

RFP36-07

City of Concord, New Hampshire

Purchasing Division

FIRE DEPARTMENT CUSTOM PUMPER

Prepared for, and in coordination with the

**FIRE DEPARTMENT
EMERGENCY SERVICES DIVISION**

Contract Documents
Proposal Documents
Specifications

Firm: _____

PROPOSAL DUE DATE/TIME: MARCH 1, 2007 NOT LATER THAN 2:00 PM

MANDATORY PRE-PROPOSAL MEETING: FEBRUARY 13, 2007 AT 1:00 PM



City of Concord, New Hampshire

PURCHASING DIVISION

41 GREEN STREET

CONCORD, NH 03301

(603) 225-8530 FAX: (603)230-3656

www.onconcord.com/purchasing

REQUEST FOR PROPOSALS

The City of Concord, New Hampshire wishes to engage the services of a qualified private firm to provide and deliver one (1) new 1500 GPM custom pumper for the Emergency Services Division of the Concord Fire Department. The firm submitting a proposal must be the authorized dealer in the State of New Hampshire for the manufacturer of the custom pumper.

An overview and detailed specifications are provided later in this Request for Proposals (RFP).

Proposals must be received **not later than 2:00 PM on March 1, 2007** from interested firms, to be eligible for consideration by the City. Each proposal shall be submitted to the **City of Concord, Finance Department, Purchasing Division, City Hall, 41 Green Street, Concord, NH 03301** in a sealed envelope which is clearly marked,

"RFP36-07 FIRE DEPARTMENT CUSTOM PUMPER"

Requests may be issued only by the Purchasing Agent, or his designee, to authorized firms, and are not transferable unless authorized by the Purchasing Agent.

A **mandatory** pre-proposal meeting, for the purpose of reviewing the specifications of this RFP, will be conducted on **February 13, 2007 at 1:00 PM** at the Concord Fire Department Headquarters, 24 Horseshoe Pond Lane, Concord, NH 03301.

Complete copies of RFP36-07 are available from the Purchasing Division, City of Concord, City Hall, 41 Green Street, Concord, NH 03301 (603-225-8530) or on-line at www.onconcord.com/purchasing.

Each proposal shall be accompanied by a certified check, cash, check drawn by a New Hampshire bank or proposal bond for and subject to the conditions provided in this RFP. The amount of such proposal deposit shall be **five percent (5%)** of the total proposal and made payable to the City of Concord, New Hampshire.

The successful proposer will be required to furnish a performance bond and a separate payment bond in the amount of **one hundred percent (100%)** of the proposal submitted.

All proposals received will be considered confidential and not available for public review until after a vendor has been selected.

The City reserves the right to reject any or all proposals or any part thereof, to waive any formality, informality, information and/or errors in the proposal, to accept the proposal considered to be in the best interest of the City, or to purchase on the open market if it is considered in the best interest of the City to do so.

Failure to submit all information as detailed on the Proposal Submission Checklist on Pages 50 and/or submission of an unbalanced proposal are sufficient reasons to declare a proposal as non-responsive and subject to disqualification.

All proposals are advertised in the Concord Monitor and periodically in other various publications, on Concord Cable Channel 17, and are posted publicly at (1) City of Concord, City Hall, 1st Floor, 41 Green Street, Concord, NH 03301 and (2) on the City of Concord web site at www.onconcord.com/purchasing.

CITY OF CONCORD, NEW HAMPSHIRE

Douglas B. Ross, Purchasing Agent
Date: _____

Proposal Due Date/Time: March 1, 2007 not later than 2:00 PM

Mandatory Pre-Proposal Meeting: February 13, 2007 at 1:00 PM

GENERAL TERMS AND CONDITIONS

PREPARATION OF PROPOSALS:

Proposals shall be submitted on the forms provided and must be signed by the Proposer or the Proposer's authorized representative. The person signing the proposal shall initial any corrections to entries made on the proposal forms.

Proposers must quote on all items appearing on the proposal forms unless specific directions in the advertisement, on the proposal form or in the special provisions allowed for partial Proposals. Failure to quote on all items may disqualify the proposal. When proposals on all items are not required, Proposers shall insert the words "no proposal" where appropriate.

Alternative proposals will be considered, unless otherwise stated, only if the alternate is: (1) Described completely, including, but not limited to, sample(s), if requested, and specifications sufficient so that a comparison to the request can be made; and (2) Submitted as part of the base proposal response, i.e. it shall not be a separate document which could be construed as a second proposal.

Unless otherwise stated in the Request for Proposal (RFP), the Proposer agrees that the proposal shall be deemed open for acceptance for Sixty (60) calendar days subsequent to submittal to the City of Concord.

Any questions or inquiries must be submitted in writing, and must be received by the Purchasing Agent (**603-230-3656: Fax; dross@onconcord.com**) no later than seven (7) calendar days before the Request for Proposals due date to be considered. Any changes to the Request for Proposals will be provided to all Proposers of record.

The Proposer shall not divulge, discuss or compare this proposal with other Proposers and shall not collude with any other Proposer or parties to a proposal whatever. (Note: No premiums, rebates or gratuities permitted either with, prior to, or after any delivery materials is allowed. Any such violation will result in the cancellation and/or return of materials, as applicable, and the removal from Proposal List).

The name of manufacturer, trade name, or catalog number mentioned in this Request for Proposal is for the purpose of designating a minimum standard of quality and type. Such references are not intended to be restrictive, although specified color, type of material and specified measurements may be mandatory. Proposals will be considered for any brand which meets or exceeds the quality of the specifications listed. On all such proposals, the Proposer shall specify the product they are proposing and shall supply sufficient data to enable a comparison to be made with the particular brand or manufacturer specified. Failure to submit the above may be sufficient grounds for rejection of the proposal.

When samples are required, they must be submitted free of cost and will be returned unless otherwise specified.

Items left for demonstration purposes shall be delivered and installed free of charge and shall be removed by the vendor at no cost to the City. Said demonstration units shall not be offered to the City as new equipment unless mutually agreed to.

The vendor may be required to supply proof of compliance with proposal specifications. When requested, the vendor must immediately supply the City with certified test results or certificates of compliance. Where none are available, the City may require independent laboratory testing. All costs for such testing, certified test results or certificates of compliance, shall be the responsibility of the vendor.

Unless otherwise stated, all prices are F.O.B.: Destination. No charge for packing or drayage will be allowed. All deliveries are to be pre-paid, C.O.D.'s will not be accepted.

Each shipment shall be identified by Purchase Order and/or RFP number, commodity description and packing list. All items, packages, etc. shall have clearly identifiable external markings or tags for ease of identification.

SUBMISSION OF PROPOSALS:

Proposals must be submitted as directed in the Request for Proposals, and on the forms provided unless otherwise specified. Proposals must be typewritten or printed in ink. Proposals must be mailed or delivered in person. Proposals that are faxed or e-mailed will not be accepted.

WITHDRAWAL OF PROPOSALS:

Proposals may be withdrawn prior to the opening date and time upon written, faxed, e-mailed or telegraphic request of the Proposer to the Purchasing Agent. Negligence on the part of the Proposer in preparing this proposal shall not constitute a right to withdraw a proposal subsequent to the proposal opening. Proposals may not be withdrawn for a period of sixty (60) days after the date of opening indicated herein or as modified by addenda.

PROPOSERS INTERESTED IN MORE THAN ONE PROPOSAL:

If more than one proposal is offered by any one party, or by any person or persons representing a party, all such proposals shall be rejected. A party who has quoted prices to a Proposer is not thereby disqualified from quoting prices to other Proposers or from submitting a direct proposal in its own behalf.

RECEIPT AND OPENING OF PROPOSALS:

Proposals shall be submitted prior to the time fixed in the Request for Proposals. Proposals received after the time so indicated shall be returned unopened.

PROPOSAL RESULTS:

All proposals received shall be considered confidential and not available for public review until after a vendor has been selected. All proposals shall be subject to negotiations prior to the award of a contract.

NO TELEPHONE REQUESTS FOR RESULTS WILL BE ACCEPTED OR GIVEN.

TIE PROPOSALS:

When identical Proposals are received, with respect to price, delivery, financial resources, experience, ability to perform and quality, award may be made by a toss of coin, with the following exception: When a tie proposal exists between a local (a business establishment within City limits) Proposer and an out-of-town Proposer, preference will be given to the local Proposer. Any Proposer having a local agent who is a bona fide resident of the City is considered a local Proposer. If a tie proposal exists between two local Proposers, or two out-of-town Proposers, the decision may be made by a toss of coin.

LIMITATIONS:

This Request for Proposal (RFP) does not commit the City to award a contract, to pay any costs incurred in the preparation of a response to this request, or to procure or contract for services or supplies. The City reserves the right to accept or reject any or all proposals received as a result of this request, or to cancel in part or in its entirety this RFP, if it is in the best interest of the City to do so.

PROPOSAL EVALUATION:

In an attempt to determine if a proposer is responsible, the City, at its discretion, may obtain technical support from outside sources. Each proposer will agree to fully cooperate with the personnel of such organizations.

AWARD OF CONTRACT:

Any contract entered into by the City shall be in response to the proposal and subsequent discussions. It is the policy of the City that contracts be awarded, among other considerations, only to responsive and responsible Proposers. In order to qualify as responsive and responsible, a prospective vendor must meet the following standards as they relate to this request:

- Have adequate financial resources for performance or have the ability to obtain such resources as required during performance;
- Have the necessary experience, organization, technical and professional qualifications, skills and facilities;
- Be able to comply with the proposed or required time of completion or performance schedule;
- Have a demonstrated satisfactory record of performance.
- Adhere to the specifications of this proposal and provide all documentation required of this proposal

The contract will be awarded to a responsive and responsible Proposer based on the qualifications and experience of the Proposer, the quality of the equipment/product/service to be provided, the Proposer's ability to provide ongoing technical support, the Proposer's timeframe

for providing the equipment/product/service and the Proposer's fee/price proposal. **See the proposal evaluation sheet for more detail concerning evaluation criteria.** The Proposer selected will be the most qualified and not necessarily the Proposer with the lowest price.

The City of Concord reserves the right to waive any formality, informality, information and/or errors in the proposals submitted and the right to reject any or all proposals at its discretion and to accept the proposal which will be in the best interest of the City; or to purchase on the open market if it is considered in the best interest of the City to do so. In case of error in the extension of prices, the unit prices proposed shall govern and the unit prices in writing shall take precedence over the unit prices in figures. Also, in the event of a discrepancy between the total of the items and the lump sum total stated, the total of the items shall govern.

MODIFICATIONS AFTER AWARD:

The City reserves the right to incorporate minor modifications, which may be required by it. The Vendor will incorporate these changes at no additional cost, but may protest such action and not be bound by any such request of it can prove that the timing or extent of the modifications implies a major effort on its part.

CANCELLATION OF AWARD:

The City reserves the right to cancel the award without liability to the Proposer at any time before a contract has been fully executed by all parties and is approved by the City.

CONTRACT:

Any Contract between the City and the Vendor shall consist of (1) the Request for Proposal (RFP) and any amendments thereto and (2) the Vendor's proposal in response to the RFP. In the event of a conflict in language between documents (1) and (2) referenced above, the provisions and requirements set forth and referenced in the RFP shall govern. However, the City reserves the right to clarify any contractual relationship in writing with the concurrence of the Vendor, and such written clarification shall govern in case of conflict with the applicable requirements contained in the RFP and the Vendor's proposal. In all other matters, not affected by written clarification, if any, the RFP shall govern. The submitter is cautioned that this proposal shall be subject to acceptance without further clarification.

EXECUTION OF AGREEMENT:

The successful Proposer shall sign (execute) the necessary agreements for entering into the contract and return such signed agreements to the City, along with the fully executed surety bonds, within ten (10) calendar days from the date mailed or otherwise delivered to the successful proposer.

APPROVAL OF AGREEMENT:

Upon receipt of the agreement that has been fully executed by the successful Proposer, the owner shall complete the execution of the agreement in accordance with local laws or ordinances and return the fully executed agreement to the Contractor. Delivery of the fully executed agreement, along with a Notice to Proceed and a City purchase order, to the Contractor shall constitute the City's approval to be bound by the successful Proposer's proposal and the terms and conditions of the agreement.

FAILURE TO EXECUTE AGREEMENT:

Failure of the successful Proposer to execute the agreement within ten (10) calendar days from the date mailed or otherwise delivered to the successful Proposer shall be just cause for cancellation of the award.

DISQUALIFICATION:

Awards will not be made to any person, firm or company in default of a contract with the City, the State of New Hampshire or the Federal Government.

INSURANCE:

The successful proposer shall procure and maintain insurance, in the amounts and coverage detailed by the proposal documents, acceptable to the City, at the proposer's sole expense, with reputable and financially responsible insurance companies, insuring against any and all public liability, including injuries or death to persons and damage to property, arising out of or related to the goods or proposer's performance hereunder and shall furnish to the City certificates of such insurance and renewals thereof signed by the issuing company or agent upon the City's request. Such certificates shall name the City of Concord as an additional insured. Such policies shall provide for cancellation only subsequent to 30 days prior written notice to the City.

The City's examination of, or failure to request or demand, any evidence of insurance hereunder, shall not constitute a waiver of any requirement and the existence of any insurance shall not limit the proposer's obligation under any provision hereof.

Except to the extent of comparable insurance acceptable to, or express waiver by the City, the proposer shall, or shall cause any carrier engaged by the proposer, to insure all shipments of goods for full value.

If the agreement with the proposer involves the performance of work by the proposer's employees at property owned or leased by the City, the proposer shall furnish such additional insurance as the City may request in respect thereof, but in any event and without such request, workers' compensation insurance and unemployment compensation insurance as required by laws of the State of New Hampshire and public and automotive liability and property damage insurance. In no event shall such employees of the proposer be deemed to be the employees of, or under the direction or control of the City for any purpose whatsoever.

WORKER'S COMPENSATION:

All proposers and subcontractors at every tier under the proposer will conform with the requirements of RSA 281 Title XXIII, Section 281-A:2 with close attention to sections VI(a), VI(c) and VII(a) as well as Section 281-A:4.

DISAGREEMENTS AND DISPUTES:

All disagreements and disputes, if any, arising under the terms of any agreement, either by law, in equity, or by arbitration, shall be resolved pursuant to the laws and procedures of the State of New Hampshire, in which state any agreement shall be deemed to have been executed. No action at law, or equity, or by arbitration shall be commenced to resolve any disagreements or disputes under the terms of any agreement, in any jurisdiction whatsoever other than the State of New Hampshire and Merrimack County.

TERMINATION OF CONTACT FOR CAUSE:

If, through any cause, the Vendor shall fail to furnish in a timely and proper manner its obligations under any Contract, or if the Vendor shall violate any of the covenants, agreements or stipulations of any Contract, the City shall thereupon have the right to terminate any Contract by giving written notice to the Vendor of such termination. In such event, all finished or unfinished work, services, plans, data programs and reports prepared by the Vendor under this Contract shall become the City's property and the Vendor shall be entitled to receive just and equitable compensation for any satisfactory work completed.

Notwithstanding the above, the Vendor shall not be relieved of liability to the City for damages sustained by the City by virtue of any breach of any contract, and the City may withhold any payments until such time as the exact amount of damages due the City is determined.

TERMINATION FOR THE CONVENIENCE OF THE CITY:

The City may terminate any contract at any time by giving written notice to the Vendor of such termination and specifying the effective date thereof, at least fifteen (15) days before the effective date of such termination.

In that event, all finished or unfinished work, services, documents and materials shall become the City's property. If any Contract is terminated by the City as provided herein, the Vendor will be paid an amount which bears the same ratio to the total compensation as the services covered by any contract, less payments of compensation previously made.

SAFETY DATA SHEET (Right to Know):

Any vendor who receives an order resulting from this Request for Proposal agrees to submit a Material Safety Data Sheet (MSDS) for each toxic or hazardous substance or mixture containing such substance, pursuant to RSA 277-A when deliveries are made. The vendor agrees to deliver

all containers properly labeled pursuant to RSA 277-A. Failure to submit an MSDS and/or label on each container will place the vendor in noncompliance with that purchase order. Failure to submit MSDS and/or labels on each container may result in civil or criminal penalties, including proposal debarment and action to prevent the vendor from selling said substances, or mixtures containing said substances within the City. All vendors furnishing substances or mixtures subject to RSA 277-A are cautioned to obtain and read the law referenced above.

PATENT PROTECTION:

The successful proposer agrees to indemnify and defend the City of Concord from all claims and losses resulting from alleged and actual patent infringements and further agree to hold the City of Concord harmless from any liability arising under RSA 382-A, 2-312 (3). (Uniform Commercial Code).

OWNERSHIP OF REPORTS:

All data, materials, plans, reports and documentation prepared pursuant to any contract between the City of Concord and the successful proposer shall belong exclusively to the City.

ASSIGNMENT PROVISION:

The successful proposer hereby agrees that it will assign to the City of Concord all cause of action that it may acquire under the anti-trust laws of New Hampshire and the United States as the result of conspiracies, combination of contracts in restraint of trade which affect the price of goods or services obtained by the City under this contract if so requested by the City of Concord.

DELIVERY:

Deliveries are to be made only to the department or division indicated on the order and in accordance with accepted commercial practices, without extra charge for packing or containers.

Deliveries, which do not conform to the specifications or are not in good condition upon receipt shall be replaced promptly. Deliveries shall be inside the building, and accepted weekdays between the hours of 8:30 AM and 3:30 PM unless otherwise stated. Delivery arrangements must be made with requesting department prior to delivery.

INVOICING:

Unless otherwise stated, invoices are to be submitted in duplicate upon delivery or pick-up to the user department or division. The invoice must include an itemization of all items, supplies, repairs or labor furnished, including unit list price, net price, extensions and total amount due. In addition, on projects that will involve partial/progress payments and/or retainage a summary statement in the following format will be provided with each invoice:

Original Contract Amount	\$\$\$\$\$\$\$\$
Plus/minus Change Orders	\$\$\$\$\$\$\$\$
Total Adjusted Contract Amount	\$\$\$\$\$\$\$\$

Work Completed to Date	\$\$\$\$\$\$\$\$
Less Previous Invoices	\$\$\$\$\$\$\$\$
Less Retainage (if any)	\$\$\$\$\$\$\$\$
Equals: Balance due this Invoice	\$\$\$\$\$\$\$\$
Balance Remaining on Contract	\$\$\$\$\$\$\$\$

All invoices shall reference a valid City of Concord Purchase Order Number.

PAYMENT:

Unless otherwise stated, payment will be made within thirty (30) days of the completion of delivery of all items or service, in acceptable condition, to the City and receipt of invoice, whichever is later.

ANY CASH DISCOUNT SHALL BE READ TO MEAN CITY PAYDAY, CPD.

TAX:

The City is exempt from all sales and Federal excise taxes. Our exemption number is 02-6000177. Please bill less these taxes.

FUNDING OUT:

The City of Concord’s obligations to pay any amount due under a contract are contingent upon availability and continuation of funds for the purpose. The City may terminate the contract, for non-appropriation of funds, and all payment obligations of the City cease on the date of termination.

ASSIGNMENT OR SUB-CONTRACTING:

None of the work or services covered by the contract shall be assigned in full or in part, or sub-contracted without the prior approval of the City.

EXCLUSIVITY:

This contract will be for the goods/services described above; however, this agreement should not be considered exclusive. As deemed necessary, the City reserves the right to obtain these goods/services from any other vendor.

PRICING:

Unless otherwise specified all prices listed are firm for the term of the contract. All prices should include all labor, material and transportation costs, and any discounts offered. No fuel surcharges shall be allowed at any time.

AUDIT:

For a period of at least three (3) years after completion of any contract, it is the responsibility of the vendor to make available at the vendor's place of business, upon demand, all price lists, documents, financial records and other records pertaining to purchases made and /or work performed under contract for the purposes of audit by the City of Concord.

INSPECTION & EVALUATION:

The City of Concord reserves the right to inspect the vendor's facilities during operating hours to determine that the level of inventory is adequate for the City's needs. The conditions and operations of the facility shall be taken into consideration in making the award of this contract.

FUGITIVE DUST AND NOISE ORDINANCES

All work shall be conducted in conformance with Title I, General Code

1. Chapter 11, Public Nuisances, Article 11-3 Fugitive Dust: and
2. Chapter 13, Public Health, Article 13-6 Noise

GUARANTEES & WARRANTY:

All parts and labor related to agreements must be guaranteed and include a warranty. If any work is unable to be guaranteed, the contractor must inform the City, in writing, prior to the delivery of an item or any work being performed. Non-guaranteed work must be offered at a discount rate from the proposal prices. **Inspection, testing and final determination of non-warranty work shall be performed at no cost to the City.**

FORCE MAJEURE:

Neither party shall be liable for any inability to perform its' obligations under any subsequent agreement due to war, riot, insurrection, civil commotion, fire, flood, earthquake, storm or other act of God.

NOTIFICATION:

Notification of the parties shall be considered to have been constructively received when it is mailed via the United State Postal Service or delivered in hand to the parties as stated in the contract.

SEVERABILITY:

If any of the GENERAL TERMS AND CONDITIONS is held to be invalid or unenforceable, it will be construed to have the broadest interpretation which would make it valid and enforceable

under such holding. Invalidity or the inability to enforce a term or condition will not affect any of the other GENERAL TERMS AND CONDITIONS.

PROVISION REQUIRED BY LAW DEEM INSERTED

Each and every provision and clause required by law to be inserted in this Request for Proposals and any subsequent Contract shall be deemed to be inserted herein and this Request for Proposals and Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Request for Proposals and/or Contract shall forthwith be physically amended to make such insertion or correction.

ENERGY STAR® COMPLIANCE

The vendor shall provide products that earn the Energy Star® and meet the Energy Star® specifications for energy efficiency. The vendor is encouraged to visit www.energystar.gov for complete product specifications and updated lists of qualifying products.

NON-RECRUITMENT OF PERSONNEL

During the term of the Agreement and for twenty-four (24) months thereafter, the City and the successful vendor party agree not to solicit or hire current or former employees without the other's prior written consent

DISADVANTAGED BUSINESS ENTERPRISES

The City hereby notifies all Vendors that it will affirmatively insure that in any contract entered into pursuant to this Request for Proposals, disadvantaged business enterprises will be afforded full opportunity to submit proposals in response to this request and will not be discriminated against on the grounds of race, color, national origin, religion, sex, age or disability in consideration for an award.

NON-DISCRIMINATION

Contracts for work resulting from this Request for Proposals shall obligate the Vendor/Contractor and the Subcontractors not to discriminate in employment practices on the grounds of race, color, national origin, religion, sex, age or disability. Statements as to non-discriminatory practices may be requested from the successful Vendor(s)/Contractor(s).

DEFINITIONS:

Proposal shall also mean quotation, bid, offer, qualification/experience statement, and services.

Proposers shall also mean vendors, offerors, proposers, contractors or any person or firm responding to a Request for Proposals.

GOVERNING LAW:

The Laws of the State of New Hampshire shall govern all contracts entered into by the City of Concord. Any disputes shall be resolved within the venue of the State of New Hampshire and Merrimack County.

FAILURE TO ACKNOWLEDGE THIS PROPOSAL MAY RESULT IN WITHDRAWAL FROM THE PROPOSAL LIST FOR THIS COMMODITY OR SERVICE.

FAILURE TO COMPLY WITH THESE REQUIREMENTS COULD RESULT IN THE CANCELLATION OF AN ORDER OR CONTRACT.

RFP36-07, FIRE DEPARTMENT CUSTOM PUMPER

SPECIFICATIONS

INTENT OF SPECIFICATIONS

It is the intent of these specifications to cover the furnishing and delivery to the purchaser of a complete vehicle equipped as hereinafter specified. With a view to obtaining the best results and the most acceptable apparatus, these specifications cover minimum requirements as to the type of construction, finish, and tests to which the apparatus must conform, together with certain details as to equipment and appliances to be furnished. Minor details of construction and materials, where not otherwise specified, are left to the discretion of the contractor, who shall be solely responsible for the design and construction. The apparatus shall conform to the requirements of NFPA 1901 (2003) edition - Standard for Automotive Fire Apparatus- to the extent as specified herein.

DELIVERY

The apparatus shall be delivered under its own power to assure adequate break-in while under warranty. It shall first be transported to the local service facility, where final inspection and preparation will be performed, including mounting of related equipment. The apparatus will then be delivered to the Purchaser's location.

POST-DELIVERY TRAINING

On a mutually agreeable date after delivery, a qualified delivery engineer shall familiarize those persons designated by the Fire Chief with the basic operation of the apparatus and its components. Training must be delivered by a qualified instructor familiar with all the mechanical and hydraulic controls and operations of the apparatus. Training program shall include both classroom and practical evolutions including; hydrant, drafting and tank to pump operations with maximum flow capabilities achieved. Limited programs or "drop-off" type deliveries are unacceptable.

CONSTRUCTION TIME

The proposer shall indicate, as part of his/her proposal, the number of calendar days required to deliver the apparatus to the City of Concord after contract signing and receipt of order.

WARRANTY

Each proposer shall submit a copy of their standard Warranty in compliance with State and Federal regulations. It shall provide coverage for a minimum of a one (1) year period. The proposer must also submit a lifetime corrosion perforation warranty, a ten (10) year pro-rated paint warranty, a lifetime frame warranty, a ten (10) year stainless steel plumbing warranty, a lifetime water tank warranty, a ten (10) year cab and body structural warranty, a 3-5 year brake system and axle warranty, a five (5) year/unlimited mileage transmission warranty, a twelve (12) month battery warranty and a ten (10) year Akron valve warranty. Warranty forms must be submitted with the proposal package. Altered forms will not be accepted. **All warranties shall commence upon inspection and acceptance by the City.**

EXCEPTIONS

Substitutions, deviations, clarifications, or exceptions to the technical specifications must be listed on the **SPECIFICATIONS EXCEPTION FORM** (additional pages may be added as needed), and must be accompanied by adequate supportive data to allow the Fire Chief to determine acceptability. Proposals that are found to have deviations without listing them will be rejected. Components identified by brand names are available to all prospective proposers and exceptions shall not be allowed on these items.

PUMP CERTIFICATION

The apparatus will be tested and certified by a third party testing company as detailed in the NFPA Standard for Pumper Fire Apparatus.

CAB CRASH WORTHINESS REQUIREMENT

The apparatus cab shall meet and/or exceed relevant load and impact tests required for compliance certification with ECE Regulation No. 29, Addendum 28, Revision 1, and “Uniform Provisions Concerning the Approval of Vehicles with Regard to the Protection of the Occupants of the Cab of a Commercial Vehicle.

A copy of a certificate or letter verifying minimum compliance to Regulation No. 29 by an independent licensed professional engineer shall be provided upon request.

GENERAL CONSTRUCTION

The general construction of the apparatus shall give due consideration to distribution of the load to be sustained, and to the general character of the service to which the vehicle will be subjected when placed in service. Ample safety factors must be provided.

The apparatus body must be of the all aluminum modular type, and shall be completely assembled prior to installation on the chassis.

Special consideration will be given to the following points: accessibility of various components requiring periodic maintenance, ease of operation, and symmetrical proportions.

The chassis, cab, and body shall all be built by the same company, thus avoiding engineering concerns and divided responsibilities when dealing with warranty adjustments.

apparatus dimensions

Overall Length: <30’

Overall Height: <10’

Wheelbase: <185”

FRAME ASSEMBLY

FRAME & CROSSMEMBER CONSTRUCTION

The frame shall be steel, shall have sufficient cross-bracing and size to prevent frame deflection out of parallel from cantilevered loads.

The chassis frame shall consist of two (2) C-channel frame rails that are connected with heavy-duty fabricated crossmembers. The chassis frame rails and crossmembers shall be bolted

together using high-strength threaded fasteners for durability and ease of repair. The Fire Pump shall not be counted as a cross member.

FRAME/CROSSMEMBER WARRANTY

The apparatus manufacturer shall supply a full lifetime frame warranty, including crossmembers, against defects in materials or workmanship. Warranties that provide a lifetime warranty for only the frame rails, but not the crossmembers, are not acceptable.

TOW HOOKS

Two (2) heavy-duty steel front tow hooks shall be securely bolted to the front chassis frame rail extensions to allow towing (not lifting) of the apparatus without damage.

TOW EYES

Two (2) heavy-duty tow eyes shall be mounted below the body at the rear of the vehicle to allow towing (not lifting) of the apparatus without damage.

FUEL TANK

One (1) fuel tank with a useable capacity of 65 gallons of fuel shall be provided. The tank shall be of an all-welded, aluminized-steel construction with anti-surge baffles and shall conform to all applicable Federal Highway Administration (FHWA) 393.65 and 393.67 standards and designed to allow for tank removal from below the chassis.

The tank shall be plumbed with top-draw and top-return fuel lines in order to protect the lines from road debris. A vent shall be provided at the top of the tank. The vent shall be connected to the filler neck to prevent splash-back during fueling operations. A ½" NPT drain plug shall be provided at the bottom of the tank.

A mechanical fuel pump shall be provided and sized by the engine manufacturer as part of the engine. Fuel fill inlet should be located on the left (drivers) side of the apparatus. It shall be concealed behind a door marked "DIESEL FUEL ONLY." A spring loaded device with brass roller shall be provided to hold the door in the open or closed position.

CHASSIS SPEED

The chassis shall be geared for 65 miles per hour top speed.

WHEELS

The front and rear tires shall be mounted on steel wheels. All rims shall be Accuride, ten (10) hole, hub-piloted wheels. All rims shall conform to the Tire and Rim Association requirements. The package shall consist of chrome plastic lug nut covers.

TIRES - MICHELIN FRONT & REAR

The front two (2) Michelin 315/80R 22.5 tires shall be tubeless type 20 PR radial tires with XZA-1 highway tread. The tires shall have weight capacity and speed rating of 18,000 lb. @ 75 MPH.

The rear four (4) Michelin 11R22.5 tires shall be tubeless type 16 PR radial tires with XDN mud and snow tread. The tires shall have weight capacity and speed rating of 23,800 lb (dual) @ 65 MPH.

All tires shall conform to the Tire and Rim Association requirements.

CAB HEATING SYSTEM

Dual 25,000 BTU water heaters shall be supplied on the rear cab wall to heat the rear cab section. A single control switch shall be located on the cab instrument panel. Each heater shall have a cover over it to prevent damage.

CAB AIR CONDITIONING SYSTEM

An overhead air-conditioner system with radiator or roof mounted compressor condenser shall be supplied.

The unit shall be mounted to the cab interior headliner in a mid cab position, away from all seating positions. The unit shall provide ten (10) comfort discharge louvers, four (4) to the back area of the cab and six (6) to the front. Two (2) of the front louvers shall be damper-controlled to provide defogging capabilities of the front windshield as necessary.

The unit shall consist of a high output evaporator coil with two (2) high output dual blowers.

CONTROL PANEL

The control panel shall actuate the air-distribution system with air cylinders, which are to be separated from the brake system by an 85-90 PSI pressure protection valve. A three-speed blower switch shall control air speed. Airflow is to be approximately 730 cfm from the louvers and a BTU output of 48,000.

CONDENSER

The radiator-mounted condenser shall include a remote-mounted receiver/drier with moisture indicator. The heat rejection capacity shall be 50% greater than the evaporator capacities when measured in accordance with SAE J1487 (Rating Air Conditioner Evaporator Air Delivery and Cooling Capacities). The condenser shall be rated at 74,000 BTU, and shall not exceed 300 PSI discharge pressure. The compressor shall be a ten-cylinder swash-plate type Seltec model TM-31HD with a capacity of 19.1 cu. in. per revolution.

ENGINE COOLING SYSTEM

The cooling system shall have a tube-and-fin radiator with a minimum of 1,070 square inches of frontal area to ensure adequate cooling under all operating conditions. A sight glass shall be included for quick fluid level assessment. The radiator cap shall be a pressure-type cap with an integrated vent tube. The radiator shall be installed at the prescribed angle in order to achieve the maximum operational effectiveness. This shall be accomplished according to established work instructions and properly calibrated angle measurement equipment.

SILICONE HOSES

Radiator hoses shall be made from silicone reinforced with nylon fiber to provide added burst strength. Radiator hose clamps shall be constant-torque style. All radiator hoses shall be routed, loomed, and secured so as to provide maximum protection from chafing, crushing, or contact with other moving parts.

COOLANT

The cooling system shall be filled with a 50/50 mixture of water and antifreeze/coolant conditioner to provide freezing protection to minus 40 (- 40) degrees F for operation in severe winter temperatures.

CHARGE AIR COOLER SYSTEM

The system shall include a charge air cooler with a minimum of 700 square inches of frontal area to ensure adequate cooling of the turbocharged air for proper engine operation and maximum performance.

CHARGE AIR COOLER HOSES

Charge air cooler hoses shall be made from high-temperature, wire-reinforced silicone. Charge air cooler hose clamps shall be heavy-duty, constant-torque, T-bolt clamps.

FAN/SHROUD

The fan shall be of a diameter with sufficient blades for maximum airflow and dynamic balance. A fan shroud attached to the radiator shall be provided to prevent recirculation of engine compartment air around the fan in order to maximize the cooling airflow through the radiator. The shroud shall be specifically formed with curved surfaces which improves air flow and cooling.

CHASSIS AXLE PACKAGE

FRONT AXLE

The front axle shall be equipped with an ArvinMeritor FL-941 axle having a rated capacity sufficient for the apparatus being proposed. The front axle shall be of an I-beam construction and utilize grease-lubricated wheel bearings. The front suspension shall be furnished with two (2) heavy-duty, double-acting shock absorbers, one (1) each side. The front axle will be equipped with oil type seals with viewing windows.

CRAMP ANGLE

The front axle shall have a nominal cramp angle of 45 degrees. The front axle hubs shall be made from ductile iron and shall be designed for use with 10 hole hub-piloted wheels in order to improve wheel centering and extend tire life.

TAPERED LEAF SPRINGS

The front axle springs shall be parabolic tapered. Tapered leaf springs provide a 20% ride improvement over standard straight spring systems. Supporting documentation/data shall be provided upon request.

POWER STEERING GEAR

The steering assembly shall be rated to statically steer a maximum front axle load equal to that found on this vehicle. Relief stops shall be provided to reduce system pressure upon full wheel cut. The steering system shall be able to operate mechanically should the hydraulic system fail.

REAR AXLE AND BRAKE SYSTEM

The rear axle shall be equipped with an ArvinMeritor RS-25-160 single rear axle. The axle shall be equipped with oil-lubricated wheel bearings with ArvinMeritor oil seals. The rear axle hubs shall be made from ductile iron and shall be designed for use with 10 hole hub-piloted wheels to improve wheel centering and extend tire life.

The rear axle suspension shall be a pair of variable-rate leaf springs with auxiliary leaf springs and bronze bushings. The variable-rate leaf springs with auxiliary leaf springs ensure that the vehicle rides and handles smoothly under both loaded and unloaded conditions.

The front and rear axles shall have ArvinMeritor Dura-Master air disc brakes with automatic slack adjusters. A swing away caliper assembly shall be provided for each brake to facilitate maintenance. The rotors shall utilize a vented disc to help dissipate heat. All actuating parts shall be sealed from dirt and moisture.

The vehicle shall be equipped with air-operated brakes and an anti-lock braking system (ABS). The brake system shall meet or exceed the design and performance requirements of the current Federal Motor Vehicle Safety Standard (FMVSS)-121, and the test requirements of the current NFPA 1901 Standard.

A dual-treadle brake valve shall correctly proportion the braking power between the front and rear systems. All air lines shall be constructed of abrasion-resistant nylon tubing routed in a manner to protect them from damage. The air lines shall be color-coded for ease of identification and simplification of maintenance. Brass fittings shall be provided on all air line connections to prevent corrosion and reduce maintenance.

The air system shall be provided with a rapid pressure build-up feature, designed to meet current NFPA 1901 requirements, to allow the vehicle to begin its emergency response as quickly as possible. A 1/4" brass quick-release air inlet with a male connection shall be located inside the driver door on the left side of the cab. The inlet shall allow a shoreline air hose to be connected to the vehicle, discharging air directly into the wet tank. A pressure-protection valve shall be installed to prevent use of the air horns or other air-operated devices should the air system pressure drop below 85 PSI. This feature is designed to prevent inadvertent actuation of the emergency/parking brakes while the vehicle is in motion.

Two (2) air pressure needle gauges, one (1) each for front and rear air pressure, with a warning light and buzzer shall be installed at the driver's instrument panel.

AIR TANK RESERVOIRS

The braking system shall carry a sufficient volume of air to comply with FMVSS-121. The chassis air system shall be equipped with a Bendix-Westinghouse AD-9 air dryer. Heated, automatic moisture ejector valves shall be installed on all tanks.

EMERGENCY/PARKING BRAKES

A Bendix-Westinghouse PP-1 parking brake control valve shall be supplied. A Bendix-Westinghouse SR-1 valve, in conjunction with a double check valve system, shall provide automatic emergency brake application when the air brake system pressure falls below 40 PSI in order to safely bring the vehicle to a stop in case of an accidental loss of braking system air pressure.

ABS ANTI-LOCK BRAKING SYSTEM

A four-channel Wabco ABS shall be provided to improve vehicle stability and control by reducing wheel lock-up during braking. This braking system shall be fitted to both front and rear axles. All electrical connections shall be environmentally-sealed for protection against water, weather, and vibration.

The system shall be configured to work in conjunction with all auxiliary engine, exhaust, or driveline brakes to prevent wheel lock-up. To improve maintenance troubleshooting, provisions in the system for an optional diagnostic tester shall be provided. The system shall test itself each time the vehicle is started, and a dash-mounted light shall go out once the vehicle is moving above 4 mph.

A warning light at the driver's instrument panel shall signal a malfunction.

WHEEL ALIGNMENT

The custom chassis frame shall have a wheel alignment in order to achieve maximum vehicle road performance and to promote long tire life. The alignment shall conform to the manufacturer's internal specifications. All wheel lug nuts and axle U-bolt retainer nuts shall be tightened to the proper torque at the time of alignment. The wheel alignment documentation shall be made available at delivery.

REAR WALL WINDOWS

A pair of fixed glass windows shall be provided on the rear wall of the cab. The windows shall be sized the same height of the rear crew cab door windows and provide increased rearward visibility.

CAB WHEEL WELL LINERS

The cab shall have two (2) front wheel well liners designed to minimize splash-up from tires into the engine compartment area. They shall be constructed out of plastic or rubber.

CAB CONSTRUCTION

The vehicle shall have an all-welded aluminum, fully enclosed tilt cab designed exclusively for the fire service to ensure long life. It shall incorporate a welded substructure of high-strength aluminum alloy extrusions that surrounds and protects the perimeter of the occupant compartment for increased safety.

The cab shall be constructed from 3/16" (0.188") 3003 H14 aluminum-alloy plate roof, floor, and outer skins welded to a high-strength 6061-T6 aluminum alloy extruded sub frame, wall supports and roof bows. This combination of high-strength, welded aluminum inner structure surrounded on all sides by load-bearing, welded aluminum outer skins provides a cab that is strong, lightweight, corrosion-resistant, and durable.

The sub frame structure shall be constructed from high-strength 6061-T6 aluminum extrusions welded together to provide a structural base for the cab.

CAB EXTERIOR

The exterior of the cab shall be 96" wide x 140" long to allow sufficient room in the occupant compartment for four (4) personnel. The back-of-cab to front axle length shall be a minimum of 72".

Rear section of the cab roof, over the crew area, shall be raised 14" above the driver's and officer's section. The raised portion shall start just to the rear of the front axle center line. The leading forward face of the raised roof shall slope backward 45 degrees to provide a streamlined look. The roof of the cab shall be covered with highly polished aluminum diamond plating. The perimeter of the tread plate, at the junction with the cab roof, shall be sealed. The rear cab doors

shall be extended into the raised portion to provide maximum headroom for entering and exiting the crew cab. The top of the crew doors shall increase by 14" and have an additional piece of fixed glass at the top of the door, above and separated from the sliding glass.

Front axle federate trim shall be brushed aluminum for appearance and corrosion resistance. Two (2) black mud flaps shall be installed on the rear of the cab front wheelwells.

CAB MOUNTS AND CAB TILT SYSTEM

The cab shall be independently mounted from the body and chassis to isolate the cab structure from stresses caused by chassis twisting and body movements. Mounting points shall consist of two (2) forward-pivoting points, one (1) on each side; two (2) intermediate rubber load-bearing cushions located midway along the length of the cab, one (1) each side; and two (2) combination rubber shock mounts and cab latches located at the rear of the cab, one (1) on each side. Pivot points shall be lubricating type with access provided for maintenance

An electric-over-hydraulic cab tilt system shall be provided to provide easy access to the engine. It shall consist of two (2) large-diameter, telescoping, hydraulic lift cylinders, one (1) on each side of the cab, with a frame-mounted electric-over-hydraulic pump for cylinder actuation.

Safety flow fuses (velocity fuses) shall be provided in the hydraulic lift cylinders to prevent the raised cab from suddenly dropping in case of a burst hydraulic hose or other hydraulic failure. The safety flow fuses shall operate when the cab is in any position, not just the fully raised position.

The hydraulic pump shall have a manual override system as a backup in the event of an electrical failure. Lift controls shall be located in a compartment to the rear of the cab on the right side of the apparatus. A parking brake interlock shall be provided as a safety feature to prevent the cab from being tilted unless the parking brake is set.

The entire cab shall be tilted through a 45 degree arc to allow for easy maintenance of the engine, transmission, and engine components. A positive-engagement safety latch shall be provided to lock the cab in the full tilt position to provide additional safety for personnel working under the raised cab.

In the lowered position, the cab shall be locked down by two (2) automatic, spring-loaded cab latches at the rear of the cab. A "cab ajar" indicator light shall be provided on the instrument panel to warn the driver when the cab is not completely locked into the lowered position.

CAB INTERIOR

The engine cover between the driver and the officer shall be a low-rise contoured design to provide sufficient seating and elbow room for the driver and the officer. Two (2) adjustable 8" defroster fan(s) shall be provided near the center portion of the windshield with a two (2) speed control on the mounting pedestal.

The rear portion of the engine cover shall be provided with a lift-up section to provide easy access for checking transmission fluid, power steering fluid, and engine oil without raising the cab. The engine cover insulation shall consist of internal heat-resistant Mylar-backed 1" foam. Externally, a damage-resistant, maintenance-free cover, constructed from a composite material with heat-resistant backing, shall be provided to reduce engine noise and heat from entering the cab interior. The cover shall be the same color as other interior padding.

All cab floors shall be covered with a black rubber floor mat that provides an aggressive slip-resistant surface in accordance with current NFPA 1901.

All exposed interior metal surfaces shall be pretreated using a corrosion prevention system and shall be coated with a textured OTO paint finish.

The interior of the cab shall be insulated to ensure the sound level for the cab interior is within the limits stated in NFPA 1901.

The vehicle shall use a seven-position tilt and telescopic steering column to accommodate various size operators.

A full-width overhead console shall be mounted to the cab ceiling for placement of siren and radio heads. Two (2) Lexan Sun Visors shall be provided, one (1) each side for the driver and officer position.

The front cab steps shall be a minimum of 8" deep x 24" wide. The rear cab steps shall be a minimum 12" deep x 23" wide. The rear step shall incorporate an intermediate step for easy access to the cab. All stepping surfaces meet current NFPA requirements.

Grip handles shall be provided on the interior of each front door below the door window to ensure proper handholds while entering and exiting the cab. Additional grip handles shall be provided on the left and right side windshield post for additional handholds.

Cab door assist handrails shall allow a positive grip with a gloved hand.

A map box shall be provided between the driver and officer. It shall be installed on top of the engine hood or the air tunnel. Box shall have 6 slots spaced on 3.00" horizontal centers. Each slot shall be 14" wide by 10" deep. They shall slant at a 30 degree angle towards the rear of the truck. The box shall have a cover with a turn slot locking device. Final design and installation of the map box shall be approved by the Department

INTERIOR LIGHTING

Interior cab lighting shall include four (4) individually switched lights in the ceiling, two (2) in the front and two (2) in the rear. Each light shall have two (2) light heads, with one light providing a white light and the second light providing a red light for nighttime use.

The cab ceiling lights and the step lights shall be wired through the "door ajar" switch to provide interior lighting when the battery power is on and any cab door is opened.

An engine compartment light with a switch shall be installed to illuminate the engine compartment

CAB AND CHASSIS LIGHTING

The apparatus shall have sufficient lights to properly illuminate step areas. Ground area lights shall be provided for each cab door. Areas under the driver and crew area exits shall be activated automatically when the exit doors are opened. Ground area lights shall be switched from the cab dash with the work light switch.

CAB INSTRUMENTS AND CONTROLS

Two (2) pantograph-style windshield wipers with two (2) separate electric motors shall be provided for positive operation. The wipers shall be a wet-arm type with a one (1) gallon washer fluid reservoir, an intermittent-wipe function, and an integral wash circuit.

Cab instruments and controls shall be located on the cab instrument panel in the dashboard on the driver's side where they are clearly visible and easily reachable. The following gauges and controls shall be provided:

Master battery switch to activate 12 volt chassis system

Start/stop switch for the vehicle engine

Speedometer/Odometer

Electronic tachometer with integral engine hour meter

Engine oil pressure gauge with warning light and alarm

Engine water temperature gauge with warning light and buzzer

Transmission temperature gauge

Dual air pressure gauge with warning light and buzzer to indicate if the front or rear pressure drops below 70 PSI

Park brake indicator light to indicate when park brake is engaged

ABS warning light to indicate if a malfunction has occurred

Fuel gauge with a low fuel indicator light

Voltmeter with warning light to monitor battery power

Heater and defroster controls with illumination

Marker light/headlight control switch with dimmer switch and high beam indicator

Self-canceling turn signal control with indicators

Windshield wiper switch with intermittent control and washer control

Master warning light switch for one touch activation on pre-set light functions

Air filter restriction indicator

Pump shift control with green "pump in gear" and "o.k. to pump" indicator lights

Automatic transmission shift console

Electric horn button at center of steering wheel

Cab ajar warning light on the message center enunciator

Door ajar indicator light on the center section of the overhead console

Instrument controls and switches shall be identified as to their function by backlit wording, or indirect panel lighting adjacent to the controls.

Fast Idle Switch

CAB CRASH WORTHINESS REQUIREMENT

The apparatus cab shall meet and/or exceed relevant load and impact tests required for compliance certification with ECE Regulation No. 29, Addendum 28, Revision 1, and "Uniform Provisions Concerning the Approval of Vehicles with Regard to the Protection of the Occupants of the Cab of a Commercial Vehicle.

A copy of a certificate or letter verifying minimum compliance to Regulation No. 29 by an independent licensed professional engineer shall be provided upon request.

SIREN - FEDERAL EQ2B

An electronic Federal EQ2B siren shall be provided. The siren shall be located on the driver side of the bumper extension.

The siren shall be controlled by two (2) foot-mounted control switches, one (1) driver, and one (1) officer.

SEAT - OFFICER

One (1) Seats, Inc 911 fixed suspension seat shall be supplied for the officer position. Seat shall include SCBA seat back.

The seat shall have a Type-2 pelvic and upper torso restraint-style seat belt made of a high visibility red material in accordance with NFPA. An extension shall be provided so the male end of the seat belt can be easily grasped and the female end can be easily located while sitting in a normal position.

A compartment shall be provided below the seat and be approximately 20.25" x 22.75" x 11" high.

SEAT - DRIVER

One (1) Seats, Inc 911 air suspension seat shall be supplied for the driver position.

The seat shall have a Type-2 pelvic and upper torso restraint-style seat belt made of a high visibility red material in accordance with NFPA. An extension shall be provided so the male end of the seat belt can be easily grasped and the female end can be easily located while sitting in a normal position.

A compartment shall be provided below the seat and be approximately 20" x 12" x 5" high.

REAR BENCH SEAT

A two (2) person bench style seat bottom with continues single cushion shall be mounted on the rear wall of the cab. Seat backs shall be Inc. 911 Universal SCBA. Each side of the seat risers shall be angled, providing sufficient legroom while entering and exiting the cab.

The seats shall have a Type-2 pelvic and upper torso restraint-style seat belt made of a high visibility red material in accordance with NFPA. 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.

ELECTRICAL SYSTEM

MULTIPLEX SYSTEM

All cab electrical equipment installed by the apparatus manufacturer shall conform to current automotive electrical system standard, the latest Federal DOT standards, and the requirements of applicable NFPA Apparatus Standard. Twisted pair shielded wire shall be provided within the electrical system for noise reduction. The wiring harness shall conform to SAE J-1128 with GXL temperature properties.

The wiring shall be color-coded and functionally-labeled every 3 inches on the outer surface of the insulation to allow for ease of identification and maintenance.

The chassis electrical system shall have a centrally located electrical distribution area in the cab. An access cover shall be provided for maintenance access to the electrical distribution area. All electrical components shall be located such that standard operations shall not interfere with or disrupt vehicle operation. An automatic thermal-reset master circuit breaker compatible with the alternator size shall be provided. Automatic thermal-reset circuit breakers shall be used to ensure reliability of the system. Automatic reset circuit breakers shall be used for directional lights, cab heater, battery power, ignition, and other circuits.

A 6 place constantly hot, and 6 place ignition switched fuse panel and ground for customer-installed radios and chargers shall be provided at the electrical distribution area. Radio suppression shall be sufficient to allow radio equipment operation without interference.

The entire electrical system shall have a failsafe redundant system. In the unlikely event of a catastrophic failure of the multiplex system, this redundant system shall permit the vehicle to be operated including full pumping operations.

MAIN CONTROL SYSTEM

The apparatus shall have an in-vehicle networking system, also known as multiplexing, to provide real time or current state diagnostic capability and reduce troubleshooting or down time when compared to a standard point to point wiring scheme.

The system shall have the capability of delivering multiple signals via a CAN bus, utilizing specifications set forth by SAE J1939.

The electrical system shall be pre-wired for modem accessibility to allow service personnel to easily plug in a modem and phone line. The modem accessibility shall be designed to allow remote diagnostics, troubleshooting, or program additions. The system shall also include the ability to be diagnosed by a hand held PDA (i.e. Palm Pilot).

A diagnostic display shall be provided in the cab for easy identification of fault and condition messages. The display shall provide the operator detailed messages such as which compartment door is ajar. The display shall allow for complete diagnostic capability without the use of additional hardware or software.

VEHICLE DATA COMPUTER

A Vehicle Data Computer (VDC) shall be supplied within the electrical system to process and distribute engine and transmission Electronic Control Module (ECM) information to chassis system gauges, the enunciator center, and related pump panel gauges.

MULTIPLEX DATA LOGGER

The data logger shall record historical faults within the multiplex system and be accessible through the diagnostic software.

12 VOLT OUTLET

Four 12 volt/20 amp power outlets shall be provided on the officer's side of the cab interior.

CAB ELECTRICAL DEMANDS

Vendors engineers shall be aware of and provide adequate electrical capability for the system to provide power to the following cab mounted items; thermal imaging camera charger, 4 Vulcan box type hand-light chargers, 4 Stream- lighter chargers, Nextel phone charger, 4 gas Haz-Mat monitor charger, Automatic external defibrillator charger, recreational vehicle type refrigerator for medical supplies, Knox - key holder, laptop computer with power inverter.

Vendor shall NOT supply any of these items or chargers only provide for their electrical demands.

MEDICAL CABINETS

The cab shall have two (2) medical storage cabinets provided, one (1) each side over the wheel well. The cabinets shall have both internal and external access.

Each medical storage cabinet shall be constructed of 1/8" smooth aluminum plate and be approximately 44" high x 28" wide x 22" deep. Each cabinet shall have an OTO gray finish to match the interior cab color. Each cabinet access door shall be a "Robinson" Roll-Up type with a satin finish.

Each cabinet to have their own outlet mounted on the top interior, cab front, wall.

ADJUSTABLE SHELVES

Each medical cabinet shall include two (2) adjustable shelves with extruded adjustable shelf tracking.

SEATING CAPACITY TAG

A permanent plate in the driver's compartment shall be installed, specifying that seating for four (4) shall be provided.

HEIGHT AND WEIGHT TAG

A permanent plate in the driver's compartment shall be installed, specifying vehicle height and weight.

CAB DOOR AND LATCH PACKAGE

Four (4) side opening cab doors shall be provided. The front doors shall open approximately 75 degrees, and the rear doors shall open approximately 80 degrees.

The doors shall be securely fastened to the doorframes with full-length, stainless steel piano hinges, with 3/8" (0.375") diameter pins for proper door alignment, long life, and corrosion resistance. For effective sealing, an extruded rubber gasket shall be provided around the entire perimeter of all doors.

Stainless steel paddle-style door latches shall be provided on the interiors of the doors and the exterior door handles shall be "L" style for easy opening with a gloved hand.

The interior latches shall be designed and installed to protect against accidental or inadvertent opening as required by NFPA 1901.

SCUFF PANELS

Aluminum bright-finish tread plate scuff panels shall be provided on the lower interior portion of all doors to protect the door panels from wear.

DOOR WINDOWS

The front door windows shall provide a minimum viewing area of 530 sq. in. each. The rear door windows shall provide a minimum viewing area of 500 sq. in. each. All windows shall have 75% light transmittance automotive safety tint. Full roll-down windows shall be provided for the front and rear cab doors with worm gear drive cable operation for positive operation and long life.

DOOR REFLECTIVE MATERIAL

Reflective material of at least 96 square inches shall be mounted inside each (4) cab door in accordance with NFPA 1901 (2003) -

FRONT GRILLE

There shall be a stainless steel grille provided on the front of the cab to protect the cooling package from road debris.

ENGINE/TRANSMISSION

Engine – Electronic C-13 430 hp electronic Caterpillar turbo-charged diesel or equivalent

A 5 year/200,000 miles parts and labor warranty shall be provided as standard by Caterpillar.

A copy of the Engine Installation Review stating the engine installation meets Caterpillar recommendations shall be provided upon delivery. The engine installation shall not require the operation of any type of "power-down" feature to meet engine installation tests.

ENGINE BRAKE

An engine brake shall be installed to assist in slowing and controlling the vehicle as required by NFPA 1901 for vehicles with gross vehicle weight ratings (GVWR) of 36,000 lbs. or greater. An on-off control switch and a high-low selector switch shall be mounted in the cab. The brake shall become inoperative when the apparatus is in "pump mode".

ALLISON TRANSMISSION

The vehicle shall utilize an Allison Model 4000-EVS, electronic, 5 speed automatic transmission.

The transmission shall have a gross input torque rating equal to that of the engine selected.

The transmission shall contain two (2) engine-driven PTO openings located at the 4 and 8 o'clock positions. The automatic transmission shall be equipped with a power lock-up device. The transmission lock-up shall prevent down shifting of transmission when engine speed is decreased during pump operations, thereby maintaining a constant gear ratio. Transmission lock-up shall be automatically activated when placing pump in gear. Transmission lock-up shall be automatically deactivated when disengaging pump for normal road operation. A transmission cooler shall be installed integral to the radiator.

A 5 year/unlimited miles parts and labor warranty shall be provided as standard by Allison Transmission.

BATTERY SYSTEM

Group 31 heavy-duty batteries shall be provided. The batteries shall be 12 volt maintenance-free. Battery system shall be able to provide ample starting and reserve CCA capacity. Batteries

shall have a warranty of twelve (12) months that shall commence upon the date of delivery of the apparatus.

JUMPER STUDS

Battery jumper studs shall be provided below the officer side rear crew cab door. The jumper studs shall allow the batteries to be charged without raising the cab.

BATTERY CHARGER

A Kussmaul, 091-9-1000, 120 VAC combination redundant air compressor/battery charger shall be installed. The 12 volt compressor will automatically replace air lost due to leakage in the brake system without any interference to engine mounted air compressor functions. The air compressor shall have a Kussmaul Model #091-9-086 auto drain between the compressor and the chassis air supply tank to remove moisture from the system. The battery charging system shall be installed and connected directly to the shoreline to ensure the batteries remain fully charged while the vehicle is in the fire station. The system shall provide a visual signal if battery voltage drops below 11.5 volts. The system shall fully charge the batteries while allowing up to eight (8) amps of additional load for onboard systems.

A Kussmaul Model #091-55-20-120, Super auto eject shall be located driver's side, mounted on the cab.

ALTERNATOR

A Leece Neville NFPA 1901 rated alternator, of sufficient capacity, with internal rectifier, regulator, and AC taps shall be installed in accordance with the engine manufacturer's recommendations.

A spare alternator, exactly the same as installed on the vehicle, shall be provided to be kept in stock by the Department.

CAB MIRRORS / HEATED

Two (2) heated and remote controlled polished aluminum mirrors shall be installed. The mirrors shall incorporate a full face upper heated section and a lower convex section. The adjustment of the upper sections shall be through dash-mounted switches. The mirrors shall be mounted on the cab.

BUMPER - 10" CUSTOM

The chassis shall have a 10" stainless steel front bumper with a 20" front bumper extension with a center-mounted hose storage tray.

HOSE TRAY

A hose storage tray shall be center-mounted through the top of the gravel shield. The lid shall be held in the open position with an officer side mounted moon spring and in the closed position with a center-mounted quarter turn latch. Lid shall allow for front suction hose to be pre-connected.

ADDITIONAL HOSE TRAY

One (1) additional hose tray shall be provided in the extended bumper. Compartment shall be constructed and installed in the same manner as the other compartment. Compartment should be of adequate size to hold 150' of 1 3/4" synthetic fire hose. It shall be constructed using same

materials as center hose well. Drain holes and dri-deck shall be provided in the well. The lid shall be held and latched in the same manner as they center well and allow the hose to be pre-connected.

SPEAKER

One (1) Federal Signal model MS-100-01 DynaMax 100 watt speaker with grille shall be provided. The speaker shall be mounted in the driver side of the front bumper. The speaker shall produce a minimum sound output of 120 db (A) at 10 feet.

AIR HORNS

Dual air horns shall be provided connected to the chassis air system. The horns shall be mounted in the front bumper. A pressure protection valve shall be installed to prevent the air brake system from being depleted of air pressure. There shall be a foot switch located on the driver's and officer's side for controlling the air horns.

CAB PAINT - TWO-TONE

The cab and chassis shall be painted two-tone WHITE UPPER & RED LOWER with the highest quality finish for low maintenance, long life, and attractive appearance. The finish shall consist of a corrosion-prevention pre-treatment to all bare metal, a sealer/primer, two (2) coats of base color, and two (2) coats of clear finish.

The aluminum cab exterior shall have no mounted components prior to painting to assure full coverage of metal treatments and paint. Any vertically- or horizontally-hinged smooth-plate compartment door shall be painted separately to assure proper paint coverage on the doorjamb and door edges.

Corrosion Prevention - all raw materials shall be pre-treated with a corrosion prevention system to provide superior corrosion resistance and excellent adhesion of the top coat.

Sealer/Primer LV - acrylic urethane sealer/primer shall be applied to guarantee excellent gloss hold-out, chip resistance, and a uniform base color.

High Solid LV (Top coat) - a lead-free, chromate-free, high-solid acrylic urethane top coat shall be applied, providing excellent coverage and durability. A minimum of two (2) coats shall be applied.

High Solid LV (Clear coat) - a high-solid LV clear coat shall be applied as the final step in order to ensure full gloss and color retention and durability. A minimum of two (2) coats shall be applied. Any location where aluminum is penetrated after painting for the purpose of mounting steps, handrails, doors, lights, or other specified components shall be treated at the point of penetration with a corrosion inhibiting pre-treatment. The pre-treatment shall be applied to the aluminum sheet metal or aluminum extrusions in all locations where the aluminum has been penetrated. All hardware used in mounting steps, handrails, doors, lights, or other specified components shall be individually treated with the corrosion inhibiting pre-treatment.

After the paint process is complete, the gloss rating of the unit shall be tested with a 20 degree gloss meter.

The chassis frame and undercarriage components shall be finished painted black.

CUSTOM CAB PAINT BREAK

The cab shall have a paint break provided to separate the two-tone painted cab colors.

BODY CONSTRUCTION

REAR BODY

The rear body shall be constructed entirely of aluminum extrusions and interlocking aluminum plates and includes enhanced extended side compartments, rear frame work, compartment top steps, a full height center rear compartment, and tailboard step.

The rear body and enhanced extended side compartments frame shall be 6063-T5 1.5" x 4" and 1.5" x 3" aluminum extrusions with a 3/16" (0.188") wall thickness and 3/16" (0.188") outside corner radius and 1/8" (0.125") aluminum tread plate. The rear extrusions shall be welded both internally and externally at each joint using an aluminum alloy welding wire.

BODY MAINFRAME

The body mainframe shall be entirely constructed of aluminum. The complete framework shall be constructed of 6061T6 and 6063T5 aluminum alloy extrusions welded together using 5356 aluminum alloy welding wire.

The frame sill extrusions shall be shaped to contour with the chassis frame rails and shall be protected from contact with the chassis frame rails by fiber-reinforced rubber strips to prevent wear and galvanic corrosion caused when dissimilar metals come in contact.

BODY MOUNTING SYSTEM

The main body shall be attached to the chassis frame rails with steel U-bolts. The rear of the body shall be spring mounted to allow for chassis flex. This body mounting system shall be used to allow easy removal of the body for major repair or disassembly.

BODY PAINT

Body shall be painted red in color. Preparation, quality, and finish materials to be the same as the cab paint.

DRIP RAIL

An anodized aluminum drip rail shall be mounted over each compartment opening to assist with water runoff.

SWITCH

Each door shall have a mechanical plunger switch wired to the door ajar indicator light in the cab and shall be interlocked with a visual and audible warning system.

COMPARTMENT DOORS

All compartment doors shall be Robinson shutter type roll up doors.

COMPARTMENTS

All compartments shall be designed and sized to take maximum advantage of allowable, build-able space on the vehicle.

DRIVER SIDE COMPARTMENTS

The three (3) driver side compartments shall be constructed from 3003 H14 1/8" (.125") smooth aluminum plate. The compartments shall be modular in design and shall not be a part of the body support structure.

There shall be one (1) compartment located ahead of the rear wheels. The compartment shall be approximately 30" wide x 65" high x 24" deep in the lower half and 12" deep in the upper section. This compartment shall contain a roll out tray.

There shall be one (1) compartment centered over the rear wheel. The compartment shall be approximately 52" wide x 33" high x 12" deep.

There shall be (1) compartment located behind the rear wheel. The compartment shall be approximately 46" wide x 65" high x 24" deep in the lower half and 12" deep in the upper section.

Each compartment seam shall be sealed using a permanent pliable silicone caulk. The walls of each compartment shall be machine-louvered for adequate ventilation. An externally-mounted compartment top shall be provided and constructed of a 1/8" (.125") aluminum tread plate. The compartment top shall be removable for easy access to main body wiring harness.

OFFICER SIDE COMPARTMENTS

The three (3) officer side compartments shall be constructed from 3003 H14 1/8" (.125") smooth aluminum plate. The compartments shall be modular in design and shall not be a part of the body support structure.

There shall be one (1) compartment located ahead of the rear wheels. The compartment shall be approximately 30" wide x 65" high x 24" deep.

There shall be one (1) compartment centered over the rear wheel. The compartment shall be approximately 52" wide x 33" high and 12" deep.

There shall be (1) compartment located behind the rear wheel. The compartment shall be approximately 46" wide x 65" high x 24" deep in the lower and 12 deep in the upper section. This compartment shall contain a roll out style tray.

Each compartment seam shall be sealed using a permanent pliable silicone caulk. The walls of each compartment shall be machine-louvered for adequate ventilation. An externally-mounted compartment top shall be provided and constructed of a 1/8" (.125") aluminum tread plate. The compartment top shall be removable for easy access to main body wiring harness.

REAR COMPARTMENT

The full height center rear compartment shall be constructed from 3003 H14 1/8" (.125") smooth aluminum plate. The compartment shall be modular in design and shall not be a part of the body support structure.

The compartment shall be approximately 44" wide x 56" high x 24" deep in the lower 28" high.

The compartment shall contain one (1) Hanna Model ECR 1616-17-18 power rewind cord reel for live electric cable. Location determined by Fire Department. Reel shall be 12 volt electric rewind and be equipped with an electrical collector ring with a minimum #10 gauge, 3 conductor

wiring. Capacity of the reel shall be a minimum of 200 feet 10/3 gauge electric cable. Plug shall be a NEMA L-5.

The compartment seams shall be sealed using a permanent pliable silicone caulk. Machined louvers shall be provided for adequate ventilation.

TAILBOARD STEP

A tailboard step shall be provided at the rear of the body. The maximum step height shall not exceed 24" in accordance with NFPA requirements. The tailboard step and enhanced extended compartment top steps shall be bolted on and shall be easily removable for replacement in the case of damage.

ZICO ELECTRIC LADDER RACK

A Zico Model LAS "Quick Lift" ladder lowering device shall be provided over the right hand forward compartment. Ladder system shall be controlled by a 30 Amp. Two-pole, double throw momentary switch located on the right side of the vehicle, properly labeled.

WATER TANK MOUNTING SYSTEM

The body design shall allow the booster tank to be completely removable without disturbing or dismounting the apparatus body structure. The water tank shall rest on top of a frame assembly covered with rubber shock pads and corner braces to support the tank. The booster tank mounting system shall utilize a floating design to reduce stress from road travel and vibration. To maintain low vehicle center of gravity the water tank bottom shall be mounted within 5" of the frame rail top.

STEPPING SURFACES

All designated exterior stepping surfaces shall be provided with an aggressive skid-resistant surface. The steps shall be in accordance with current NFPA requirements and shall include a multi-directional aggressive gripping surface incorporated into the diamond plate.

WATER/FOAM TANK

A 750 gallon water booster tank with (1) 30 gallon integral foam cell and (1) 20 gallon integral foam cell shall be supplied. ***The booster tank shall be shaped to provide the lowest possible hose bed height.*** The booster tank shall be completely removable without disturbing or dismounting the apparatus body structure.

The booster tank top, sides, and bottom shall be constructed of 1/2" (0.50") black UV-stabilized copolymer polypropylene. The booster tank shall have one (1) 12" x 12" water fill tower and two (2) - 10" x 10" foam fill towers. All fill towers shall have hinged lids and be labeled appropriately, Foam A or Foam B. The foam fill towers shall include a stainless steel butterfly latch to secure the lid in the closed position and a pressure/vacuum vent mounted in the lid. The fill towers shall be located in the forward driver side corner of the tank. The fill towers shall include a removable 1/4" (0.25") thick polypropylene screen.

The booster tank shall have a 3" tank-to-pump suction line with an anti-swirl plate, and one (1) for a 1.5" tank fill line. A 3" cleanout plug shall be provided at the bottom of the tank sump. A 4" diameter water tank overflow pipe shall be provided and routed to dump behind the rear axle. The overflow pipe dumping location shall not affect the rear axle tire traction when moving forward. The foam cells shall include a 1" drain line routed to drain below the tank.

The baffle design shall allow water flow in accordance with NFPA during tank filling or pump operations.

The booster tank shall undergo extensive testing prior to installation in the truck. The testing shall include an electronic spark and tank fill test after both the internal and external tank shell welds are completed.

A lifetime manufacture's limited warranty shall be included.

PUMP MODULE - SIDE MOUNT

An aluminum extruded side mount pump module with a forward area for (2) 1.75", one (1) 2 1/2" triple cross lay shall be provided and located forward of the body. The pump module shall be constructed entirely of aluminum extrusions and interlocking aluminum plates. The driver and officer side pump panels shall be constructed of brushed 14 gauge stainless steel.

The pump module design and mounting shall be separate from the body to allow the pump module and body to move independently of each other in order to reduce stress from frame twisting and vibration. The exterior surface of the pump module shall have a sanded finish.

RUNNING BOARDS

The pump module shall include a running board on each side of the pump module. The running boards shall be in accordance with NFPA in both step height and stepping surface. Each running board shall be bolted on to the pump module and be easily removable for replacement in the case of damage.

PRECONNECTS CROSS-LAY

The pump module design shall include an area for three cross lays with appropriate dividers. Two (2) shall have a capacity of 200' of 1.75" double jacket hose. The third shall have a capacity of 200' of 2.5" double jacket hose all single stack loads.

PUMP PANELS

The driver side pump panel shall be completely removable and the officer side pump panel shall be vertically-hinged along the forward extrusion for access to the pump compartment for maintenance.

HOSEBED ACCESS STEPS

Three (3) heavy-duty folding steps that meet NFPA 1901 requirements shall be supplied.

The steps shall be located two (2) on the driver side and one (1) on the officer side rear to provide access to the driver side hosebed area in accordance with NFPA.

HOSEBED COVER

A 1/8" thick aluminum tread plate hose bed cover shall be provided. It shall fully cover the entire top of the hose bed. The cover shall be of the two (2) door type with continuous piano hinged bolted to each hose bed side panel. Hinges shall be bolted to the covers. Each cover shall be reinforced with hat sections that have been welded to the underside of the cover for increased strength. Cover shall be supported by a modified hose bed partition that incorporates a channel at its top. Partition arrangement shall determined by the Department to allow maximum use of the hose bed. A 150# rated gas cylinder shall be installed on each cover to assist in lifting it. Cylinders shall also hold the covers in the raised position. A weighted and secured vinyl cover

shall be provided for the rear of the aluminum hose bed cover to prevent unintentional hose deployment.

HOSEBED DIVIDER - LONG

Five (5) long adjustable dividers shall be provided for the hosebed.

The hosebed dividers shall be constructed of 1/4" (0.25") smooth aluminum plate with an extruded aluminum base welded to the bottom. The rear upper end of the dividers shall have a 3" radius corner to protect personnel.

The dividers shall have a scotch-brite sanded finish and shall be deburred to prevent damage to the hose stored in the hose bed.

The dividers shall be designed, notched if needed, to allow easy access to the in-bed pre-connect with ability to adjust the dividers and still have access.

HOSEBED

The hosebed area shall be of sufficient size to carry the following quantity of hose, as viewed left to right:

200' of 1.75" double jacket hose.

200' of 1.75" double jacket hose.

1000' of 4" supply hose

600' of 2.5" double jacket hose.

200' of 1.75" double jacket hose.

200' of 1.75" double jacket hose.

The hose bed design shall incorporate adjustable tracks in the forward and rearward area of the hosebed for the installation of an adjustable divider(s). The adjustable tracks shall hold an adjustable divider(s) mounting nut straight, so only a Phillips head screwdriver is required to adjust a divider(s) from side to side.

The hosebed shall be easily removable to allow access to the booster tank below.

HARD SUCTION STORAGE RACKS

Two (2) hard suction hose storage racks shall be provided. Location to be determined.

The storage racks shall be constructed of anodized extruded aluminum and includes two (2) spring-mounted latch handles with stainless steel scuff plates. The scuff plates shall be located on the hosebed side to protect the painted surface.

TRIM PACKAGE APPARATUS BODY

The pump module and body shall have rub rail along the sides of the pump module and along the length of the body on each side and at the rear.

The rub rail depth shall allow marker and/or warning lights to be recessed inside for protection. The rub rail shall be mounted off the pump module and body with nylon spacers. Each rub rail shall have a reflective material insert for increased side and rear visibility.

SCBA BOTTLE STORAGE

Four (4) SCBA bottle storage compartments shall be provided. The compartments shall be 8" diameter by 25" deep and located two (2) each side in the body wheel well area. Each SCBA bottle shall be held in place by a hinged cast aluminum door with a positive latch and shall include an inner door seal for increased protection against the elements. The inner SCBA storage tube shall be made of high strength polyethylene to provide additional protection to the surface of the SCBA bottles.

REAR MUDDLAPS

Body mounted rear mud flaps shall be provided. The mud flaps shall be mounted directly to the body wheel well liner.

PUMP SYSTEM

The pump shall be a midship-mounted CSU-type Waterous or Hale 1500 GPM single stage centrifugal pump. The pump shall be mounted on the chassis frame rails and shall be split-drive driven.

Two (2) 6" diameter suction ports with 6" NST male threads and removable screens shall be provided. The ports shall be mounted one (1) on each side of the midship pump and shall extend through the side pump panels. Inlets shall come equipped with long-handle chrome caps.

A replaceable zinc anode element shall be installed directly on the pump intake piping and into the pump waterway.

A three (3) year pump warranty shall be provided

PUMP MANIFOLD

The discharge manifold system shall be provided to allow a direct flow of water to the discharge valves and provide the straightest alignment for the rod going from the valves to the control handles. This results in easier operation of the valves and prevents binding of the rod when the valve is being operated. The manifold and fabricated piping systems shall be constructed of a minimum of Schedule 10 stainless steel to reduce corrosion.

The apparatus manufacturer shall provide a full ten (10) year stainless steel plumbing components warranty. This warranty shall cover defects in materials or workmanship of apparatus manufacturer designed foam/water plumbing system stainless steel components for ten (10) years. A copy of the warranty document shall be provided with the proposal.

FOAM SYSTEM

FoamPro 2002 Foam Proportioning System for Class "A" & "B" Foam shall be installed. The foam system shall be capable of discharging both Class "A" and "B" foam.

A check valve shall be installed between the water pump and foam injection point to prevent foam agent from contaminating the water pump. Also a check valve shall be placed between the foam pump and injection point to prevent water flowing into the foam pump and foam tanks. System shall meet all FoamPro installation requirements.

All the plumbing and check valves shall be stainless steel or brass. Galvanized or black iron pipe will not be acceptable.

After the flow meter and the foam injection point the discharge shall be split to feed a minimum of four (4) different outlets as directed by the fire department. It is understood by the department that depending on the number of discharges utilized, nozzle flow rates selected and foam agent percentage, that all outlets may not be able to be used simultaneously at rated water or foam flows (see foam capacities stated above) nor can one outlet (of the four) discharge water and another foam, while the system is in operation.

A panel mounted FoamPro Model 3435-0079 dual tank manual selector valve shall be provided. A low tank sensor shall be provided for each foam tank. Total foam concentrate output shall be 2.1 gallons per minute. Proportioning rate shall be a push-button set by the pump operator from 0.1% to 3%, in 0.1% increments.

The Department must review and approve the final plan for the foam system including foam pump location and the discharges that are to be supplied with foam.

PRIMING SYSTEM

The electrically-driven priming pump shall be a positive displacement vane type. One (1) priming control, located at the pump operator's position, shall open the priming valve and start the priming motor. The priming pump shall be self lubricating type. Access shall be provided so that the operator can refill the lubricating reservoir.

PUMP SHIFT

The pump shift shall be pneumatically-controlled using a power shifting cylinder.

The power shift control valve shall be mounted in the cab and be labeled "PUMP SHIFT". The apparatus transmission shift control shall be furnished with a positive lever, preventing accidental shifting of the chassis transmission.

A green indicator light shall be located in the cab and be labeled "OK TO PUMP". This light shall be energized when the pump shift has been completed and the chassis automatic transmission has obtained converter lockup (4th gear lockup).

One (1) pump panel-mounted "GREEN" indicator light shall be positioned by the throttle control on the pump operator's panel. The light shall be energized when the pump shift has been completed, chassis automatic transmission has obtained converter lockup (4th gear lockup), and the chassis parking brake is set.

GEARBOX COOLER

A gearbox cooler shall be provided to maintain safe operating temperatures during prolonged pumping operations.

PUMP CERTIFICATION

The pump, when dry, shall be capable of taking suction and discharging water in accordance with current NFPA 1901 requirements. The pump shall be tested at the manufacturer's facility by an independent third-party testing service. The conditions of the pump test shall be as outlined in current NFPA 1901 requirements.

The tests shall include, at a minimum: the pump test, the pumping engine overload test, the pressure control system test, the priming device tests, the vacuum test, and the water tank to pump flow test as outlined in current NFPA 1901 requirements.

A piping hydrostatic test shall be performed as outlined in current NFPA 1901 requirements.

The pump shall deliver the percentage of rated capacities at pressures indicated below:

A test plate, installed at the pump panel, shall provide the rated discharges and pressures together with the speed of the engine as determined by the certification test and the no-load governed speed of the engine.

A Certificate of Inspection certifying performance of the pump and all related components shall be provided at time of delivery. Additional certification documents shall include, but not be limited to: Certificate of Hydrostatic Test, Electrical System Performance Test, Manufacturer's Record of Pumper Construction, and Certificate of Pump Performance from the pump manufacturer.

TEST PLUGS

Two (2) test plugs shall be pump panel-mounted for third party testing of vacuum and pressures of the pump.

AUXILIARY ENGINE COOLER

An engine cooler used to lower engine water temperature during prolonged pumping operations and controlled at the pump operator's panel shall be provided.

The engine cooler shall be installed in the engine coolant system in such a manner as to allow cool pump water to circulate around engine water, thus forming a true heat exchanger action. Cooler inlet and outlet shall be continuous, preventing intermixing of engine coolant and pump water.

PUMP DRAIN

A master drain valve shall be installed and operated from the pump operator's panel. The master pump drain assembly shall consist of a bronze master drain with a rubber disc seal and turning handle.

The manual Master Drain Valve shall have six (6) individually-sealed ports that allow quick and simultaneous draining of multiple intake and discharge lines. It shall be constructed of corrosion-resistant material and be capable of operating at a pressure of up to 300 PSI.

The master drain shall provide independent ports for low point drainage of the fire pump and auxiliary devices.

PUMP COOLER LINE

The pump shall have a 3/8" line installed from the pump discharge to the booster tank to cool the pump during sustained periods of pump operation when water is not being discharged. The pump cooler line shall be controlled from the pump operator's panel by a 3/8" snubber valve.

PUMP PANEL HEATER

A pump panel heater shall be provided to reduce chances of freeze-up of pump controls and drain lines.

Heater shall circulate engine water and be equipped with a blower. Design shall be approved by Department personnel prior to fit-up.

GOVERNOR

Electronic Pressure Governor System will not be accepted. NO EXCEPTIONS

ENGINE GAUGE PACKAGE

Class 1 ENFO III engine information status display shall be supplied at the pump operator's panel to monitor the vehicle's engine. The weatherproof package shall include the following:

Tachometer – to monitor engine revolutions per minute;

Oil pressure gauge - to monitor engine oil pressure;

Water temperature gauge – to monitor the engine water temperature;

Voltmeter - connected to the vehicle electrical system;

Engine Alarm system – two (2) warning lights, one (1) to indicate low oil pressure, and one (1) to indicate high water temperature, and a buzzer alarm for audible warning.

VALVES

All valves shall be an Akron 8800 HD series. The valve control lever shall be a chrome push-pull locking "T" handle located at the pump operator's panel and shall visibly indicate the position of the valve at all times. The control shall be clearly marked by a metal nameplate recessed into the control lever handle. To improve identification of the discharge color-coded tags shall be provided in accordance with current NFPA 1901 standards.

The discharge shall be supplied with a 3/4" bleeder valve assembly. The bleeder valve shall be installed to drain water from the gauge pressure line to prevent freezing of the line and to drain water and relieve pressure from the discharge plumbing. The drain shall be controlled with a quarter-turn valve on the pump panel.

The Akron valves shall come with a ten (10) year warranty supplied by the manufacturer.

GAUGES

One master pressure gauge and one master vacuum gauge with a six (6)" diameter white face and range of 30-0-400 shall be installed on the pump panel.

Individual line pressure gauges with a 2 ½ "diameter white face and a range of 0-300 shall be provided for all discharges. Gauges shall be in alignment with the discharge control levers.

The gauge shall be filled with a liquid solution to assure visual reading to within 1% accuracy. All gauges shall be protected from freezing to -35 degrees F.

There shall be a 1" differential in viewing area between analog master gauges and individual analog outlet gauges as outlined in NFPA 1901. All gauges shall meet ASME B40.1 and be resistant to vibration, pressure pulsation dampened, corrosion-resistant, shock-resistant, and condensation-resistant.

TANK FILL

One (1) manually-operated 1 ½ " valve shall be installed between the pump discharge and the booster tank in order to fill the tank.

FRONT JUMPLINE

One (1) 1.5" front bumper pre-connect outlet with a 2" manually-operated valve shall be supplied to the extended front bumper. The discharge shall be located extended through the bumper next to the hose well.

The pre-connect shall consist of a 2" heavy-duty hydraulic hose coming from the pump discharge manifold to a 2" FNPT x 1.5" MNST mechanical swivel hose connection to permit the use of the hose from either side of the apparatus.

An air blowout valve shall be installed between the chassis air reservoir and the front jump line. The control shall be installed on the pump operator's panel.

TRIPLE CROSSLAY HOSEBED

Each cross lay shall include one (1) brass swivel with either a 1.5" NST or 2.5" NST male hose connection to permit the use of the hose from either side of the apparatus. It should be covered with a piano hinged aluminum tread-plate cover with weighted end flaps or safety netting to prevent hose from deploying. The cover shall be hinged at the front of the hose-bed with a hold open device provided for repacking hose.

The cross lay piping shall consist of heavy-duty hoses from the pump discharge manifold to the swivels. Each cross lay discharge shall include a manually-operated valve. The valve control shall be located at the pump operator's panel.

2.5" DISCHARGES – DRIVER'S SIDE

Two (2) 2.5" discharge outlets with a manually-operated 2.5" valve and pressure gauge shall be provided and located on the left side of the apparatus at the pump panel. The valve controls shall be located at the pump operator's panel. The valve discharge shall extend out beyond the pump panel with a 30 degree downward discharge adapter to help prevent kinking of the discharge hose. The end of the discharge adapter shall have 2.5" NST male threads and shall be equipped with a chrome-plated rocker-lug cap with a retainer chain.

2.5" DISCHARGE - OFFICER SIDE

One (1) 3" discharge outlet with a manually-operated valve and pressure gauge shall be supplied to the officer's side pump panel.

The discharge shall extend out beyond the pump panel with a chrome-plated 30 degree downward angle with chrome-plated 2.5" NST threads to help prevent kinking of the discharge hose. The 30 degree droop shall be an integral part of the discharge valve and shall be equipped with a chrome-plated rocker-lug cap with a retainer chain.

3.5" DISCHARGE - OFFICER SIDE

One (1) 3.5" discharge outlet with a manual gear actuated valve and pressure gauge shall be provided at the officer's side pump panel.

The discharge shall extend out beyond the pump panel with a chrome-plated 30 degree downward angle with chrome-plated 4" Storz threads to help prevent kinking of the discharge hose. The 30 degree droop shall be an integral part of the discharge valve and shall be equipped with a chrome-plated rocker-lug cap with a retainer chain.

The valve shall be equipped with a device that limits the opening and closing speeds to comply with the current edition of NFPA 1901.

2.5" DISCHARGES - REAR

Two (2) 3" discharge outlets with manually-operated valves and pressure gauges shall be supplied to the rear of the apparatus, one each side.

Discharges shall be capable of supplying 400 GPM each.

2.5" DISCHARGE REAR PRE-CONNECT

One (1) 2.5" discharge outlet with a manually-operated valve and gauge shall be provided in the front of the hose-bed. Discharge outlet to be 2.5" NST chrome-plated.

DECK GUN DISCHARGE

One (1) 3" deck gun discharge with a manual gear actuated 3" self-locking valve shall be provided above the pump compartment. The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times. The valve shall be equipped with a device that limits the opening and closing speeds to comply with the current edition of NFPA 1901. A 3", 4 bolt ASA flange shall be installed on the end of the discharge riser.

FOAM TANK LEVEL GAUGES

High quality foam tank level gauges shall be provided and located at the pump operator's panel. The gauge shall provide a high visibility display of the foam tank foam level (LED preferred). Gauges shall be compatible with the Foam Pro System.

WATER TANK LEVEL GAUGE

A water tank level gauge shall be provided and located at the pump operator's panel to provide a high-visibility display of the water tank water level (LED device preferred).

TANK-TO-PUMP 3" INTAKE

One (1) manually-operated 3" valve shall be installed between the pump intake and the booster tank in order to pump water from the tank. The booster tank shall be connected to the intake side of the pump with 3" piping and one (1) quarter turn valve. The tank to pump line will run straight (no elbows) from the pump into the front face of the water tank. The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times. The tank to pump line shall have a bronze check valve and the capacity to flow a minimum of 600 GPM

2.5" INTAKE – DRIVER'S SIDE

One (1) 2.5" inlet with a manually operated 2.5" self-locking valve shall be provided on the left side of the apparatus at the pump panel. The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times.

The end of the suction adapter shall have 2.5" NST female swivel threads and shall be equipped with a chrome-plated rocker-lug plug with a retainer chain.

FRONT SUCTION INTAKE

A front pump inlet equipped with a six (6)" NST chrome plated, long handle cap shall be provided. Stainless steel 5" pipe with large sweep type welded elbows and connections made with Victaulic couplings shall be used. Piping shall be routed under the right side of the cab and over the front axle. It shall be mounted to the chassis frame with support brackets.

Drains shall be provided at any low spots to help eliminate freeze-up.

Operation of this inlet shall be by a manual or electric operated valve with the controls at the pump panel.

110 VOLT PACKAGE

There shall be one (1) Honda EM5000SX, 5000 watt maximum (4500 watt continuous) gasoline engine driven generator located for transport as directed by CFD.

The generator shall be equipped with: 11 HP, 4-cycle, air cooled, 337cc engine, Automatic low oil shutdown, Automatic throttle control, returns engine to idle after load is off, 4-1/2 Gallon fuel tank mounted on the generator, And Electric start (12v)

The generator shall be mounted on the top of the vehicle in an enclosure to protect it from the elements while still providing adequate ventilation to provide for safe operations.

The generator shall be wired to the vehicle batteries for electric remote starting. A remote start/stop switch and amber running light for the generator shall be provided on the cab dash.

Two (2) 20 AMP (NEMA #L5-20) Twist Lock Receptacles with weatherproof covers shall be provided on the body. Location shall be determined by the Department.

Two (2) 750 watt quartz lights with internal poles shall be mounted on the forward area of a side mount pump module. The internal pole shall allow the light head to rotate 360 degrees and to be extended upward for better scene illumination. The light position and height shall be held in position by a locking twist knob on the mounting base. These are to be wired for use with generator power and switches provided in the cab.

One (1) eight-place breaker box without the master breaker shall be located in the left front pump operators compartment. The breaker box shall include the two (2) breakers for the 20 AMP receptacles, two (2) 750 watt quartz lights, and one (1) cord reel with three (3) open breaker positions remaining. The rear of the breaker box shall be coated with a material to prevent any dissimilar metal corrosion problems. The box shall be spaced off the wall to further assist in corrosion prevention.

One (1) Hannay Model ECR 1616-17-18 power rewind cord reel for live electric cable. Location shall be determined by Fire Department. Reel shall be 12 volt electric rewind and be equipped with an electrical collector ring with a minimum #10 gauge, 3 conductor wiring. Capacity of the reel shall be a minimum of 200 feet 10/3 gauge electric cable.

A four (4) outlet junction box with internal pilot light and carry handle shall be provided at the end of the reel. Plugs should be wired for Nema L5-20 receptacles and have spring action weather tight covers.

TAILLIGHTS

Whelen CAST 3 600 series LED style taillights shall be provided

The lights shall be located on each side of the rear compartment face.

The light colors shall be red for the stop/tail, amber for turn light and clear for the back-up light.

BACK-UP ALARM

An electronic back-up alarm shall be supplied to provide an audible alarm that meets the Type D requirements of SAE J994 and in accordance with NFPA.

The alarm shall provide 97 db (A) and be wired into the chassis back-up lights to signal when the vehicle is in reverse.

BACK-UP CAMERA

An electronic back-up camera shall be installed complete with LCD monitor, audio and night vision capabilities.

ECCO # ECCK 5620 is acceptable. The exact location of the camera unit shall be determined by the Department. Camera shall be enclosed on the sides and top with aluminum plate to protected from an accidental damage.

PUMP PANEL LIGHTING PACKAGE

Pump panel lighting shall be provided for a side mount pump module in accordance with NFPA.

The driver side pump control panel shall have Truck Lite Super Strip Light LED 2' lights mounted under an aluminum light shield that is directly mounted above the driver side pump panel.

Similar lighting shall be provided for the officers' side of the pump panel.

The lights shall be activated by the work light switch in the cab when the park brake is set.

LICENSE PLATE LIGHT

One (1) license plate light shall be installed at the rear of the vehicle on the left side.

UNDERBODY GROUND LIGHTS

Four (4) Truck-Lite Model - 44 LED ground lights with clear/white lenses shall be provided to illuminate the ground area below the body in accordance with NFPA requirements.

The ground lights shall be activated with the work lights switch in the cab after the park brake is set.

STEP LIGHTING PACKAGE

There shall be lights provided to illuminate the rear tailboard step area in accordance with NFPA requirements. The lights shall be Truck-Lite, model 44 LED.

Each light shall have a clear/white lens and chrome mounting ring. The lights shall be activated with the work lights switch in the cab when the park brake is set.

COMPARTMENT LIGHT PACKAGE

Truck-Lite Model 44 LED lighting shall be provided to illuminate the all body compartments in accordance with NFPA.

All compartment lighting shall be wired to a master switch in the cab and each compartment's lights shall be activated through the door-ajar indicator switch.

WORK LIGHT PACKAGE

Two (2) lights Unity model AGS4413, 12 volt, 35 watt with a floodlight bulb or equivalent shall be located up high on the trailing edge of the rear body/beavertail, one on each side of hose bed. These lights shall be switched together; with switch installed, labeled as to function (“Rear Scene”), in emergency lighting cluster.

All lights shall be wired to activate with the work light switch in the cab or individually by an on/off switch located on the light head.

BODY ELECTRICAL SYSTEM

BODY WIRING

All body electrical equipment installed by the apparatus manufacturer shall conform to current automotive electrical system standard, the latest Federal DOT standards, and the requirements of the applicable NFPA Apparatus Standard. Twisted pair shielded wire shall be provided within the electrical system for noise reduction.

The wiring harness shall conform to SAE J-1128 with GXL temperature properties. All exposed wiring shall be run in loom with a minimum 289 degree Fahrenheit rating. All wiring looms shall be properly supported and attached to body members along the entire run. All wiring shall be mounted so as to provide protection from water and heat. All connections shall be crimp type with heat shrink tubing with insulated shanks to resist moisture and foreign debris such as grease and road grime. Weather-resistant connectors shall be provided throughout to ensure the integrity of the electrical system. Gold contacts shall be used for superior connectivity and improved performance. All wiring looms shall be properly supported and attached along the entire run. At any point where wire or looms must pass through metal, rubber grommets shall be installed to protect the wire from abrasion.

Wiring shall be individually and permanently function and color-coded every three (3) inches on the insulation to allow for easy identification.

The main low voltage chassis to body interface point and distribution panel shall be provided at the front of the body in a location providing easy service access. The distribution panel shall be labeled and shall contain body electrical relays and wire connection bar. The distribution panel shall be located so as not to reduce useable compartment space. An electrical harness quick-disconnect shall be provided to facilitate removal of the body in the future. All circuits shall be protected with automatic reset circuit breakers to ensure reliability of the system.

All electrical equipment switches shall be mounted on a switch panel mounted in the cab convenient to the operator. Emergency warning light switches shall be of the rocker type. For easy night time operation an integral indicator light shall be provided to indicate when the circuit is energized. All switches shall be appropriately identified as to their function.

CAB ROOF MOUNTED LIGHTS

Two (2) 12 volt Brow lights shall be mounted on the forward part of the cab roof. Lights shall be switched at drivers electrical control panel. Exact location of Brow light on the cab will be provided by the Department.

NFPA WARNING PACKAGE

Certified Emergency Lighting Package shall be Whelen Brand. It shall be a Halogen/ LED combination system designed to reduce the electrical draw required.

"Wig-Wag" flasher for headlamps shall be installed. Switch, labeled as to function, shall be included in emergency lighting switch cluster.

The lighting package design including all cab switching, light location, lens color to be determined at Pre-Proposal conference.

DOT CLEARANCE/MARKER LIGHT PACKAGE

LED type clearance lights shall be installed in conformance to the latest Federal DOT standards.

LETTERING AND GRAPHICS

A 6" NFPA compliant scotchlite chassis/body stripe and up to (100) Scotchlite letters shall be applied per Fire Department design.

A red/green chevron design herringbone reflective tape shall be applied to the rear per Fire Department design.

911 Emergency lettering applied to both sides.

City of Concord decals supplied by the City and applied to both doors.

ADDITIONAL EQUIPMENT

The following additional equipment shall be supplied and installed on the apparatus:

- Red Mateflex dry deck flooring in each compartment
- "Public Safety Equipment" brand "Arrowstick" traffic advisor light systems
- Two (2) ZICO collapsible wheel chocks with holders shall be mounted under the left side body forward of the rear wheels.
- On-spot automatic snow chains installed to meet manufactures specifications.
- Ladders- One (1) 24' pumper extension, one (1) 14' foot roof ladder and one (1) 10' folding ladder shall be provided. Ladders shall be Duo-Safety or Alco-Lite brand. All necessary mounting brackets and hardware shall be installed by vendor.
- An Akron Apollo Monitor model # 3421 with portable base # 3413 with 4" storz connection and Task Force Tip 18" Extend -A- Gun device shall be provided.
- Two (2) lengths of Kochek Flexlite 10 foot hard suction hose with 6" couplings
- One (1) 6 foot and one (1) 10 foot pike pole with mounting hardware.
- PAC TRAC PN 7000 tool mounting system shall be installed to cover the entire rear wall of the compartment over the wheels on the driver's side. Six (6) Handlelok PN 1004, Six (6) Flexmount PN1002 and Four (4) Toolok PN1003 mounting brackets shall be provided to complete this mounting system.

MANUALS

Two (2) copies of all operator, service, and parts manuals shall be supplied at the time of delivery in electronic format (CD-ROMs) The electronic manuals shall include the following information:

Operating Instructions, descriptions, specifications, and ratings of the cab, chassis, body, installed components, and auxiliary systems.

Warnings and cautions pertaining to the operation and maintenance of the fire apparatus and fire fighting systems.

Charts, tables, checklists, and illustrations relating to lubrication, cleaning, troubleshooting, diagnostics, and inspections.

Instructions regarding the frequency and procedure for recommended maintenance.

Maintenance instructions for the repair and replacement of installed components.

Parts listing with descriptions and illustrations for identification.

Electrical schematic and electrical component locator.

Warranty descriptions and coverage.

The CD-ROM shall incorporate a navigation page with electronic links to the operator's manual, service manual, parts manual, and warranty information, as well as instructions on how to use the manual. Each copy shall include a table of contents with links to the specified documents or illustrations.

The CD must be formatted in such a manner as to allow not only the printing of the entire manual, but to also the cutting, pasting, or copying of individual documents to other electronic media, such as electronic mail, memos, and the like.

A find feature shall be included to allow for searches by text or by part number.

These electronic manuals shall be accessible from any computer operating system capable of supporting portable document format (PDF). Permanent copies of all pertinent data shall be kept file at both the local dealership and at the manufacturer's location.

NOTE: Engine overhaul and transmission overhaul manuals are not included.

WARRANTIES

ONE YEAR STANDARD

The apparatus manufacturer shall provide a full 1 year standard warranty. All components manufactured by the apparatus manufacturer shall be covered against defects in materials or workmanship for a 1 year period. All components covered by separate suppliers such as engines, transmissions, tires, and batteries shall maintain the warranty as provided by the component supplier. **A copy of the warranty document shall be provided with the proposal.**

STRUCTURAL

The apparatus manufacturer shall provide a comprehensive 10 year/100,000-mile structural warranty. This warranty shall cover all structural components of the cab and/or body manufactured by the apparatus manufacturer against defects in materials or workmanship for 10 years or 100,000 miles, whichever occurs first. Excluded from this warranty are all hardware, mechanical items, electrical items, or paint finishes. **A copy of the warranty document shall be provided with the proposal.**

LIFETIME FRAME

The apparatus manufacturer shall provide a full lifetime frame warranty. This warranty shall cover all apparatus manufacturer designed frame, frame members, and crossmembers against defects in materials or workmanship for the lifetime of the covered apparatus. **A copy of the warranty document shall be provided with the proposal.** Frame warranties that do not cover crossmembers for the life of the vehicle shall not be acceptable.

POLYPROPYLENE TANK

The apparatus manufacturer shall provide a full lifetime polypropylene tank warranty. This warranty shall cover all defects in materials or workmanship of the polypropylene tank for the lifetime of the covered apparatus with its original owner. **A copy of the warranty document shall be provided with the proposal.**

STAINLESS STEEL PLUMBING

The apparatus manufacturer shall provide a full 10 year stainless steel plumbing components warranty. This warranty shall cover defects in materials or workmanship of apparatus manufacturer designed foam/water plumbing system stainless steel components for 10 years. **A copy of the warranty document shall be provided with the proposal.**

WARRANTY - 10 YEAR PAINT

The apparatus manufacturer shall provide a 10-year limited paint and corrosion perforation warranty. This warranty shall cover paint peeling, cracking, blistering, and corrosion provided the vehicle is used in a normal and reasonable manner. Paint shall be prorated for 10 years and corrosion perforation shall be covered 100% for 10 years. The warranty period shall begin upon delivery of the apparatus to the original user-purchaser. **A copy of the warranty document shall be provided with the proposal.**

UV paint fade shall be covered in a separate warranty supplied by Akzo-Nobel and shall be for a minimum of 7 years.

WARRANTY BRAKE SYSTEM AND AXLES

A 3 year/300,000 miles parts and labor Anti-Locking Braking System (ABS) warranty shall be provided as standard by Meritor Automotive. **A copy of the warranty document shall be provided with the proposal.**

A 5 year/unlimited miles parts and 2 year labor front and rear axle warranty shall be provided as standard by ArvinMeritor Automotive. **A copy of the warranty document shall be provided with the proposal.**

A 3 year/unlimited miles parts and 3 year labor front and rear brake warranty shall be provided as standard by ArvinMeritor Automotive. The warranty shall include bushings and seals. **A copy of the warranty document shall be provided with the proposal.**

ALLISON TRANSMISSION

A 5 year/unlimited miles parts and labor warranty shall be provided as standard by Allison Transmission. **A copy of the warranty document shall be provided with the proposal.**

BATTERY SYSTEM

Batteries shall have a warranty of twelve (12) months. **A copy of the warranty document shall be provided with the proposal.**

VALVES

All valves shall be an Akron 8800 HD series. The Akron valves shall come with a ten (10) year warranty supplied by the manufacturer. **A copy of the warranty document shall be provided with the proposal.**

EXTENDED WARRANTY OPTIONS

Vendor shall provide price quote to purchase extended coverage on all major components that are covered by one year warranty and extended electrical component coverage.

FACTORY INSPECTION TRIP

One pre-construction meeting for three (3) City of Concord personnel to be held at manufactures facility shall be proposed as an **itemized option.** Purpose of the trip is to approve and review final plans for construction of the apparatus with vendor's engineers.

One factory inspection trip to provide the opportunity for three (3) City of Concord personnel to inspect the apparatus prior to delivery and to make certain it meets all specified requirements shall be proposed as an **itemized option.**

All costs (air and ground travel, lodging and meals) associated with both trips shall be proposed as itemized options and **not** included in the lump sum cost for the apparatus. Air travel shall be roundtrip from the Manchester-Boston Regional Airport, Manchester, NH.

PROPOSER'S SUBMISSION CHECKLIST

In order to be considered responsive, each Vendor must submit the following list of documents, in **one (1) original and two (2) identical copies**:

1. Proposal Sheet
2. Specifications Exception Form
3. Alternate Form W-9
4. City of Concord Indemnification Agreement
5. Standard and Extended Warranty Literature

The successful vendor must submit, prior to contract signing:

1. His/her firm's **insurance certificate** (naming the City of Concord as an Additional Insured) that meets the minimum required types and levels of coverage; and
2. Separate Payment and Performance Bonds in the amount of 100% of the contract price.

The successful Vendor shall provide, upon delivery of the vehicle, the following:

1. Manuals:
 - A. Two Complete Operations, Service and Part Manuals in electronic (CD-ROM) format;
2. Other Documentation:
 - A. Wheel alignment documentation;
 - B. Engine installation review;
 - C. Certificate of inspection certifying performance of pump and related components;
 - D. Certificate of hydrostatic test;
 - E. Certification of electrical system performance test; and
 - F. Certification of manufacturer's record of pumper construction.

The successful Vendor shall provide, upon request, the following:

1. Certificate or letter, from an independent licensed professional engineer, verifying minimum compliance to ECE Regulation No. 29

**CITY OF CONCORD, NEW HAMPSHIRE
PROPOSAL SHEET
RFP36-07
FIRE DEPARTMENT CUSTOM PUMPER**

THE UNDERSIGNED HEREBY OFFERS TO FURNISH AND DELIVER ONE (1) NEW 1500 GPM CUSTOM PUMPER IN ACCORDANCE WITH THE TERMS, CONDITIONS AND SPECIFICATIONS OF RFP36-07 FOR THE FOLLOWING NOT-TO-EXCEED LUMP SUM PRICE:

1. 1500 GPM CUSTOM PUMPER (DO NOT INLCUDE PRE-CONSTRUCTION CONFERENCE, FACTORY VISITS, ADDITIONAL EQUIPMENT AND OPTIONAL EQUIPMENT):

_____ DOLLARS \$ _____
TOTAL PRICE WRITTEN FIGURES

MANUFACTURER: _____

MODEL: _____

APPARATUS IS: _____ IN-STOCK UNIT; _____ ORDERED UNIT

YEAR OF MANUFACTURE: _____

LEFT TURNING RADIUS: _____ RIGHT TURNING RADIUS: _____

FULL-CIRCLE TURNING RADIUS: _____

LOCALTION OF FACTORY WHERE APPARATUS IS TO BE BUILT: _____

LOCATION OF FACTORY AUTHORIZED REPAIR FACILITY: _____

RESPONSE TIME TO PROVIDE SERVICE AFTER NOTIFICATION BY CITY (Hours): _____

RESPONSE TIME TO PROVIDE REPLACEMENT PARTS ARO (Hours): _____

DELIVERY TIME, AFTER RECEIPT OF ORDER, FOR COMPLETED AND OPERATIONAL APPARATUS TO THE CITY, IN CALENDAR DAYS: _____

MAXIMUM WHEELBASE OF APPARATUS: _____

MAXIMUM OVERALL LENGTH OF APPARATUS: _____

MAXIMUM OVERALL WIDTH OF APPARATUS: _____

MAXIMUM OVERALL HEIGHT OF APPARATUS (INCLUDING ROOF MOUNTED OPTIONS): _____

ITEMIZED PRICES (Do not include in lump sum price for apparatus)*:

1. PRICE PER PERSON FOR PRE-CONSTRUCTION CONFERENCE*: \$ _____

2. PRICE PER PERSON FOR EACH FACTORY INSPECTION*: \$ _____

*Price shall include all air and ground travel, lodging and meals.

ADDITIONAL EQUIPMENT (Do not include in lump sum price for apparatus)*:

1. OPTION 1 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

2. OPTION 2 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

3. OPTION 3 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

4. OPTION 4 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

5. OPTION 1 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

6. OPTION 2 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

7. OPTION 3 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

8. OPTION 4 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

9. OPTION 4 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

VENDOR RECOMMENDED OPTIONS (Do not include in lump sum price for apparatus)*:

1. OPTION 1 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

2. OPTION 2 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

3. OPTION 3 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

4. OPTION 4 DESCRIPTION: _____

_____ Dollars \$ _____
(Written) (Figures)

VALUE ADDED SERVICES TO BE PROVIDED AT NO ADDITIONAL COST TO THE CITY: _____

***The City reserves the right to purchase these items through the successful vendor or on the open market.**

THE UNDERSIGNED ACKNOWLEDGES:

1. THAT HE/SHE IS AN AUTHORIZED AGENT OF THE VENDOR SUBMITTING THIS BID
2. THE RECEIPT OF THE FOLLOWING ADDENDA _____
3. THE FIRM SUBMITTING THIS BID HAS NEVER DEFAULTED ON ANY MUNICIPAL, STATE, FEDERAL OR PRIVATE CONTRACT

COMPANY: _____

SIGNED BY: _____

PRINTED OR TYPED NAME: _____

ADDRESS: _____

TELEPHONE NUMBER: _____ FAX NUMBER: _____

TOLL FREE NUMBER: _____ E-MAIL: _____

CELL PHONE NUMBER: _____ PAGER: _____

PRIMARY POINT OF CONTACT: _____

PLEASE FILL OUT, SIGN AND RETURN TO:

The City of Concord
Douglas B. Ross, Purchasing Agent
41 Green Street
Concord, NH 03301
603-225-8530

Due Date/Time: March 1, 2007 Not Later Than 2:00 PM

IN AN EFFORT TO BETTER REACH ALL PROSPECTIVE VENDORS, PLEASE ASSIST US BY PROVIDING AND RETURNING, WITH YOUR PROPOSAL, THE FOLLOWING INFORMATION:

HOW DID YOU LEARN ABOUT THIS REQUEST FOR PROPOSALS (RFP)? PLEASE CHECK ALL THAT APPLY:

- _____ LEGAL NOTICE IN THE CONCORD MONITOR
- _____ PURCHASING PAGE OF THE CITY INTERNET WEB SITE
- _____ ADVERTISEMENT ON CONCORD CABLE TV (CCTV-Channel 17)
- _____ POSTING ON CITY HALL BULLETIN BOARD
- _____ SUBSCRIPTION TO A CONSTRUCTION REPORTING SERVICE
Please identify the reporting service:_____
- _____ CITY SENT THE RFP TO MY FIRM
- _____ OTHER, PLEASE IDENTIFY:_____

THANK YOU FOR YOUR ASSISTANCE.

CITY OF CONCORD, NEW HAMPSHIRE
SPECIFICATIONS EXCEPTION FORM

In the interest of fairness and sound business practice, it is mandatory that you state any exceptions taken by you to our specifications.

It should not be the responsibility of the City of Concord to ferret out information concerning the materials which you intend to furnish.

If your proposal does not meet all of our specifications you **must** so state in the space provided below:

Proposals on equipment, vehicles, supplies, service and materials not meeting specifications may be considered by the City, however, all deviations must be listed above.

If your proposal does not meet our specifications, and your exceptions are not listed above, the City of Concord may claim forfeiture on your proposal bond, if submitted.

Signed: _____
I DO meet specifications

Signed: _____
I DO NOT meet specifications as listed in this proposal; exceptions are in the space provided.

Failure to submit this form with your proposal response may result in your proposal being rejected as unresponsive.

Request for Taxpayer Identification Number and Certification

Give form to the requester. Do not send to the IRS.

Name (as shown on your income tax return)	
Business name, if different from above	
Check appropriate box: Individual/ Sole proprietor <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Other <input type="checkbox"/>	Exempt from backup withholding <input type="checkbox"/>
Address (number, street, and apt. or suite no.)	Requester's name and address (optional)
City, state, and ZIP code	City of Concord Finance Department 41 Green Street Concord NH 03301
List account number(s) here (optional)	
Part I	Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). For other entities, it is your employer identification number (EIN).

Social Security number –	Employer identification number –
Part II	Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number, and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
3. I am a U.S. person (including a U.S. resident alien).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN.

Sign Here	Signature of U.S. Person	Date:
------------------	--------------------------	-------

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA. Pursuant to IRS Regulations, you must furnish your Taxpayer IRS Identification Number (TIN) to the City whether or not you are required to file tax returns. If this number is not provided, you may be subject to required withholding on each payment made to you. To avoid this withholding & to ensure that accurate tax information is reported to the IRS, **A RESPONSE IS REQUIRED.**

CITY OF CONCORD, NEW HAMPSHIRE

**THE FOLLOWING INDEMNIFICATION AGREEMENT SHALL BE, AND IS
HEREBY A
PROVISION OF ANY CONTRACT**

The successful vendor agrees to indemnify, investigate, protect, defend and save harmless the City, its officials, officers, agents and employees from any and all claims and losses accruing or resulting to any and all contractors, subcontractors, suppliers, laborers and any other person, firm, or corporation furnishing or supplying work, services, materials or supplies in connection with the performance of this contract, and from any and all claims and losses accruing or resulting to any person, firm or corporation which may be injured or damaged by the vendor in the performance of this contract. In any case, the foregoing provisions concerning indemnification shall not be construed to indemnify the City for damage arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of the City or its employees. This indemnification shall survive the expiration or early termination of this contract.

COMPANY _____

TAXPAYER IDENTIFICATION NUMBER _____

AUTHORIZED SIGNATURE _____

ADDRESS _____

TELEPHONE _____

TOLL-FREE NUMBER _____

FAX NUMBER _____

E-MAIL ADDRESS _____

Failure to submit this form with your RFP response may result in your Proposal being rejected as unresponsive.

City of Concord, New Hampshire
RFP36-07, FIRE DEPARTMENT CUSTOM PUMPER
Insurance Requirements for All Contractors

Additional Coverage is Required if Checked

Minimum Limits Required

Commercial General Liability

General Aggregate	\$2,000,000
Products-Completed Operations Agg.	\$2,000,000
Personal and Advertising	\$1,000,000
Each Occurrence Injury	\$1,000,000
Fire Damage (Any One Fire)	\$ 50,000
Medical Expense (Any One Person)	\$ 10,000
<input type="checkbox"/> Occurrence	
<input type="checkbox"/> Claims Made	

Additional Coverage to Include

<input type="checkbox"/> Owners & Contractors' Protective – Limit	NA
<input type="checkbox"/> Underground/Explosion and Collapse	

Commercial Automobile Liability

Combined Single Limit	\$1,000,000
<input type="checkbox"/> Any Auto, Symbol 1	
<input type="checkbox"/> Include Employees as Insured	

Additional Coverage to include:

<input type="checkbox"/> Garage Liability	NA
<input type="checkbox"/> Garage Keepers Legal Liability	NA

Workers Compensation

NH Statutory including Employers Liability - Each Accident/Disease-Policy Limit/Disease-Each Employee	\$100,000/\$500,000/\$100,000
--	-------------------------------

Commercial Umbrella

May be substituted for higher limits required above	NA
<input type="checkbox"/> Follow Form Umbrella on ALL requested Coverage	

Other

<input type="checkbox"/> 1. Professional/Errors & Omissions	NA
<input type="checkbox"/> 2. Builders Risk – Renovation Form	
All Risk completed value form including Collapse	NA
Sublimit for Soft Cost Coverage	NA
<input type="checkbox"/> 3. Installation Floater (Equipment)	NA
<input type="checkbox"/> 4. Riggers Liability	NA
<input type="checkbox"/> 5. Environmental – Pollution Liability	NA
<input type="checkbox"/> 6. Aviation Liability	NA
<input type="checkbox"/> 7. Watercraft – Protection & Indemnity	NA

(X) **The City of Concord must be named as Additional Insured**

NOTICE OF AWARD

Dated: _____

TO: _____

ADDRESS: _____

CITY PROJECT NO. RFP36-07

PROJECT: Fire Department Custom Pumper

CITY CONTRACT NO.: RFP36-07

CONTRACT FOR: Fire Department Custom Pumper

You are notified that your Proposal for the above Contract has been considered and accepted for you to provide and deliver one (1) new custom pumper for the Concord Fire Department. All terms, conditions, specifications and prices shall be in accordance with the **CITY'S** Request for Proposals (RFP36-07) and the **VENDOR'S** proposal opened on **March 1, 2007**.

The Contract Price of your contract, shall be the following not-to-exceed price:

_____ Dollars (\$ _____)

One original of the Agreement accompanies this Notice of Award.

You must comply with the following conditions precedent within **ten (10) calendar days** of the date of this Notice of Award, which is by _____. You must deliver to the **CITY**:

1. One fully executed counterpart of the Agreement;
2. Your insurance certificate, that meets the minimum required levels of coverage, naming the **CITY** as an additional insured; and
3. Separate Payment and Performance Bonds each in the amount of the contract price.

Failure to comply with these conditions within the time specified will entitle the **CITY** to consider your proposal abandoned, to annul this Notice of Award and to declare your proposal bond as forfeited.

Within ten (10) calendar days after you comply with these conditions, the **CITY** will return to you one fully signed counterpart of the Agreement and issue a Notice to Proceed and purchase order and return your proposal bond.

CITY OF CONCORD, NEW HAMPSHIRE
(CITY)

BY _____
(AUTHORIZED SIGNATURE)

PURCHASING AGENT
(TITLE)

Copy to FIRE DEPARTMENT

AGREEMENT

THIS AGREEMENT, made this _____ day of _____ by
and between The City of Concord, New Hampshire, hereinafter called the “**CITY**” and
_____, doing business as (an individual) or (a partnership) or
(a corporation), hereinafter called the “**VENDOR**”.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter
mentioned:

1. The **VENDOR** will commence to provide and deliver one (1) new 1500 GPM custom pumper to the **CITY’S** Fire Department. All terms, conditions, specifications and prices shall be in accordance with the **CITY’S** Request for Proposals (RFP36-07) and the **VENDOR’S** proposal response opened on **March 1, 2007**.
2. The **VENDOR** will furnish all of the material, supplies, tools, equipment, labor and other services necessary to provide and deliver the aerial line truck as detailed by RFP36-07.
3. The **VENDOR** will commence the work required by the **CONTRACT DOCUMENTS** on _____. Completion time for this **AGREEMENT** shall be not later than _____ calendar days thereafter.
4. The **VENDOR** agrees to perform all of the **WORK** described in the **CONTRACT DOCUMENTS** and comply with the terms therein for the not-to-exceed prices provided with the cost proposal submitted by the **VENDOR**. The contract price for the custom pumper shall be:

_____ **Dollars**
(\$_____)

5. The term “**CONTRACT DOCUMENTS**” means and includes the following:
 - (A) REQUEST FOR PROPOSALS RFP36-07 DATED _____
 - (B) RFP36-07 PROPOSAL RESPONSE DATED _____
 - (C) CITY OF CONCORD REQUIRED CONTRACT FORMS/DOCUMENTS:
 1. SPECIFICATIONS EXCEPTION FORM
 2. ALTERNATE FORM W-9
 3. INDEMNIFICATION AGREEMENT
 4. INSURANCE CERTIFICATE
 5. PROPOSAL BOND
 6. PAYMENT BOND
 7. PERFORMANCE BOND

- (F) LETTER OF AWARD DATED _____
- (D) NOTICE OF AWARD DATED _____
- (E) AGREEMENT
- (F) NOTICE TO PROCEED
- (G) CITY PURCHASE ORDER
- (H) ADDENDA NO. _____ DATED _____

6. The **CITY** will pay the **VENDOR** in the manner and at such times as set forth in the General Terms and Conditions such amounts as required by the **CONTRACT DOCUMENTS**.
7. This Agreement shall be binding upon all parties hereto and their respective heirs, Executors, administrators, successors and assigns.

IN WITNESS HEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in one (1) original.

CITY:
CITY OF CONCORD, NEW HAMPSHIRE

BY _____

Name/Title: Douglas B. Ross, Purchasing Agent

(SEAL)

ATTEST:

Name _____

Title _____

VENDOR:

By _____

Name _____

(Please Type)

Address _____

(SEAL)

ATTEST:

Name _____

(Please Type)

NOTICE TO PROCEED

Dated: _____

TO: _____

ADDRESS: _____

CITY PROJECT NO. RFP36-07

PROJECT: Fire Department Custom Pumper

CITY CONTRACT NO.: RFP36-07

CONTRACT FOR: Fire Department Custom Pumper

(Name of Vendor)

You are notified that the Contract Time under the above contract will commence to run on _____ . By that date, you are to start performing your obligations under the Contract Documents. In accordance with the Agreement, the date of completion for this contract shall be no later than _____ calendar days thereafter.

Before you may start any Work the General Terms and Conditions provides that you must deliver to the CITY:

1. Certificates of insurance, naming the **CITY** as additional insured, which you are required to purchase and maintain in accordance with the Contract Documents; and
2. Separate Payment and Performance Bonds each in the amount of 100% of the contract price.

CITY OF CONCORD, NEW HAMPSHIRE
(CITY)

BY _____
(AUTHORIZED SIGNATURE)

PURCHASING AGENT
(TITLE)

Copy to FIRE DEPARTMENT

City of Concord,
New Hampshire



Finance Department

Purchasing Division

CITY HALL 41 GREEN STREET

Concord, NH 03301

(603)225-8530 FAX(603)230-3656

Reference: RFP36-07

If you choose not to propose, please complete the questionnaire below and return it with your response by the proposal opening date. Your assistance in helping us to analyze no proposal rationale is very much appreciated. Thank you.

* * * * No Proposal Questionnaire * * * *

A no proposal is submitted in reply to the City of Concord Request for Proposals (RFP36-07, Fire Department Custom Pumper) for the following reasons:

- _____ Item/Service not supplied by our company.
- _____ Proposal specification (give reason(s), e.g., too restricted, not clear, etc.):

- _____ Profit margin on municipal proposals too low.
- _____ Past experience with City of Concord (give specifics, e.g., payment delay, proposal process, administrative problems, etc) _____
- _____ Insufficient time allowed to prepare and respond to proposal request.
- _____ Proposal requirement too large _____ or too small _____ for our company.
- _____ Priority of other business opportunities limit time/other resources available to deliver or perform according to proposal specifications.
- _____ Other reason(s), please specify: _____

.....

Company Name and Address: _____

Phone: () _____

(Signature)

(Typed/Printed Name & Title)

PROPOSAL/INTERVIEW EVALUATION FORM

FIRM: _____ DATE: _____

PROJECT: RFP36-07, FIRE DEPARTMENT CUSTOM PUMPER

DEPARTMENT/DIVISION: FIRE DEPARTMENT, EMERGENCY SERVICES DIVISION

RATING CATEGORY	WEIGHT	RATING	SCORE
<u>Proposal:</u>			
Responsive-Provided Required Documents	5		
Cost (Base and Itemized)	15		
Delivery Time	10		
<u>Equipment</u>			
Meets/Exceeds Specifications	15		
Warranty's	10		
<u>Firm:</u>			
Record of Satisfactory Performance	10		
In-house Capabilities for Service	10		
Responsible (Per RFP General Terms & Conditions)	10		
Location	5		
Total:			

Rating Scale: Rate Each Category on a Score of 0-10 - Unacceptable 0, Average 5, Excellent 10

Score: Multiply the Weight by the Rating to determine the Score for each Category. Add the Scores for all Categories to determine the Total Score. The vendor with the highest Total Score is awarded the contract.