regarding waiver requests. The Community Advisory Board, as described in Section 2.121.070 of this ordinance, shall consider waiver requests along with their supporting documentation and analysis, and may hold a public hearing to consider the views of the public before making a recommendation to the City Manager regarding the waiver request. For a hardship waiver, the Community Advisory Board shall offer an opportunity to be heard to employees of the Covered Employer. After reviewing the recommendation of the Community Advisory Board, the City Manager may approve and grant or deny all or part of a request. The City Manager may in his or her discretion grant a temporary hardship waiver pending the hearing before the Community Advisory Board. For Chapter 30B contract waivers, the Community Advisory Board shall make its recommendation to the City Manager no more than thirty days after it is notified of the request for a Chapter 30B contract waiver.

(i) Terms of exceptions. If an employer is subject to this Chapter as a result of its receipt of more than one kind of Assistance covered by this Chapter, and if the City Manager grants a waiver with respect to one form of Assistance, the City Manager need not find that this Chapter is inapplicable to the employer with respect to another form of Assistance received by the employer.

(j) Exceptions. The following positions will be excepted from the requirement of the payment of the Living Wage upon certification in an affidavit in a form approved by the Applicable Department and signed by a principal officer of the Covered Employer that the positions are as follows:

- (1) youth hired pursuant to a city, state, or federally funded program which employs youth as defined by city, state, or federal guidelines, during the summer, or as part of a school to work program, or in other related seasonal or part-time program;
- (2) work-study or cooperative educational programs;
- (3) trainees who are given a stipend or wage as part of a job training program that provides the trainees with additional services, which may include, but are not limited to, room and board, case management, or job readiness services.
- (4) persons working in a recognized supported employment program that provides workers with additional services, which may include, but are not limited to, room and board, case management, counseling, or job coaching;
- (5) positions where housing is provided by the employer;
- (6) employees who are exempt from federal or state minimum wage requirements; and
- (7) individuals employed by the City of Cambridge where the employment of such individuals is intended primarily to provide a benefit or subsidy to such individuals, although the City is compensating them for work performed.

2.121.050 Notification Requirements.

All Applicable Departments shall provide in writing an explanation of the requirements of this ordinance in all requests for bids for service contracts and to all persons applying for Assistance as defined by this ordinance. All persons

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who have signed a service contract with the City of Cambridge or a contract for Assistance shall forward a copy of such requirements to any person submitting a bid for a subcontract on the Assistance contract.

2.121.060 Duties of Covered Employers.

(a) Notification Requirements. Covered employers shall provide each Covered employee with a fact sheet about this ordinance and shall post a notice about the ordinance in a conspicuous location visible to all employees. The fact sheet and poster shall be provided to the Covered Employer by the Applicable Department and shall include:

- (1) notice of the Living Wage amount;
- (2) a summary of the provisions of this ordinance;
- (3) a description of the enforcement provisions of the ordinance;
- (4) the name, address, and phone number of a person designated by the Applicable Department to whom complaints of noncompliance with this ordinance should be directed.

(b) Contract for Assistance. At the time of signing a contract for assistance with the City of Cambridge or with a Beneficiary, the contract must include the following:

- (1) the name of the program or project under which the contract or subcontract is being awarded;
 - (2) a local contact name, address, and phone number for the Beneficiary;
 - (3) a written commitment by the Beneficiary to pay all Covered Employees not less than the Living Wage as subject to adjustment under this ordinance and to comply with the provisions of this ordinance;
 - (4) a list of Covered Employees under the contract with the employees' job titles;
 - (5) a list of all subcontracts either awarded or that will be awarded to Beneficiaries with funds from the Assistance.
- Upon signing any subcontracts, the Covered Employer shall forward a copy of the subcontract to the Applicable Department.

(c) Maintenance of payroll records. Each Covered Employer shall maintain payrolls for all Covered Employees and basic records relating thereto and shall preserve them for a period of three years. The records shall contain the name and address of each employee, the job title and classification, the number of hours worked each day, the gross wages, deductions made, actual wages paid, and copies of social security wage and withholding reports, and evidence of payment thereof and such other data as may be required by the Applicable Department from time to time.

(d) Applicable Department duties. The Applicable Department shall cause investigations to be made as may be necessary to determine whether there has been compliance with this Ordinance. The Applicable Department shall report the findings of all such investigations to the Community Advisory Board.

(e) Covered Employer to cooperate. The Covered Employer shall submit payroll records on request to the Applicable Department. The Covered Employer shall permit City representatives to observe work being performed upon the work site, to interview employees and to examine the books and records relating to the payrolls being investigated to determine payment of wages.

(f) City Assistance Reports. Each Applicable Department shall file a City Assistance Report with the City Manager and the Community Advisory Board by July 31 of each year. The report shall include, for each Assistance package or contract approved during the preceding fiscal year:

- (1) the name of the Applicable Department (awarding agency), the name of the specific program under which the Assistance was awarded, and the origin of funds for Assistance;
- (2) a description of the purpose or project for which the Assistance was awarded;
- (3) the name, address, and phone number of a local contact person for the Covered Employer;
- (4) the total cost to the City of Assistance provided to each Beneficiary, including both face-value of Assistance, as well as revenue not collected as a result of the Assistance.

2.121.070 Community Advisory Board.

(a) Purpose. The purpose of the Community Advisory Board shall be to review the effectiveness of this Ordinance at creating and retaining Living Wage jobs, to make recommendations to the City Manager regarding the granting of Waivers to Covered Employers, to review the implementation and enforcement of this ordinance, and to make recommendations from time to time in connection therewith.

(b) Composition. The Community Advisory Board shall be composed of nine members and shall include representatives of labor unions, community organizations and the business community. All members will be appointed by the City Manager.

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Members of the Board shall serve a three-year term. Whenever a vacancy shall occur the City Manager shall appoint a replacement within thirty days of said vacancy.

(c) Meetings. The Community Advisory Board shall meet quarterly and in special session as required. All meetings of the Board shall be open to the public and will allow for public testimony on the uses of the City Assistance generally, and on specific instances of Assistance or proposed Assistance as received or sought by individual enterprises.

(d) Conflict of Interest. No member of the Community Advisory Board shall participate in any proceeding concerning a Beneficiary, a Covered Employer or a Covered Employee, or applicant for waiver or exemption, if the member or any member of his or her immediate family has a direct or indirect financial interest in the outcome of said proceeding.

2.121.080 Enforcement.

(a) Enforcement powers. In order to enforce this Chapter, the Applicable Department may, with the approval and assistance of the City Solicitor, issue subpoenas, compel the attendance and testimony of witnesses and production of books, papers, records, and documents relating to payroll records necessary for hearing, investigations, and proceedings. In case of failure to comply with a subpoena, the City may apply to a court of appropriate jurisdiction for an order requiring the attendance and testimony of witnesses and the productions of books, papers, records, and documents. Said court, in the case of a refusal to comply with any such subpoena, after notice to the person subpoenaed, and upon finding that the attendance or testimony of such witnesses or the production of such books, papers, records, and documents, as the case may be, is relevant or necessary for such hearings, investigation, or proceedings, may issue an order requiring the attendance or testimony of such witnesses or the production of such documents and any violation of the court's order may be punishable by the court as contempt thereof.

(b) Complaint procedures. An employee who believes that he or she is a Covered Employee or an applicant for a position to be filled by a Covered Employee who believes that his or her employer is not complying with requirements of this Chapter applicable to the employer may file a complaint with the Applicable Department or with the Community Advisory Board. Complaints of alleged violations may also be filed by concerned citizens or by the City Council. Complaints of alleged violations may be made at any time, but in no event more than three years after the last date of alleged violation, and shall be investigated promptly by the Applicable Department. Statements written or oral, made by an employee, shall be treated as confidential and shall not be disclosed to the Covered Employer without the consent of the employee.

(c) Investigations and hearings. The Applicable Department shall investigate the complaint, and may, in conjunction with the City Solicitor, and in accordance with the powers herein granted, require the production by the employer of such evidence as required to determine compliance. Prior to ordering any penalty the applicable Department shall give notice to the employer and conduct a hearing. If at any time during these proceedings, the employer voluntarily makes restitution of the wages not paid to the employee making the complaint and to any similarly situated employees, by paying all back wages owed plus interest at the average prior year Massachusetts passbook savings bank rate, or otherwise remedies the violation alleged if the violation involves matters other than wages, then the Applicable Department shall thereafter dismiss the complaint against the employer.

(d) Remedies. In the event that the Applicable Department, after notice and hearing, determines that any Covered Employer has failed to pay the Living Wage rate or has otherwise violated the provisions of this Chapter, the Applicable Department may order any or all of the following penalties and relief:

(1) Fines up to the amount of \$300 for each Covered Employee for each day that the Covered Employer is in violation of this Ordinance, except if the violation was not knowing and willful, then the total fine shall not exceed the amount of back wages plus interest owed;

(2) Suspension of ongoing contract and subcontract payments;

(3) Ineligibility for future City Assistance for up to three years beginning when all penalties and restitution have been paid in full. In addition, all Covered Employers having any principal officers who were principal officers of a barred beneficiary shall be ineligible under this section; and

(4) Any other action deemed appropriate and within the discretion and authority of the city.

Remedies in this section shall also apply to the party or parties aiding and abetting in any violation of this chapter.

(e) Private right of action. Any Covered Employee, or any person who was formerly employed by a Beneficiary, may bring an action to enforce the provisions of this Chapter to recover back pay and benefits, attorneys fees and costs, by filing suit against a Beneficiary in any court of competent jurisdiction.

(f) Remedies herein non-exclusive. No remedy set forth in this Chapter is intended to be exclusive or a prerequisite for asserting a claim for relief to enforce the right granted under this Chapter in a court of law. This Chapter shall not be construed to limit an employee's right to bring a common law cause of action for wrongful termination.

Name of Bidder: _____

(g) Retaliation and discrimination barred. A Covered Employer shall not discharge, reduce the compensation or otherwise retaliate against any employee for making a complaint to the City, otherwise asserting his or her rights under this Chapter, participating in any of its proceedings or using any civil remedies to enforce his or her rights under the Chapter. The City shall investigate allegations of retaliation or discrimination and shall, if found to be true, after notice and a hearing, order appropriate relief as set out in paragraphs (c) and (d) herein

2.121.090 Severability.

In the event any provision of this ordinance shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provisions hereof.

2.121.100 Effective Date.

This law shall be effective sixty (60) after final passage.

The Living Wage Ordinance (2.121) provides, at 1.121.030(b) that the wage shall be upwardly adjusted each year no later than March 1st in proportion to the increase in the Annual Average Consumer Price Index for the prior calendar year for All Urban Consumers (CPI-U) in the Boston area, as published by the federal Bureau of Labor Statistics.

For calendar year 1999, the CPI-U increased by 2.5%. Therefore the new living wage, as of March 1, 2000 is \$10.25.

For calendar year 2000, the CPI-U increased by 4.3%. Therefore the new living wage, as of March 1, 2001 is \$ 10.68.

For calendar year 2001, the CPI-U increased by 4.3%. Therefore the new living wage, as of March 1, 2002 is \$11.11.

For calendar year 2002, the CPI-U increased by 2.6% . Therefore the new living wage, as of March 1, 2003 is \$11.37.

The City Council has voted to amend the section of the Living Wage Ordinance (1.121.030 (b) that provides the method for calculating cost of living increases each year. As a result of this change, the living wage as of March 30, 2003 is \$11.44.

For calendar year 2003, the CPI-U increased by 3.76%. Therefore the new living wage, as of March 1, 2004 is \$11.87.

For calendar year 2004, the CPI-U increased by 2.7%. Therefore the new living wage, as of March 1, 2005 is \$12.19.

For calendar year 2005, the CPI-U increased by 3.3%. Therefore the new living wage, as of March 1, 2006 is \$12.59.

For calendar year 2006 the CPI-U increased by 3.1 %. Therefore the new living wage, as of March 1, 2007 is \$12.98.

For calendar year 2007 the CPI-U increased by 1.9 %. Therefore the new living wage, as of March 1, 2008 is \$13.23.

For calendar year 2008 the CPI-U increased by 3.5 %. Therefore the new living wage, as of March 1, 2009 is \$13.69.

For calendar year 2009 the CPI-U decreased by .67 %. Therefore the new living wage, as of March 1, 2010 will remain at \$13.69.

Name of Bidder: _____

City Of Cambridge
Articles Of Agreement

Commodity:
File Number:

This agreement is made and entered into this _____, by and between the **City Of Cambridge** ("the CITY"), a municipal corporation organized and existing under the laws of the Commonwealth of Massachusetts, and _____ operating under the laws of the State of _____ ("the Contractor").

Address:

Telephone, Fax, E-mail:

Article I. Definition. "This Contract" as used herein shall mean these Articles of Agreement and "the bid documents," which include, but are not limited to, the instructions to bidders, the Contractor's bid or proposal, the specifications, the general conditions, the requirements, the applicable addenda, and all documents and forms submitted with the Contractor's bid or proposal that were accepted by the City.

Article II. Duration. The Contractor shall commence the performance of this contract for the period beginning on _____ and ending on _____.

Article III. Terms. The Contractor agrees to provide the services all in accordance with the bid documents (bid opening date) or (proposal if appropriate).

Contract Value:

Article IV. Payment. The City agrees to pay to Contractor the sum set forth in the Contractor's bid or proposal. **Contractor shall invoice department to which it provided the service, not the Purchasing Department.**

Article V. Termination. The following shall constitute events of default under this Contract requiring immediate termination: a) any material misrepresentation made by the Contractor, b) any failure by the Contractor to perform any of its obligations under this Contract including, but not limited to, the following: (i) failure to commence performance of this Contract at the time specified in this Contract due to a reason or circumstance within the Contractor's reasonable control, (ii) failure to perform this Contract with sufficient personnel and equipment or with sufficient material to ensure the completion of this Contract within the specified time due to a reason or circumstance within the Contractor's reasonable control, (iii) failure to perform this Contract in a manner reasonably satisfactory to the City, (iv) failure to promptly re-perform within reasonable time the services that were rejected by the City as erroneous or unsatisfactory, (v) discontinuance of the services for reasons not beyond the Contractor's reasonable control, (vi) failure to comply with a material term of this Contract, including, but not limited to, the provision of insurance and nondiscrimination, and (vii) any other acts specifically and expressly stated in this Contract as constituting a basis for termination of this Contract.

Except as otherwise provided in the Articles of Agreement, the City may terminate the contract upon seven days notice.

Article VI. Damages. From any sums due to the Contractor for services, the City may keep for its own the whole or any part of the amount for expenses, losses and damages as directed by the Purchasing Agent, incurred by the City as a consequence of procuring services as a result of any failure, omission or mistake of the Contractor in providing services as provided in this Contract.

Article VII. Conflict. In the event there is a conflict between these Articles and the bid documents, the bid documents shall supersede these articles.

Article VIII. Governing laws and ordinances. This Contract is made subject to all the laws of the Commonwealth and the Ordinances of the City and if any such clause thereof does not conform to such laws or ordinances, such clause shall be void (the remainder of the Contract shall not be affected) and the laws or ordinances shall be operative in lieu thereof.

NAME OF BIDDER: _____

File No 4845- To Furnish and Deliver Qty of One (1) new Aerial Ladder Fire Apparatus for the City of Cambridge Fire Department – File No. 4845- Thursday, October 16, 2008 @ 11:00 AM

Article IX. Performance Security. Upon execution of this Contract by the Contractor, the Contractor shall furnish to the City security for the faithful performance of this Contract in the amount of 100% of the value of the bid in the form of a performance bond issued by a surety satisfactory to the city or in the form of a certified check.

Article X. Equal Opportunity. the Contractor in the performance of all work under this contract will not discriminate on the grounds of race, color, sex, age, religious creed, disability, national origin or ancestry, sexual orientation, marital status, family status, military status, or source of income in the employment practices or in the selection or retention of subcontractors, and in the procurement of materials and rental of equipment. The city may cancel, terminate or suspend the contract in whole or in part for any violation of this article.

Article XI. Assignability. the Contractor shall not assign, sell, subcontract or transfer any interest in this contract without prior written consent of the city.

In witness whereof the parties have hereto and to three other identical instruments set their hands the day and year first above written.

Approved as to Form:

The Contractor:

Donald A Drisdell
City Solicitor

Signature And Title

Robert W. Healy
City Manager

Cynthia H. Griffin
Purchasing Agent

NAME OF BIDDER: _____