



KENAI FIRE DEPARTMENT FIRE ENGINE 2018



OWNER:

**CITY OF KENAI
210 FIDALGO AVENUE
KENAI, ALASKA 99611
(907) 283-8236**

A. RFP AND CONTRACT DOCUMENTS

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A. RFP AND CONTRACT DOCUMENTS

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B. SPECIFICATIONS



CITY OF KENAI
210 FIDALGO AVENUE
KENAI, ALASKA 99611-7794
(907) 283-8236

**ADVERTISEMENT FOR REQUEST
FOR PROPOSAL**

Project Name: KFD Fire Engine 2018

Last Day for Questions or Alternate Requests: 5PM Tuesday August 28th, 2018

RFP Due Date and Time: No later than 5pm Monday September 10th, 2018

Equipment delivery date FOB Kenai, AK: 365 days from Notice To Proceed

Scope of Work: Provide one Fire Engine and related Equipment FOB Kenai Fire Department, Kenai, AK

RFPs must be delivered in a sealed envelope clearly marked with the project name and Cost Proposal to be delivered in a separate envelope clearly marked with the project name to the Public Works Department at the address above. RFP documents can be obtained on City of Kenai website at www.ci.kenai.ak.us or at City Hall for a non-refundable fee for each set of documents.

Publish: Anchorage Daily News- August 12th, 2018

CITY OF KENAI INSTRUCTIONS

1. GENERAL

These instructions specify the form and procedures for the submission of a complete and acceptable Request for Proposal (RFP).

Project Name: KFD Fire Engine 2018

Last Day for Questions or Alternate Requests: 5PM Tuesday August 28th, 2018

RFP Due Date and Time: No later than 5PM Monday September 10th, 2018

Equipment delivery date FOB Kenai, AK: 365 days from Notice To Proceed

2. EVIDENCE OF QUALIFICATIONS

Upon request of the City, a Proposer whose RFP is under consideration for the award of the Agreement, shall submit promptly to the City, satisfactory evidence of the Proposer's financial resources, their experience, their performance in completing other projects of a similar nature, the organization and equipment they have available for the performance of the Agreement, and other information detailing the Proposer's ability to and experience with constructing the specified equipment.

3. PROPOSER QUALIFICATIONS

Before the RFP is considered for award, the City reserves the right to determine whether or not a Proposer is responsible and to require the Proposer to complete a Proposer Qualification Form and/or provide a current financial statement prepared by a Certified Public Accountant. The City shall determine whether a Proposer is responsible on the basis of the following criteria:

- The skill and experience demonstrated by the Proposer in performing Agreements of a similar nature.
- The Proposer's record for honesty and integrity.
- The Proposer's capacity to perform in terms of facilities, personnel, and financing.
- The Proposer's past performance under City Agreements. If the Proposer has failed in any material way to perform its obligations under any Agreement with the City, the Proposer may be determined as a non-responsible Proposer.
- A Proposer's representations concerning their qualifications will be construed as a covenant under the Agreement. Should it appear that the Proposer has made a material misrepresentation, the City shall have the right to terminate the Agreement for the Contractor's breach, and the City may then pursue such remedies as provided in the Agreement Documents or as provided by state statute, City code, or as appropriate.

Any final determination that a Proposer is non-responsive will be made by the City Manager. Such determination will be made in writing to the Proposer setting forth the reasons for such determination.

4. CONDITIONS AFFECTING THE WORK

The Proposer shall examine carefully the RFP documents before submitting a RFP. The submission of a RFP shall be an admission that the Proposer has made such examination and is satisfied as to the requirements and accuracy of the RFP documents.

The City assumes no responsibility for any understanding or representations concerning conditions made by any of its officers, agents, or employees prior to the execution of this Agreement, unless such understanding or representations are expressly stated in the RFP documents or Addenda.

The Proposer shall include in their RFP, sufficient sums to cover all items required by the Agreement, and shall rely entirely upon their own examination in making their RFP. The submission of a RFP shall be taken as prima facie evidence of compliance with this paragraph.

If information or documentation required for submitting an accurate and complete RFP is absent from these documents, the Proposer is required to notify the Public Works Director by facsimile (907) 283-8236, or by e-mail to scurtin@kenai.city

5. SECURITY TO BE FURNISHED BY PROPOSER

If the RFP exceeds \$100,000.00 a certified check, bank cashier's check, or RFP bond, made payable to the City of Kenai amount equal to five (5%) percent of the total RFP, shall accompany each RFP as evidence of good faith, a guarantee that if awarded the agreement, the Proposer will execute the agreement and give bond as required. All Proposer's checks or RFP bonds will be retained until the successful Proposer has entered into a satisfactory agreement and furnished bonds, as required.

See section 19 for details on the deductive alternates. If and only if a deductive alternate is accepted by the City of Kenai, the successful Proposer shall furnish the City a Performance and Payment bond in the full amount of the Agreement and shall maintain the Bond in force during the continuance of the Agreement. The bonds must be furnished prior to the City's execution of the Agreement. The Bond shall be for the faithful performance of the Agreement in all respects including, but not limited to, payments for all materials and labor. All alterations, extensions of time, additional work, and other changes authorized by the Agreement Documents may be made without securing the consent of the Surety or Sureties. Power-of-Attorney for the person signing the Bond for the Surety must be submitted with the Bond. These bonds, in whatever amount required by the specific agreement, shall be administered and deemed governed by the provisions of Alaska Statutes Title 36, Chapter 25, and shall comply with all requirements for payment and submission of claims as provided by that chapter.

6. LICENSING

Alaska State Statutes requires that all businesses wishing to engage in business in Alaska obtain license(s). All Proposers are required to furnish with their RFP, the applicable, current licenses required to perform the work. Applicable licenses may include the following: Contractor's License, Specialty Contractor License, and Alaska Business License. Failure to submit license(s) with the RFP may result in rejection of the Contractor's RFP.

7. TAX COMPLIANCE CERTIFICATE

No agreement will be awarded to any individual or entity that is in violation of the tax laws of the City of Kenai or the Kenai Peninsula Borough unless the violation is cured within ten business days of notice. The Tax Compliance Certificate must be signed by the Proposer only and submitted with the RFP. The City will obtain verification of tax compliance from the Kenai Peninsula Borough for the successful Proposer. RFPs submitted without a completed Tax Compliance Certificate may be considered non-responsive.

8. INTERPRETATION OR CORRECTIONS OF RFP DOCUMENTS

Proposers shall notify the Public Works Director promptly of any error, omission, or inconsistency that may be discovered during examination of the RFP documents and the proposed work site(s). Requests from Proposers for interpretation or clarification of the RFP documents shall be made in writing to the Public Works Director and shall arrive no later than the time and date specified in Section 1 of these Instructions to Proposers. Questions may be faxed to (907) 283-8236 or emailed to scurtin@kenai.city. The subject line of the email or fax must include the name of the project.

Oral questions may be presented at a pre-RFP conference if one is provided for in Section 1 of these Instructions to Proposers. Interpretations, corrections, or changes, if any, to the RFP documents shall be made by Addendum. Proposers shall not rely upon interpretations, corrections, and changes made in any other manner, including orally, at the pre-RFP conference. Interpretations, corrections, and changes shall not be binding unless included in an Addendum. All Addenda issued during the time of the RFP shall become part of the Agreement Documents. Questions or requests for clarifications shall be directed to the Public Works Director. Only written interpretations or corrections by Addendum shall be binding, and no other forms of interpretation or correction will be binding on the City of Kenai.

It is the Proposer's sole responsibility to ascertain that they have received all Addenda issued by the City of Kenai. Addenda will be issued electronically and/or by facsimile. All Addenda must be acknowledged in the space provided on the RFP Form. If no Addenda have been issued, write or type zero or "N/A" on the RFP Form in the space provided.

9. PREPARATION AND SUBMISSION OF RFPs

- RFPs must be received at City Hall prior to the time and date specified in Section 1 of these Instructions to Proposers.
- RFPs must be submitted on the RFP Form furnished. RFPs must be completed in ink or by typewriter, and must be manually signed by an authorized person. If erasures or other changes appear on the forms, the person signing the RFP must initial each erasure or change in ink.
- RFPs shall specify a unit or lump sum price, typed or written in ink in figures, for each RFP item called for. In case of error in the extension of prices, the unit price will govern. RFPs may be rejected if they show any omissions, alteration of the forms, additions not called for, conditional or alternate RFPs not called for, qualified RFPs, or irregularities of any kind.
- The RFP Form invites RFPs on definite plans and specifications. Only the amounts and information asked for on the RFP Form will be considered as the RFP. Each Proposer shall RFP upon the work exactly as specified and as requested on the RFP Form, and

Proposers shall propose upon all alternates as indicated. When responding on an alternate for which there is no charge, Proposer shall write the words "No Charge" in the space provided.

- One (1) complete RFP package shall be completely sealed in an envelope clearly marked with the Proposer's company name, and the "Project Name" and "RFP Due Date" specified in Section 1 of these Instructions to Proposers. A complete RFP package shall include the following documents:
 - Cost Proposal Form, which must be placed in a separate sealed envelope
 - Tax Compliance Certificate
 - Applicable Licenses
 - Non-Collusion Affidavit
 - RFP Bond with Power of Attorney (If RFP exceeds \$100,000.00)
 - Executed Specifications (Either Yes, No, or Approved Alternate must be checked)
 - Other documents listed in these instructions including but not limited to manufacturers' descriptive literature, executed specifications, and drawings.
- RFPs received without all the required documents may be considered non-responsive. RFPs received after the RFP due date and time will be considered non-responsive and will not be accepted.
- No responsibility shall be attached to the City for the premature opening of, or the failure to open a RFP not properly addressed and identified.
- Please note that overnight delivery from the lower 48 states is generally not available. Prospective Proposers should anticipate a minimum of two to three days delivery time for express, priority or expedited delivery services.

10. MODIFICATION OF RFPS

RFP modifications will be accepted by the City, and binding upon the Proposer, where the modification:

- is received at City Hall prior to the time and date specified in Section 1 of these Instructions to Proposers.
- does not identify the adjusted RFP Total price. Only adjustments to the sealed RFP will be accepted. For example:
 - CORRECT – Increase the RFP Total by \$5,000.
 - INCORRECT – Decrease the RFP Total by \$5,000 for a new Total of \$95,000.
- is signed by the same individual who signed the original RFP.

Should there be more than one RFP modification from a Proposer, only the last modification received prior to the deadline shall be applied to the RFP. All earlier modifications shall be disregarded.

Any modification which fails to meet any requirement of this section shall be rejected, and the RFP shall be considered as if no modification had been attempted.

11. WITHDRAWAL OF RFP

At any time prior to scheduled closing time for receipt of RFPs, any Proposer may withdraw their RFP, either personally or by written request.

After the scheduled closing time for receipt of RFPs, no Proposer will be permitted to withdraw their RFP unless Notice of Award is delayed for a period exceeding forty five (45) days.

A RFP may not be withdrawn after opening without the written consent of the City.

12. ACCEPTANCE – REJECTION OF RFPs

The City reserves the right to reject any or all RFPs, to waive minor irregularities in any RFPs or in the RFP procedure, and to accept any RFP presented which meets or exceeds said specifications and which is deemed to be in the best interest of the City. However, the requirements for timeliness and manual signatures shall not be waived. The City is not responsible for RFP preparation costs.

13. EXECUTION OF AGREEMENTS

The successful Proposer shall be required to execute an Agreement for the work within ten (10) days after receiving the Notice of Award and Agreement documents from City; if Contractor does not return executed copies within this time, then, at the option of City, the RFP may be rejected.

14. AWARD OF AGREEMENT

It is the intent of the City to award the RFP to the most, qualified, responsive and responsible Proposer. Unless otherwise stated in the RFP documents, the Agreement, if awarded, shall be awarded to the responsible Proposer who submits the most responsive RFP.

The amount of the Agreement shall be the total sum of the amounts computed from the estimated quantities and unit prices and/or the lump sum awarded by the City and specified in the Agreement.

Proposals will be evaluated on the following criteria:

Factor	Description	Points
1	General Requirements How well the equipment proposed meets the requirements of the technical specifications contained in the Request for Proposal.	25
2	Cost Price will not be the sole selection criteria	50
3	References Owner and Mechanic references from Alaskan Fire Departments. (A minimum of eight (8) each Owner and Mechanic references must be supplied)	20
4	Compatibility Overall compatibility with current overall City of Kenai fleet and Mutual Aid Fire Departments Fleets	5
Total		100

On all RFPs, Notice of Award or rejection will be given within forty-five (45) days of RFP opening. The notice will be in writing and signed by the Public Works Director. A Notice of Intent to Award, and no other act of the City of Kenai or its representatives, constitutes an acceptance of a RFP. The acceptance of a RFP shall bind the successful Proposer to execute the Agreement.

15. AGREEMENT AND PERFORMANCE AND PAYMENT BOND SIGNATURE INSTRUCTIONS WHEN BONDS ARE REQUIRED

See section 19 for details on the deductive alternates. If and only if a deductive alternate is accepted by the City of Kenai, the successful Proposer shall furnish the City a Performance and Payment bond in the full amount of the Agreement. The successful Proposer shall insert the full name and business of the Contractor in the Agreement and on the Performance and Payment Bond, hereinafter the Bond.

If the Contractor is a partnership or joint venture, all partners or joint ventures shall sign the Agreement and the Bond except that one partner or one joint venturer may sign for the partnership or joint venture when all other partners or joint venturers have executed a Power-of-Attorney authorizing one partner or joint venturer to sign. The Power-of-Attorney shall accompany the executed Agreement and the Bond.

If the Contractor is a Limited Liability Company (LLC), a person with appropriate authority to bind the LLC shall execute the Agreement and Bond unless a Power-of-Attorney or Corporate Resolution accompanies the executed Agreement and Bond.

If the Contractor is a corporation, the President or Vice-President and Secretary or Treasurer of the corporation shall execute the Agreement and the Bond unless a Power-of-Attorney or Corporate Resolution accompanies the executed Agreement and Bond.

The Bond shall be returned undated as to Agreement Date. The Agreement Date shall be inserted on the Agreement when the City signs the Agreement and the Bond shall be dated the same as the Agreement Date.

16. SPECIAL PROVISIONS

If funded in part or in whole by a grant or grants, the contractor and their subcontractors will be required to comply with the requirements of these grants, including insurance and purchasing requirements, if any.

17. APPEAL PROCEDURE

Any party submitting a RFP for this procurement and who believes that they are adversely affected by the City's procurement process, or by any acts of the City in connection with the award of a City contract, may file a RFP protest appeal with the City's Public Works Director. All RFP protest appeals must be filed with the City within ten (10) days of the issuance of the City's notice of its intent to award the contract. The City Manager will decide the appeal. The RFP protest appeal must be in writing and shall include the following information:

- A. the name, address, e-mail, and telephone and facsimile numbers of the protester;
- B. the signature of the protester or the protester's representative;
- C. identification of the contracting agency and the solicitation or contract at issue;

D. a detailed statement of the legal and factual grounds of the protest, including copies of relevant documents; and,

E. the form of relief requested.

The RFP protest appeal may be hand-delivered, faxed, or sent by U.S. mail with postage prepaid to the attention of the Public Works Director, 210 Fidalgo Ave., Kenai, AK 99611. Regardless of the method of delivery chosen by the protester, all RFP protest appeals must be actually received by the City within ten (10) calendar days of the issuance of the City's notice of intent to award. If the tenth day is a City-recognized holiday or a weekend, the deadline for appeal shall be the next work day. It is up to the protester to choose a method of delivery to assure timely receipt by the City.

The City Manager shall decide the RFP protest appeal and issue a written decision under the following general procedures:

A. If the City Manager sustains a protest in whole or in part, the City Manager shall implement an appropriate remedy.

B. In determining an appropriate remedy, the City Manager shall consider the circumstances surrounding the solicitation or procurement including the seriousness of the procurement deficiencies, the degree of prejudice to other interested parties or to the integrity of the procurement system, the good faith of the parties, the extent the procurement has been accomplished, costs to the agency and other impacts on the agency of a proposed remedy, and the urgency of the procurement to the welfare of the City.

C. Notwithstanding subsections A and B immediately above, if the City Manager sustains a RFP protest appeal in whole or part, the protester's damages shall not exceed the reasonable RFP or proposal preparation costs.

The City Manager shall deliver his or her determination of the RFP protest appeal in writing to the protester by hand-delivery at the protester's place of business or other address or via U.S. Mail or facsimile, and shall be effective immediately upon receipt if hand-delivered, upon receipt of delivery confirmation if sent by facsimile or, if mailed, three (3) days after placement in the U.S. Mail.

A party filing a RFP protest appeal may appeal the City Manager's decision to the Kenai Superior Court.

18. COMPLIANCE OR ACCEPTED ALTERNATES TO SPECIFICATIONS

The Specifications must be checked YES, NO, or APPROVED ALTERNATE. If any NO is checked, the City may reject the RFP.

Proposer hereby agrees that the material offered will meet all the requirements of the specifications in this solicitation unless alternates have been deemed acceptable by Owner. Manufacturer's names, trade names, brand names, model and catalog numbers used in these specifications are for the purpose of describing and establishing general quality levels. Such references are not intended to be restrictive. Alternates will be approved via addenda, and only via addenda. Request for alternates must be submitted no later than the date in the Advertisement for RFP. An alternate must be requested via email sent to scurtin@kenai.city with an explanation giving in detail the extent of the alternate, the reason for which it is requested, and

why the City should approve the alternate. Provide as much detail as possible. If multiple models or options are provided with your submittal data clearly indicate which you are requesting. The City of Kenai will be the sole judge of whether an alternative is acceptable to the items specified.

19. PAYMENT

All prices stated shall be exclusive of state and local sales and use taxes.

Payment to be made under the following terms:

Base RFP – 100% payment upon delivery and acceptance at the City of Kenai Fire Department.

Deductive Alternate #1 (Requires 100% payment and performance bond)

- Chassis to be paid in full upon delivery to the successful Proposers' plant.
- 95% of balance upon acceptance of completed equipment at successful Proposers Plant.
- Remaining 5% upon delivery and acceptance at the City of Kenai Fire Department.

Deductive Alternate #2

- 100% pre-payment with contract.

20. FEDERAL EXCISE TAXES

The City of Kenai is exempt from Federal Excise Taxes.

21. MANUFACTURERS' DESCRIPTIVE LITERATURE

Two copies of all manufacturers' descriptive literature demonstrating the equipment meets the requirements of the specifications or approved alternate shall be provided with the RFP.

22. DRAWINGS

A general arrangement drawing depicting the equipment' appearance shall be provided. The drawing shall consist of left side, right side, front and rear elevation views. Equipment requiring additional controls shall include a general arrangement view of the control operator's position, scaled the same as the elevation views. The City shall provide signed approval of the drawing prior to order release to production.

23. WARRANTY, REPAIR SERVICES, AND PARTS

If the manufacturer's warranty excludes warranties of any specific included component because such components are covered by the component manufacturer's warranty, the warranty of the component manufacturer shall be included with the RFP. Unless otherwise stated, the warranty of the manufacturer shall cover all components of the equipment including accessories. The warranty obligation shall include the following:

All materials and labor.

All transportation and shipping costs for the equipment or any part of the equipment from the City of Kenai Fire Department to the place of manufacture and return, in the event the repair requires service at the place of manufacture.

The terms of the warranty or warranties. A copy of the warranty must be included in the RFP. The Proposer shall provide in the RFP a statement stating the following:

- a) The length of time that parts and services will be available after delivery. Parts must be available within 72 hours of order.
- b) Identification of an authorized service and repair facility with adequate facilities to complete any warranty, repairs, or modifications.

Original warranty certificates indicating: structural warranty, basic warranty, and electrical warranty. All warranties shall be stated in years, "lifetime" warranties shall specifically state a comparison of the warranty conditions (i.e. life of chassis, until major repairs, etc.).

24. PATENTS

The supplier shall defend any and all suits and assume all liability for any claims against the City, or any of its officials, employees, agents, for the use of any patented process, device, or article forming a part of the equipment or any appliance to be furnished under the contract.

25. STATUTES AND REGULATIONS

The completed equipment must comply with the requirements of applicable federal statutes and regulations, applicable Alaska statutes and regulations of the Department of Labor and Industries, the Department of Transportation, and all other applicable state regulatory agencies. In the event the specifications cannot be complied with without violating such requirements, the Proposer shall so state, or if not discovered until after the contract has been executed, the manufacturer shall advise the City prior to construction of the equipment.

26. ACCEPTANCE AND TESTING

Acceptance shall be made in writing and shall occur only after testing of the equipment after delivery to Kenai.

On receipt of the completed equipment, the City shall inspect and test the equipment prior to acceptance as per the following:

- The equipment shall be inspected and tested for compliance to the specifications and contract.
- In the event the equipment fails to comply with the specifications or fails to meet the test requirements after the first inspection and tests, the manufacturer shall be immediately notified and shall have a period of thirty (30) days after the completion of such inspection and tests to correct the noted deficiencies. The City shall then re-inspect and re-test the equipment prior to acceptance. Failure to make such changes as the City may consider necessary to conform to any provision of the specifications within the thirty (30) days period shall be cause for rejection of the equipment.

The storage of the equipment at the City's location during this period shall not constitute acceptance of the equipment.

27. DELIVERY AND INSPECTIONS

The completed equipment shall be delivered at the Proposer's expense F.O.B. Kenai, Alaska.

- **Delivery.** The completed equipment may be transported under its own power from the proposed manufacturing site to the place of embarkment. The equipment shall be shipped to Alaska, via under deck storage. No open deck barge shipping is acceptable. The equipment shall be driven to Kenai, Alaska, where final inspection will occur.
- **Pre-Construction Conference.** A pre-construction conference for the equipment shall be conducted at the manufacturing plant. Two (2) persons from the City of Kenai, as well as a representative from the dealer will travel to the manufacturing plant to meet with sales and engineering staff for the exact planning of the equipment. All expenses for this pre-construction conference trip shall be borne by the City.
- **Mid-Construction Conference.** A mid-construction conference for the equipment shall be conducted at the manufacturing plant. Two (2) persons from the City of Kenai, as well as a representative from the dealer will travel to the manufacturing plant to meet with sales and engineering staff for evaluation of the build of the equipment. All expenses for this mid-construction conference trip shall be borne by the City.
- **Final Inspection and Training.** The equipment shall be inspected by two (2) persons from City of Kenai, at the manufacturing site upon completion of the equipment. The cost of this final inspection trip shall be borne by the City

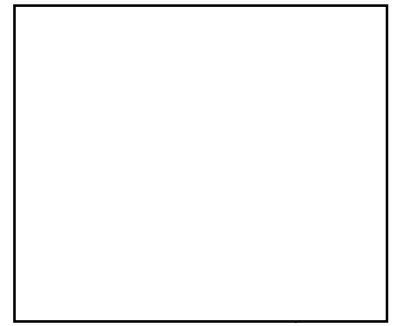
Tax Compliance Certification

Kenai Peninsula Borough

Finance Department

144 N. Binkley Street
 Soldotna, Alaska 99669-7599
 www.kpb.us

Phone: (907) 714-2197
 or: (907) 714-2175
 Fax: (907) 714-2376



1.) Fill in all information requested. 2.) Sign and date. 3.) Submit with solicitation, or other.

For Official Use Only

Reason for Certificate: <input type="checkbox"/> Solicitation <input type="checkbox"/> Other:		For Department:	
		Dept. Contact:	
Business Name:			
Business Type: <input type="checkbox"/> Individual <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Other:			
Owner Name(s):			
Business Mailing Address:			
Business Telephone:		Business Fax:	
Email:			

As a business or individual, have you ever conducted business or owned real or personal property within the Kenai Peninsula Borough? (If yes, please supply the following account numbers and sign below. If no, please sign below.)
 Yes No Kenai Peninsula Borough Code of Ordinances, Chapter 5.28.140, requires that businesses/individuals contracting to do business with the Kenai Peninsula Borough be in compliance with Borough tax provisions. No contract will be awarded to any individual or business who is found to be in violation of the Borough Code of Ordinances in the several areas of taxation.

REAL/PERSONAL/BUSINESS PROPERTY ACCOUNTS	
ACCT. NO.	ACCT. NAME

TAX ACCOUNTS/STATUS (TO BE COMPLETED BY KPB)	
YEAR LAST PAID	BALANCE DUE

KPB Finance Department (signature required)

In Compliance Not in Compliance

Date

SALES TAX ACCOUNTS	
ACCT. NO.	ACCT. NAME

TAX ACCOUNTS/STATUS (TO BE COMPLETED BY KPB)		
FILED THRU	M/F's	BALANCE DUE

KPB Sales Tax Division (signature required)

In Compliance Not in Compliance

Date

CERTIFICATION: I, _____ the _____, hereby certify that, to the
(Name of Applicant) (Title)
 best of my knowledge, the above information is correct as of _____.
(Date)

Signature of Applicant (Required)

IF ANY BUSINESS IS CONDUCTED OR IS AWARDED A BID WITHIN THE KENAI PENINSULA BOROUGH YOU MUST BE REGISTERED TO COLLECT SALES TAX. THE SALES TAX DEPARTMENT CAN BE REACHED AT (907) 714-2175.

NON – COLLUSION AFFIDAVIT

(To be executed and submitted with the Proposal)

I, _____ of _____,
Firm Name

being duly sworn, do depose and state:

I, or the firm, association, or corporation of which I am a member, who proposal on the Contract to be executed by the City of Kenai, for the construction of that certain construction project designated as:

Kenai Fire Department Fire Engine 2018

located at Kenai, Alaska in the State of Alaska, have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such Contract.

Signature

Name

Title

Date

STATE OF ALASKA)
)ss
THIRD JUDICIAL DISTRICT)

The foregoing instrument was acknowledged before me this ____ day of _____, 201__, by_____.

NOTARY PUBLIC for State of Alaska
My Commission Expires: _____

PROPOSAL BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____

_____ as Principal, and _____

as Surety, are hereby held and firmly bound unto _____

as the OWNER, in the penal sum of _____
for the payment of which, well and truly made, we hereby jointly and severally bind ourselves,
successors and assigns.

Signed this _____ day of _____, 201___. The Principal has submitted to _____

_____, a certain PROPOSAL, attached hereto and hereby made
a part

hereof, to enter into a contract in writing for the _____

NOW, THEREFORE,

- (a) If said PROPOSAL shall be rejected, or
- (b) If said PROPOSAL shall be accepted and the principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said PROPOSAL), and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said PROPOSAL, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agree that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such PROPOSAL; and said Surety does hereby waive notice of any such extension.


IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal L.S.)

Surety

By: _____

IMPORTANT- - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

Contractor's Printed Name: <hr/> Contractor's Fed. Tax ID #: <hr/>		THE CITY OF KENAI SHORT FORM AGREEMENT This agreement is not valid until properly signed by the parties and accompanied by a valid City of Kenai Purchase Order	City of Kenai 210 Fidalgo Ave. Kenai, AK 99611 907-283-8236
CONTRACTOR WILL PROVIDE THE CITY OF KENAI THE FOLLOWING SERVICE(S); <p>Interpretation: The following documents are incorporated herein by reference and shall be given the following order of precedence:</p> <ol style="list-style-type: none"> 1. Addenda 2. Bid Specifications / Drawings / Instructions to Bidders 3. This Short Form Agreement 4. General Conditions (See page two / reverse of this form if double sided) 5. Contractor's Bid 			
Contractor's compensation will be (In words and numbers):			
Time of commencement and completion:			
BY SIGNING BELOW, THE CONTRACTOR HEREBY AFFIRMS THAT HE OR SHE HAS READ AND ACCEPTS ALL TERMS AND CONDITIONS OF THIS AGREEMENT INCLUDING THE GENERAL CONDITIONS			Contractor's Address & Phone / Fax Numbers:
Contractor's Signature _____		Date _____	
Recommended by: _____	Purchase Order Number: _____	Approved by City Manager: _____	
Signature _____	Date _____	Signature _____	Date _____

GENERAL CONDITIONS

Section 1. Execution of This Agreement. This agreement is not valid until properly signed by the parties and accompanied by a valid City of Kenai Purchase Order.

Section 2. Independent Contractor. The Contractor shall provide services as an independent contractor to the City.

Section 3. Compliance With Laws. The Contractor shall comply with all statutes, ordinances, and regulations governing its performance, post all required notices, and obtain all permits, licenses, and other entitlements necessary to its performance. The Contractor shall pay all taxes related to its performance and shall be current on all borough taxes at the time of entering this agreement. The Contractor shall acquire and maintain in good standing all permits, licenses; and other entitlements necessary to the legal performance of this agreement.

Section 4. Equal Employment Opportunity.

- A. The Contractor will not discriminate against any applicant for employment because of race, color, religion, national origin, ancestry, age, sex, marital status, or mental or physical handicap. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to the characteristics listed above. Such action shall include, without limitation, employment, upgrading, demotion or transfer, recruitment or recruiting or recruiting advertising, lay-off or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship. The Contractor will post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- B. The Contractor shall state in all solicitations or advertisements for employees to work on agreement jobs, that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, ancestry, age, sex, marital status, or physical or mental handicap.
- C. The Contractor shall include the provisions of subsections A and B of this section in every subcontract or purchase order under this agreement, so as to be binding upon every subcontractor or vendor of the Contractor under this agreement.

Section 5. Insurance. During the term of this agreement the Contractor shall maintain a policy of workers' compensation and employers' liability insurance as required by law. Contractor shall also be required to carry Commercial general liability with minimum coverage of \$1,000,000 and automobile liability insurance with minimum coverage of \$1,000,000 combined single limit bodily injury and property damage per occurrence. This insurance shall be primary and exclusive of any other insurance carried by the City of Kenai. The commercial general liability insurance shall be without limitation on the time within which the resulting loss, damage, or injury is actually sustained. Certificate(s) of Insurance shall be provided by Contractor and all subcontractors, or their Insurance Companies and/or their Agents, naming the City of Kenai as an additional insured for the work specified in this contract with a waiver of subrogation for commercial general liability insurance and automobile liability insurance. The certificates of insurance must reference the specific contract by name and project number. Workers compensation insurance must be endorsed for waiver of subrogation against the City. Such insurance shall be by a company/corporation currently rated "A-" or better by A.M. Best.

Section 6. Assignments. Unless the City provides otherwise in writing, any assignment by the Contractor of its interest in any part of this agreement or any delegation of its duties shall be void, and permit the City to terminate this agreement without liability for work performed.

Section 7. Ownership, Publication, Reproduction, and Use of Material. Unless the City provides otherwise in writing, all data, documents, and materials that the Contractor produces shall be property of the City, which shall retain the exclusive right to publish, disclose, distribute and otherwise use, in whole or in part, any such data, documents, or other materials. This exclusive right does not apply to any materials presently in the public domain or not subject to copyright.

Section 8. Indemnity. The contractor shall indemnify, hold harmless, and defend the City at its own expense from and against any and all claims, losses, damages or expenses, including reasonable attorney's fees, of, or liability for, any wrongful or negligent acts, errors, or omissions of the contractor, its officers, agents or employees, or any subcontractor under this agreement. The contractor shall not be required to defend or indemnify the City for any claims of, or liability for, any wrongful or negligent act, error, or omission solely due to the independent negligence of the City. If there is a claim of, or liability for, the joint negligence of the contractor and the independent negligence of the City, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. Apportionment shall be determined upon final determination of percentage of fault. If any such determination is by settlement, the percentage of fault attributed to each party for purposes of this indemnification provision shall only be binding upon the parties included in the settlement agreement. "Contractor" and "City" as used in this article include the employees, agents, officers, directors, and other contractors who are directly responsible, respectively, to each. The term "independent negligence of the City" is negligence other than in the City's selection, administration, monitoring, or controlling of the contractor and in approving or accepting the contractor's work.

Section 9. Termination.

This agreement may be terminated for cause immediately or by the City for its convenience upon fifteen (15) days' written notice to the Contractor.

Upon termination and the Contractor's furnishing to the City all finished and unfinished data, documents or other materials prepared under the agreement, the City shall pay the Contractor for all satisfactory work performed before termination.

Section 10. Nonwaiver. Either party failing to enforce a provision of this agreement does not waive the provision or affect the validity of the agreement or a party's right to enforce any provision of the agreement.

Section 11. Jurisdiction and Choice of Law. Any civil action arising from this agreement shall be brought in the trial courts for the Third Judicial District of the State of Alaska at Kenai. The laws of the State of Alaska govern this agreement.

Section 12. Integration. This document and all documents incorporated in it by reference are the entire agreement of the parties and supersede all previous communications, representations or agreements regarding this subject, whether oral or written, between the parties.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal, and
(Corporation, Partnership, or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

(Name of Owner)

(Address of Owner)

hereinafter called Owner, in the penal sum of _____ Dollars,
(\$ _____) in lawful money of the United States, for the payment of which sum well and truly
to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly
by these presents.

THE CONDITIONS OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with
the Owner, dated the _____ day of _____, 201_, a copy of which is hereto attached and made a part
hereof for the construction of:

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings,
covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions
thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims
and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs
and damages which it may suffer by reason of failure to do so, and shall reimburse and repay owner all outlay
and expense which the owner may incur in making good any default, then this obligation shall be void; otherwise
to remain in full force and effect .

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change,
extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or
the specifications accompanying the same shall in any ways affects its obligation on this bond, and it does hereby
waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the
work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of
any beneficiary hereunder, who claims may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 201__.

(Principal) (SEAL)

(Principal Secretary)

ATTEST:

BY _____

(Witness as to Principal)

(Address)

(Address)

(Surety) (SEAL)

ATTEST:

BY _____
(Attorney-in-Fact)

(Witness as to Surety)

(Address)

(Address)

NOTE: If Contractor is Partnership, all partners should execute bond.

IMPORTANT: Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____ (Name of Contractor)

_____ (Address of Contractor)

a _____, hereinafter called Principal, and
(Corporation, Partnership, or Individual)

_____ (Name of Surety)

_____ (Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

_____ (Name of Owner)

_____ (Address of Owner)

hereinafter called Owner, in the penal sum of _____ Dollars, (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, 201_, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of said work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or other-wise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any ways affects its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, who claims may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 201__.

(Principal) (SEAL)

(Principal Secretary)

ATTEST:

BY _____

(Witness as to Principal)

(Address)

(Address)

(Surety) (SEAL)

ATTEST:

BY _____
(Attorney-in-Fact)

(Witness as to Surety)

(Address)

(Address)

NOTE: If Contractor is Partnership, all partners should execute bond.

IMPORTANT: Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

**CONTRACTOR'S RELEASE AND AFFIDAVIT OF PAYMENTS
OF DEBTS AND CLAIMS ("Release")**

PROJECT NAME: KENAI FIRE DEPARTMENT FIRE ENGINE 2018

The undersigned, being first duly sworn, deposes and says:

1. That pursuant to this contract for project _____ between the undersigned and the City of Kenai dated _____ the undersigned hereby certifies that, except as listed below, he has paid in full or has otherwise satisfied all obligations for materials and equipment furnished for all work, labor, and services performed and for all known indebtedness and claims for which the Contractor or the City of Kenai is or may become liable in connection with performance under this contract. The Contractor warrants that he has made diligent search and inquiry to determine the existence of any such claim, debt, or liability and that all such obligations, whether liquidated, unliquidated, or disputed, have been satisfied.

2. The Contractor further certifies he did not extend any loan, gratuity, or gift of money of any form whatsoever to any employee or agent of the City, that he did not rent or purchase any equipment or materials from any employee of the City, nor to the best of his knowledge, from any agent of any employee of the City, and that he has not made any promise to an employee or agent of the City to do or undertake any such action after completion of the subject contract.

3. Pursuant to the above-described contract and in consideration of the final payment in the amount of \$ _____, the undersigned Contractor hereby releases and discharges the City of Kenai, its officers, agents and employees of and from any and all further claim, debt, charge, demand, liability, or other obligation whatsoever under or arising from said contract, whether known or unknown and whether or not ascertainable at the time of the execution of this instrument. This release is complete, final, binding and irrevocable.

4. The Contractor shall indemnify, defend, save and hold the City, its elected and appointed officers, agents and employees, harmless from any and all claims, demands, suits, or liability of any nature, kind or character including costs, expenses, and attorneys fees resulting from Contractor or Contractor's officers, agents, employees, partners, attorneys, suppliers, and subcontractors' performance or failure to perform this Agreement in any way whatsoever. This defense and indemnification responsibility includes claims alleging acts or omissions by the City or its agents which are said to have contributed to the losses, failure, violations, or damage. However, Contractor shall not be responsible for any damages or claim arising from the sole negligence or willful misconduct of the City, its agents, or employees. Contractor and subcontractors shall also not be required to defend or indemnify the City for damage or loss that has been found to be attributed to an independent contractor directly responsible to the City under separate written contract.

If any portion of this Release is voided by law or court of competent jurisdiction, the remainder of this Release shall remain in full force and effect.

CONTRACTOR'S RELEASE AND AFFIDAVIT OF PAYMENTS
OF DEBTS AND CLAIMS ("Release")

IN WITNESS WHEREOF, this Release has been executed this __ day of _____, 201__.

(Contractor's signature)

Title _____

STATE OF ALASKA)
) ss
THIRD JUDICIAL DISTRICT)

THIS IS TO CERTIFY that on this _____ day of _____, 201__, before the undersigned, a Notary Public in and for the State of Alaska, duly commissioned and sworn, personally appeared _____, who, having produced satisfactory evidence of identification, and having acknowledged the voluntary and authorized execution of the foregoing instrument for the purposes therein mentioned, executed the above and foregoing instrument.

Notary Public for Alaska

My Commission Expires: _____

(NOTE: In case of a corporation, the attached Certificate of Authority must be completed by a corporate officer other than the one who signs above.)



"Village with a Past, City with a Future"

210 Fidalgo Avenue, Kenai, Alaska 99611-7794
Telephone: 907-283-7535 / Fax: 907-283-3014
www.ci.kenai.ak.us

CONSENT OF SURETY COMPANY TO FINAL PAYMENT

PROJECT: _____

CONTRACT DATE: _____

CONTRACTOR: _____

TO: CITY OF KENAI, OWNER
210 Fidalgo Avenue
Kenai, AK 99611
Attn: Public Works Department

In accordance with the provisions of the above-referenced Contract between Owner, City of Kenai, and Contractor, Surety (insert name and address of Surety),

does hereby consent to and approve of the final payment to Contractor in the amount of \$_____, and in the case of Surety, it is further agrees as follows:

1. In giving this Consent, Surety has made its own investigation to determine whether said payment should be made to Contractor and Surety has not relied on any representation by the City of Kenai or its employees or agents which has induced it to consent to such payment.

2. Surety agrees that this payment shall not relieve Surety of any of its obligations to the City of Kenai as set forth in its Labor and Material Payment and Performance Bonds and Surety waives any and all claims against City of Kenai for wrongful release of funds to Contractor.

**CITY OF KENAI
COST PROPOSAL
Fire Engine**

COST PROPOSAL MUST BE SEALED IN A SEPARATE ENVELOPE

ACKNOWLEDGEMENT

In submitting this proposal, we certify that we have examined the specifications documents, have received Addenda

Nos. , and have included their provisions in our proposal.

1. **Base RFP** – 100% payment upon delivery and acceptance at the City of Kenai Fire Department
\$ _____
Numerical Amount

2. **Deductive Alternate #1** (Requires 100% payment and performance bond)
 - Chassis to be paid in full upon delivery to the successful Proposers' plant.
 - 95% of balance upon acceptance of completed equipment at successful Proposers Plant.
 - Remaining 5% upon delivery and acceptance at the City of Kenai Fire Department.
\$ _____
Numerical Amount

3. **Deductive Alternate #2**
 - 100% pre-payment with contract.
\$ _____
Numerical Amount

SIGNATURE REQUIREMENT

Firm Name _____

Address _____

City _____ State _____ Zip _____

Telephone _____ Fax _____

Representative _____ Title _____

Email Address _____

The undersigned has read the foregoing and hereby agrees to the conditions stated therein by affixing his/her signature below:

Signature of Authorized Company Representative **Date**

B. SPECIFICATIONS

	Bidder Complies	
	Yes	No
<p><u>SPECIFICATIONS FOR A TRIPLE COMBINATION PUMPER</u></p> <p>Sealed bids will be received by Kenai Fire Department for the furnishing of all necessary labor, equipment and material for the Fire Apparatus and other equipment as outlined in the following specifications.</p> <p><u>INTENT OF SPECIFICATIONS</u></p> <p>It shall be the intent of these specifications to cover the furnishing and delivery of a complete fire apparatus. These detailed specifications cover the requirements as to the type of construction, finish, equipment and tests to which the fire apparatus shall conform. Minor details of construction and materials, which are not otherwise specified, are left to the discretion of the contractor.</p> <p><u>INSTRUCTIONS TO BIDDERS</u></p> <p>The purchaser's standards for bidding automotive fire apparatus must be strictly adhered to, and all bid forms and questions must be complete and submitted with the bid. Omissions and variations shall result in immediate rejection of the bid.</p> <p>Bids shall only be considered from companies that have an established reputation in the field of fire apparatus construction and have been in business for a minimum of 20 years. Furthermore, in order to insure fair, ethical, and legal competition, neither the original equipment manufacturer (O.E.M.) nor parent company of the O.E.M. shall have ever been fined or convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market (no exception).</p> <p>If a bidder represents more than one fire apparatus company or brands of apparatus, they must only bid the top of the line that meets specification.</p> <p>Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified.</p> <p>Any apparatus manufacturer or their parent company who has had a performance bond called in the last 10 years, shall not be eligible to bid. Any bids from these manufactures shall be immediately rejected (no exception).</p> <p>Each bid shall be accompanied by a set of manufacturer's set of specifications consisting of a detailed description of the apparatus, construction methods, and equipment proposed to which the apparatus furnished under contract shall conform. These specifications shall indicate size, type, model and make of all components parts and equipment, providing proof of compliance with each and every item in the departments advertised specifications. A letter only, even</p>		

	Bidder Complies	
	Yes	No
<p>though written on company letterhead, shall not be sufficient. An exception to this requirement shall not be acceptable.</p> <p>In accordance with the current edition of NFPA 1901 standards, the proposal shall specify whether the fire department or apparatus dealership shall provide required loose equipment.</p> <p>The purchaser will utilize this advertised specification to compare all submitted bid proposals. To facilitate comparison, all bid proposal specifications shall be submitted in the same sequence as the advertised specification. Any bidder who fails to submit a set of bid proposal specifications, or who photo copies and submits these specifications as their own construction details will be considered non responsive. This shall render such proposal ineligible for award.</p> <p>The purchaser's specification shall, in all cases, govern the construction of the apparatus, unless a properly documented exception or deviation was approved. Any bid indicating that the manufacturer's proposal shall supersede the purchaser's specification will be considered a complete substitute and immediately rejected.</p> <p>THE PURCHASER HAS THE RIGHT TO REJECT ANY BIDS WHICH DOES NOT MEET THESE SPECIFICATIONS AND IS THE SOLE DECIDER TO DEEM WHICH BID IS IN THE BEST INTEREST OF THE PURCHASER.</p> <p><u>EXCEPTIONS</u></p> <p>These specifications are based upon design and performance criteria which have been developed by the fire department as a result of extensive research and careful analysis. Subsequently these specifications reflect the only type of fire apparatus that is acceptable at this time and all specifications herein contained are considered as minimum. Therefore exceptions to the specifications may not be accepted.</p> <p>Bidders shall indicate in the "yes/no" column if their bid complies on each item (paragraph) specified.</p> <p>If a product brand name is specified and is commercially available to all bidders, an exception to such items is not acceptable and such bid may be rejected.</p> <p>Exceptions shall be allowed if they are equal to or superior to that specified and provided they are listed and fully explained on a separate page. All deviations, no matter how slight, shall be clearly explained on a separate sheet, in the bid sequence, citing the page and paragraph number(s) of the specifications, how the proposal deviation is different, how the deviation meets or exceeds the specifications and why it is necessary, and entitled "EXCEPTIONS TO SPECIFICATIONS". The buyer reserves the right to require a bidder to provide proof in each</p>		

Kenai Fire Department

	Bidder Complies	
	Yes	No
<p>case that a substituted item is equal to that specified. The buyer shall be the sole judge in determination of acceptable substitutes.</p> <p>Proposals that are found to have deviations without listing them or bids taking total exceptions to these advertised specifications will be rejected (no exception).</p> <p>Bids not including all exceptions is a material breach and shall result in the bid being immediately rejected (no exception).</p> <p><u>GENERAL DESIGN AND CONSTRUCTION</u></p> <p>The cab, chassis, pump module, and body are to be entirely designed, assembled and painted by the prime vehicle manufacturer, which minimizes third party involvement on engineering, design, service and warranty issues.</p> <p>All bidders shall provide a list of the company, manufacturing location, and engineering source for each individual major component, including but not limited to the welded cab assembly, the pumphouse module assembly, the chassis assembly, body and electrical system. Apparatus using any subcontracted cab, chassis, pump module, electrical system or body will not be acceptable.</p> <p>The apparatus shall be designed with due consideration to distribution of load between the front and rear axles. Weight balance and distribution shall be in accordance with the recommendations of the National Fire Protection Association.</p> <p>The bidder shall make accurate statements as to the apparatus weight and dimensions.</p> <p><u>QUALITY AND WORKMANSHIP</u></p> <p>All steel welding shall follow American welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding shall follow American welding Society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding shall follow American Welding Society B2.1-2000 requirements for structural welding of sheet metal. Flux core arc welding to use alloy rods, type 7000, American welding Society standards A5.20-E70T1. Employees classified as welders are tested and certified to meet the American Welding Society codes upon hire and every three (3) years thereafter. The manufacturer shall be required to have an American welding Society certified welding inspector in plant during working hours to monitor weld quality.</p> <p>The manufacturer shall also be certified to operate a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International organization for Standardization (ISO) specify the quality systems that shall be established by the manufacturer</p>		

	Bidder Complies	
	Yes	No
<p>for design, manufacture, installation and service. A copy of the certificate of compliance shall be included with the bid.</p> <p>To demonstrate the quality of the product and service, each bidder shall provide a list of at least ten (10) fire departments/municipalities in the region that have bought a second time from the representing dealer. An exception to this requirement shall not be acceptable.</p> <p><u>DELIVERY</u> Apparatus, to insure proper break in of all components while still under warranty, shall be delivered under its own power - rail or truck freight shall not be acceptable. A video shall be provided for the orientation using this actual truck</p> <p><u>MANUALS AND SERVICE INFORMATION</u> The manufacturer shall supply at time of delivery, two (2) complete operation and maintenance manuals covering the complete apparatus as delivered. A permanent plate shall be mounted in the drivers compartment which specifies the quantity and type of fluid required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.</p> <p><u>SAFETY VIDEO</u> Since video is much more effective than written documentation and can be replayed for new personnel and as a refresher for existing personnel, an apparatus safety video, in DVD format shall be provided at time of delivery. This video shall address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus. Safety procedures for the following shall be included on the video: vehicle pre trip inspection, chassis operation, pump operation and maintenance.</p> <p><u>PERFORMANCE TESTS AND REQUIREMENTS</u> A road test shall be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts, and rear axle shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. Vehicle shall adhere to the following parameters:</p> <p>A) The apparatus, when fully equipped and loaded, shall have not less than 25 percent nor more than 50 percent of the weight on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle.</p> <p>B) The apparatus shall be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine.</p>		

	Bidder Complies	
	Yes	No
<p>C) The service brakes shall be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway. The air brake system shall conform to Federal Motor vehicle Safety Standards (FMVSS) 121.</p> <p>D) The apparatus, fully loaded, shall be capable of obtaining a speed of 50 mph on a level concrete highway with the engine not exceeding the governed rpm (full load).</p> <p><u>FAILURE TO MEET TEST</u> In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the bidder within 30 days of the date of the first trial. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. failure to comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the bidder of such changes, shall also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser or its use by the purchaser during the above-specified period with the permission of the bidder shall not constitute acceptance.</p> <p><u>SERVICE AND WARRANTY SUPPORT (DEALERSHIP)</u> TO INSURE FULL SERVICE AFTER DELIVERY, THE SELLING BIDDER/DEALERSHIP MUST BE CAPABLE OF PROVIDING SERVICE WHEN REQUIRED.</p> <p>The bidder/dealership shall show that the company is in position to render prompt service and to furnish replacement parts.</p> <p>Each bidder/dealership must be able to display that they are actively in the fire apparatus service business by operating a factory authorized service center and parts repository capable of satisfying the warranty service requirements and parts requirements of the vehicle(s) being purchased.</p> <p>The bidder/dealership must state the location of this authorized service center. This service center must have a staff of factory-trained mechanics, well versed in all aspects of service for all major components of the apparatus. The service center must be within five hundred (500) miles of the Fire Department.</p> <p><u>SERVICE AND WARRANTY SUPPORT (MANUFACTURER)</u> To provide an additional layer of service support, the successful manufacturer must also own a least two separate service facilities, one located in the northern portion of the US to service both Canada and the northern US states and one in the south to service the southern states.</p> <p>The manufacturer shall stock 1 million parts equating to \$5,000,000 of inventory dedicated to service and replacement parts to ensure quick response and minimize down time. Furthermore,</p>		

Kenai Fire Department

	Bidder Complies	
	Yes	No
<p>the manufacturer shall house the inventory in a dedicated facility, with a dedicated shipping area that ensures service parts are given priority. The bidder shall provide detailed documentation of service and replacement part resources.</p> <p>Parts identification shall be provided to both the dealer and the Fire Department through an on line web based application for the specific truck reflected in this specification. Access will be granted using the specific VIN number of the vehicle. The online web application will provide the ability to view complete bills of materials, digital photographs, parts drawings, assembly drawings, and access to all current operation, maintenance and service publications.</p> <p>The manufacturer must also maintain a 24 hour/ 7 day a week, toll free emergency hot line.</p> <p>The manufacturer shall employ a staff of adequate size (a minimum of 30 personnel) specifically dedicated to providing customer support and parts for the fielded fleet of vehicles it has produced.</p> <p>The manufacturer must be capable of providing both in-house and on-site service for the apparatus.</p> <p>The manufacturer shall offer regional factory hands-on repair and maintenance training classes.</p> <p>The manufacturer shall employ a minimum of four certified EVT technicians on staff, not only providing technical expertise in the repair of fire apparatus, but also demonstrating the commitment to service after the sale.</p> <p><u>LIABILITY</u></p> <p>The successful bidder shall defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract. To ensure this will occur, the bidder shall carry the following minimum insurance.</p> <p><u>COMMERCIAL GENERAL LIABILITY INSURANCE, MANUFACTURER</u></p> <p>The successful bidder shall supply, from the apparatus manufacturer, during the performance of the contract and for three (3) years following acceptance of the product, and the apparatus manufacturer shall keep in force at least the following minimum limits of commercial general liability insurance:</p> <p style="padding-left: 40px;">Each Occurrence\$1,000,000</p> <p style="padding-left: 40px;">Products/Completed Operations Aggregate\$1,000,000</p> <p style="padding-left: 40px;">Personal and Advertising Injury\$1,000,000</p>		

Kenai Fire Department

	Bidder Complies	
	Yes	No
<p>General Aggregate\$5,000,000</p> <p>Coverage shall be written on a Commercial General Liability form. The policy shall be written on an occurrence form and shall include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The apparatus manufacturer's policy shall include Owner as an additional insured when required by written contract.</p> <p><u>COMMERCIAL AUTOMOBILE LIABILITY INSURANCE, MANUFACTURER</u></p> <p>The successful bidder shall, during the performance of the contract keep in force at least the following minimum limits of commercial automobile liability insurance:</p> <p>Each Accident Combined Single Limit:\$1,000,000</p> <p>Coverage shall be written on a Commercial Automobile liability form.</p> <p><u>UMBRELLA/EXCESS LIABILITY INSURANCE, MAUNFACTURER</u></p> <p>The successful bidder shall supply from the apparatus manufacturer, during the performance of the contract and for three (3) years following acceptance of the product, and the apparatus manufacturer shall keep in force at least the following minimum limits of umbrella liability insurance:</p> <p>Aggregate:\$25,000,000</p> <p>Each Occurrence:\$25,000,000</p> <p>The umbrella policy shall be written on an occurrence basis and at a minimum provide excess to the apparatus manufacturer's General Liability, Automobile Liability and Employer's Liability policies.</p> <p>The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.</p> <p>Coverage shall be provided by a carrier(s) rated A- or better by A.M. Bests.</p> <p>All policies shall provide a 30 day notice of cancellation to the named insured. The Certificate of Insurance shall provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice shall be delivered in accordance with the policy provisions. Bidder agrees to furnish owner with a current Certificate of Insurance, from the apparatus manufacturer, with the coverages listed above along with its bid. The certificate shall show the purchaser as certificate holder.</p>		

	Bidder Complies	
	Yes	No
<p><u>SINGLE SOURCE MANUFACTURER</u></p> <p>Bids shall only be accepted from a single source apparatus manufacturer. The definition of single source is a manufacturer that designs and manufactures their products using an integrated approach, including the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body being designed, fabricated and assembled on the bidder's premises. The electrical system (hardwire or multiplex) shall be both designed and integrated by the same apparatus manufacturer. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) must be from a single source manufacturer and not split between manufacturers (i.e. body, pumphouse, cab weldment and chassis). The bidder shall provide evidence that they comply with this requirement.</p> <p>The bidder shall state the location of the factory where the apparatus is to be built.</p> <p><u>NFPA 2016 STANDARDS</u></p> <p>This unit shall comply with the NFPA standards effective January 1, 2016, except for fire department directed exceptions. These exceptions shall be set forth in the Statement of Exceptions.</p> <p>Certification of slip resistance of all stepping, standing and walking surfaces shall be supplied with delivery of the apparatus.</p> <p>All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points shall be identified on the customer approval print and are shown as approximate. Actual location(s) shall be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack.</p> <p>A plate that is highly visible to the driver while seated shall be provided. This plate shall show the overall height, length, and gross vehicle weight rating.</p> <p>The manufacturer shall have programs in place for training, proficiency testing and performance for any staff involved with certifications.</p> <p>An official of the company shall designate, in writing, who is qualified to witness and certify test results.</p>		

Kenai Fire Department

	Bidder Complies	
	Yes	No
<p><u>NFPA COMPLIANCY</u> Apparatus proposed by the bidder shall meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in the current edition at time of contract execution. Fire Department's specifications that differ from NFPA specifications shall be indicated in the proposal as "non-NFPA."</p> <p><u>PUMP TEST</u> The rated water pump shall be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results, along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horsepower curve, and the manufacturer's record of pump construction details shall be forwarded to the Fire Department.</p> <p><u>GENERATOR TEST</u> If the unit has a generator, the generator shall be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results shall be provided to the Fire Department at the time of delivery.</p> <p><u>INSPECTION TRIP(S)</u> The bidder shall provide two (2) factory inspection trip(s) for two people customer representative(s). The inspection trip(s) shall be scheduled at times mutually agreed upon between the manufacturer's representative and the customer. All costs such as travel, lodging and meals shall be the responsibility of the bidder.</p> <p><u>BID BOND</u> All bidders shall provide a bid bond as security for the bid in the form of a 10% bid bond to accompany their bid. This bid bond shall be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond shall be issued by an authorized representative of the Surety Company and shall be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond shall include language, which assures that the bidder/principal shall give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.</p> <p>Proposals received from bidders who do not manufacture the chassis shall provide a warranty that shall be issued jointly and severally by, and signed by, both the bidder and the chassis manufacturer.</p> <p>If the successful bidder does not manufacture the chassis, the bidder shall supply a warranty bond, in addition to their performance bond, along with their signed contract. This warranty</p>		

Kenai Fire Department

	Bidder Complies	
	Yes	No
<p>bond shall guarantee all terms and conditions of the Basic One (1) Year Limited Warranty and names both the bidder and chassis manufacturer as co-principals. This warranty bond shall be issued for the contract amount and shall remain in force for a term which is consistent with the term of the Basic One (1) Year Limited Warranty.</p> <p>Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle shall apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle shall not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision shall prevail.</p> <p><u>PERFORMANCE BOND, 1 YEAR</u></p> <p>The successful bidder shall furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond shall be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required.</p> <p>Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Basic One (1) Year Limited Warranty period included within this proposal. Owner agrees that the penal amount of this bond shall be simultaneously amended to 100% percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type shall not exceed one (1) year from the date of such satisfactory acceptance and delivery, or the actual Basic One (1) Year Limited Warranty period, whichever is shorter.</p> <p><u>APPROVAL DRAWING</u></p> <p>A drawing of the proposed apparatus shall be provided for approval before construction begins. The sales representative shall also have a copy of the same drawing. The finalized and approved drawing shall become part of the contract documents. This drawing shall indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.</p> <p>A "revised" approval drawing of the apparatus shall be prepared and submitted by the manufacturer to the purchaser showing any changes made to the approval drawing.</p>		

	Bidder Complies	
	Yes	No
<p><u>ELECTRICAL WIRING DIAGRAMS</u> Two (2) electrical wiring diagrams, prepared for the model of chassis and body, shall be provided.</p> <p><u>CHASSIS</u> Chassis provided shall be a new, tilt-type custom fire apparatus. The chassis shall be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis shall be designed and manufactured for heavy-duty service, with adequate strength and capacity for the intended load to be sustained and the type of service required.</p> <p><u>WHEELBASE</u> The wheelbase of the vehicle shall be no greater than 208.50.</p> <p><u>GVW RATING</u> The gross vehicle weight rating shall be a minimum of 58,000#.</p> <p><u>FRAME</u> The chassis frame shall be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails shall be heat-treated steel measuring 10.25" x 3.50" x .375".</p> <p>Each rail shall have a section modulus of 16.00 cubic inches, yield strength of 120,000 psi, and a resisting bending moment (rbm) of 1,921,069 inch-pounds.</p> <p><u>FRONT AXLE</u> The front axle shall be a reverse "I" beam type with inclined king pins and a rated capacity of 18,000 lb.</p> <p><u>FRONT SUSPENSION</u> The front springs shall be a three (3)-leaf, taper leaf design, 54.00" long x 4.00" wide, with a ground rating of 18,000 lb.</p> <p>The two (2) top leaves shall wrap the forward spring hanger pin. The top leaf shall also wrap the rear spring hanger pin. Both the front and rear eyes shall be Berlin style wraps that shall place the eyes in the horizontal plane within the main leaf. This shall reduce bending stress from acceleration and braking.</p> <p>A steel encased rubber bushing shall be used in the spring eye. The steel encased rubber bushing shall be maintenance free and require no lubrication.</p>		

	Bidder Complies	
	Yes	No
<p><u>SHOCK ABSORBERS</u> To provide a smoother ride, heavy-duty telescoping shock absorbers shall be provided on the front axle.</p> <p><u>FRONT OIL SEALS</u> Oil seals with viewing window shall be provided on the front axle.</p> <p><u>FRONT TIRES</u> Front tires shall be 315/80R22.50 radials, 20 ply tread, rated for 18,180 lb maximum axle load and 68 mph maximum speed.</p> <p>The tires shall be mounted on 22.50" x 9.00" steel disc type wheels with a ten (10) stud, 11.25" bolt circle.</p> <p><u>REAR AXLE</u> The rear axle shall be a tandem axle assembly with a capacity of 40,000 lb.</p> <p>An inter-axle differential, which divides torque evenly between axles, shall be provided with an indicator light mounted on the cab instrument panel.</p> <p><u>TOP SPEED OF VEHICLE</u> A rear axle ratio shall be furnished to allow the vehicle to reach a top speed of 60 mph.</p> <p><u>REAR SUSPENSION</u> The rear suspension shall be a rubber bolster system with an equalizing beam design that distributes the load equally between the two (2) axles. The ground rating of the suspension shall be 42,000 lb.</p> <p><u>REAR OIL SEALS</u> Oil seals shall be provided on the rear axle(s).</p> <p><u>REAR TIRES</u> Rear tires shall be eight (8) 12R22.50 radials, 16 ply all season tread, rated for 54,240 lb maximum axle load and 75 mph maximum speed.</p> <p>The tires shall be mounted on 22.50" x 8.25" steel disc type wheels with a ten (10) stud, 11.25" bolt circle.</p> <p><u>TIRE BALANCE</u> All tires shall be balanced with balancing beads. The beads shall be inserted into the tire and eliminate the need for wheel weights.</p>		

	Bidder Complies	
	Yes	No
<p><u>TIRE PRESSURE MANAGEMENT</u> There shall be a LED tire alert pressure management system provided, that shall monitor each tire's pressure. A sensor shall be provided on the valve stem of each tire for a total of 10 tires.</p> <p>The sensor shall calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor shall activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi.</p> <p>Removing the cap from the sensor shall indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED shall immediately start to flash.</p> <p><u>FRONT HUB COVERS</u> Stainless steel hub covers shall be provided on the front axle. An oil level viewing window shall be provided.</p> <p><u>REAR HUB COVERS</u> Stainless steel, high hat, hub covers shall be provided on the rear axle hubs.</p> <p><u>CHROME LUG NUT COVERS</u> Chrome lug nut covers shall be supplied on front and rear wheels.</p> <p><u>MUD FLAPS</u> Mud flaps shall be installed behind the front and rear wheels of the apparatus.</p> <p><u>WHEEL CHOCKS</u> There shall be one (1) pair of folding aluminum alloy wheel blocks, with easy-grip handle provided.</p> <p><u>WHEEL CHOCK BRACKETS</u> There shall be one (1) pair of horizontal mounting wheel chock brackets provided for the folding wheel chocks. The brackets shall be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets shall be mounted below the left side rear compartment.</p> <p><u>ELECTRONIC STABILITY CONTROL</u> A vehicle control system shall be provided as an integral part of the ABS brake system from Meritor Wabco.</p> <p>The system shall monitor and update the lateral acceleration of the vehicle and compare it to a critical threshold where a side roll event may occur. If the critical threshold is met, the vehicle control system shall automatically reduce engine RPM, engage the engine retarder (if equipped),</p>		

	Bidder Complies	
	Yes	No
<p>and selectively apply brakes to the individual wheel ends of the front and rear axles to reduce the possibility of a side roll event.</p> <p>The system shall monitor directional stability through a lateral accelerometer, steer angle sensor and yaw rate sensor. If spinout or drift out is detected, the vehicle control system shall selectively apply brakes to the individual wheel ends of the front and rear axles to bring the vehicle back to its intended direction.</p> <p><u>ANTI-LOCK BRAKE SYSTEM</u></p> <p>The vehicle shall be equipped with an anti-lock braking system. The ABS shall provide a six (6) channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology shall control the anti-lock braking system. Each wheel shall be monitored by the system. When any wheel begins to lockup, a signal shall be sent to the control unit. This control unit shall then reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system shall eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.</p> <p><u>AUTOMATIC TRACTION CONTROL</u></p> <p>An anti-slip feature shall be included with the ABS. The Automatic Traction Control shall be used for traction in poor road and weather conditions. The Automatic Traction Control shall act as an electronic differential lock that shall not allow a driving wheel to spin, thereby supplying traction at all times. The ABS electronic control unit (ECU) shall work with the engine ECU, sharing information concerning wheel slip. Engine ECU shall use information to control engine speed, allowing only as much throttle application as required for the available traction, regardless of how much the driver is asking for. A "mud/snow" switch shall be provided on the instrument panel. Activation of the switch shall allow additional tire slip to let the truck climb out and get on top of deep snow or mud.</p> <p><u>BRAKES</u></p> <p>The service brake system shall be a full air type design.</p> <p>Front brakes shall be disc type with automatic pad wear adjustment and 17.00" rotors for improved stopping distance.</p> <p>The rear brakes shall be 16.50" x 7.00" cam operated with automatic slack adjusters. Dust shields shall be provided.</p> <p><u>BRAKE SYSTEM AIR COMPRESSOR</u></p> <p>The air compressor shall have 18.7 cubic feet per minute output.</p>		

	Bidder Complies	
	Yes	No
<p><u>BRAKE SYSTEM</u></p> <p>The brake system shall include:</p> <ul style="list-style-type: none"> • Brake treadle valve • Heated automatic moisture ejector on air dryer • Total air system capacity of 6,408 cubic inches • Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi • Spring set parking brake system • Parking brake operated by a push-pull style control valve • A parking "brake on" indicator light on instrument panel • Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, shall be provided with an automatic spring brake application at 40 psi • A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa) • 1/4 turn drain valves on each air tank <p>The air tank shall be primed and painted to meet a minimum 750 hour salt spray test.</p> <p>To reduce the effects of corrosion, the air tank shall be mounted with stainless steel brackets (no exception).</p> <p><u>BRAKE SYSTEM AIR DRYER</u></p> <p>The air dryer shall be properly sized for the brake system with spin-on coalescing filter cartridge and 100 watt heater.</p> <p><u>BRAKE LINES</u></p> <p>Color-coded nylon brake lines shall be provided. The lines shall be wrapped in a heat protective loom where necessary in the chassis.</p> <p><u>AIR INLET</u></p> <p>One (1) air inlet with 3D series male coupling shall be provided. It shall allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet shall be located in the driver side lower step well of cab. A check valve shall be provided to prevent reverse flow of air. The inlet shall discharge into the "wet" tank of the brake system. A mating female fitting shall also be provided with the loose equipment.</p>		

		Bidder Complies																			
		Yes	No																		
<p><u>ALL WHEEL LOCK-UP</u> An additional all wheel lock-up system shall be installed which applies air to the front brakes only. The standard spring brake control valve system shall be used for the rear.</p> <p><u>ENGINE</u> The chassis shall be powered by an electronically controlled engine as described below:</p> <table border="1"> <tr> <td>Power:</td> <td>450 hp at 2100 rpm</td> </tr> <tr> <td>Torque:</td> <td>1250 lb-ft at 1400 rpm</td> </tr> <tr> <td>Governed Speed:</td> <td>2200 rpm</td> </tr> <tr> <td>Emissions Level:</td> <td>EPA 2017</td> </tr> <tr> <td>Fuel:</td> <td>Diesel</td> </tr> <tr> <td>Cylinders:</td> <td>Six (6)</td> </tr> <tr> <td>Displacement:</td> <td>543 cubic inches (8.9L)</td> </tr> <tr> <td>Starter:</td> <td>Heavy duty</td> </tr> <tr> <td>Fuel Filters:</td> <td>Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter.</td> </tr> </table> <p>The engine shall include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system shall give the owner or repair technician access to state of health information for various vehicle sub systems. The system shall monitor vehicle systems, engine and after treatment. The system shall illuminate a malfunction indicator light on the dash console if a problem is detected.</p> <p><u>HIGH IDLE</u> A high idle switch shall be provided, inside the cab, on the instrument panel, that shall automatically maintain a preset engine rpm. A switch shall be installed, at the cab instrument panel, for activation/deactivation.</p> <p>The high idle shall be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light shall be provided, adjacent to the switch. The light shall illuminate when the above conditions are met. The light shall be labeled "OK to Engage High Idle."</p> <p><u>ENGINE BRAKE</u> An engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver.</p>		Power:	450 hp at 2100 rpm	Torque:	1250 lb-ft at 1400 rpm	Governed Speed:	2200 rpm	Emissions Level:	EPA 2017	Fuel:	Diesel	Cylinders:	Six (6)	Displacement:	543 cubic inches (8.9L)	Starter:	Heavy duty	Fuel Filters:	Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter.		
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	Bidder Complies	
	Yes	No
<p>The driver shall be able to turn the engine brake system on/off and have a high, medium and low setting.</p> <p>The engine brake shall activate when the system is on and the throttle is released.</p> <p>The high setting of the brake application shall activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine.</p> <p>The engine brake shall be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated.</p> <p>The ABS system shall automatically disengage the auxiliary braking device, when required.</p> <p><u>CLUTCH FAN</u></p> <p>A fan clutch shall be provided. The fan clutch shall be automatic when the pump transmission is in "Road" position, and constantly engaged when in "Pump" position.</p> <p><u>ENGINE AIR INTAKE</u></p> <p>The engine air intake shall be located above the engine cooling package. It shall draw fresh air from the front of the apparatus through the radiator grille.</p> <p>A stainless steel metal screen shall be installed at the inlet of the air intake system that shall meet NFPA 1901 requirements.</p> <p>The air cleaner and stainless steel screen shall be easily accessible by tilting the cab.</p> <p><u>EXHAUST SYSTEM</u></p> <p>The exhaust system shall be stainless steel from the turbo to the engine's aftertreatment device, and shall be 4.00" in diameter. The exhaust system shall include a single module aftertreatment device to meet current EPA standards. An insulation wrap shall be provided on all exhaust pipes between the turbo and aftertreatment device to minimize the heat loss to the aftertreatment device. The exhaust shall terminate horizontally ahead of the right side rear wheels. A tailpipe diffuser shall be provided to reduce the temperature of the exhaust as it exits. Heat deflector shields shall be provided to isolate chassis and body components from the heat of the tailpipe diffuser.</p> <p><u>RADIATOR</u></p> <p>The radiator and the complete cooling system shall meet or exceed NFPA and engine manufacturer cooling system standards.</p>		

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	Bidder Complies	
	Yes	No
<p>For maximum corrosion resistance and cooling performance, the entire radiator core shall be constructed using long life aluminum alloy. The radiator core shall consist of aluminum fins, having a serpentine design, brazed to aluminum tubes. No solder joints or leaded material of any kind shall be acceptable in the core assembly.</p> <p>The radiator core shall have a minimum front area of 1060 square inches.</p> <p>Supply tank shall be made of heavy duty glass-reinforced nylon and the return tank shall be made of aluminum. Both tanks shall be crimped onto the core assembly using header tabs and a compression gasket to complete the radiator core assembly. There shall be a full steel frame around the inserts to enhance cooling system durability and reliability.</p> <p>The radiator shall be compatible with commercial antifreeze solutions.</p> <p>The radiator assembly shall be isolated from the chassis frame rails with rubber isolators to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven terrain.</p> <p>The radiator shall include a de-aeration/expansion tank. For visual coolant level inspection, the radiator shall have a built-in sight glass. The radiator shall be equipped with a 15 psi pressure relief cap.</p> <p>A drain port shall be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.</p> <p>Shields or baffles shall be provided to prevent recirculation of hot air to the inlet side of the radiator.</p> <p><u>COOLANT LINES</u></p> <p>Rubber hose shall be used for all engine coolant lines to be installed by the chassis manufacturer.</p> <p>Hose clamps shall be stainless steel constant torque type to prevent coolant leakage. They shall react to temperature changes in the cooling system and expand or contract accordingly while maintaining a constant clamping pressure on the hose.</p> <p><u>FUEL TANK</u></p> <p>A 75 gallon fuel tank shall be provided and mounted at rear of chassis. The tank shall be constructed of 12-gauge, hot rolled steel. It shall be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank shall be mounted with stainless steel straps. (no exception).</p>		

	Bidder Complies	
	Yes	No
<p>A .75" drain plug shall be provided in a low point of the tank for drainage.</p> <p>A fill inlet shall be located on the left hand side of the body and be covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only."</p> <p>A .50" diameter vent shall be provided running from top of tank to just below fuel fill inlet.</p> <p>The tank shall meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume.</p> <p>All fuel lines shall be provided as recommended by the engine manufacturer.</p> <p><u>DIESEL EXHAUST FLUID TANK</u></p> <p>A 4.5 gallon diesel exhaust fluid (DEF) tank shall be provided and mounted in the driver's side body forward of the rear axle.</p> <p>A 0.50" drain plug shall be provided in a low point of the tank for drainage.</p> <p>A fill inlet shall be located on the driver's side of the body and be covered with a hinged, spring loaded, polished stainless steel door that is marked "Diesel Exhaust Fluid Only".</p> <p>The tank shall meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing.</p> <p>The tank shall include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.</p> <p><u>TRANSMISSION</u></p> <p>An electronic torque converting automatic transmission shall be provided.</p> <p>The transmission shall be equipped with prognostics to monitor oil life, filter life, and transmission health. A wrench icon on the shift selector's digital display shall indicate when service is due.</p> <p>Two (2) PTO openings shall be located on both sides of converter housing (positions 4 o'clock and 8 o'clock) as viewed from the rear.</p> <p>A transmission temperature gauge with red light and audible alarm shall be installed on the cab dash.</p> <p><u>TRANSMISSION SHIFTER</u></p> <p>A five (5)-speed push button shift module shall be mounted to right of driver on console. Shift position indicator shall be indirectly lit for after dark operation.</p>		

		Bidder Complies													
		Yes	No												
<p>The transmission ratio shall be:</p> <table border="1"> <tr> <td>1st</td> <td>3.49 to 1.00</td> </tr> <tr> <td>2nd</td> <td>1.86 to 1.00</td> </tr> <tr> <td>3rd</td> <td>1.41 to 1.00</td> </tr> <tr> <td>4th</td> <td>1.00 to 1.00</td> </tr> <tr> <td>5th</td> <td>0.75 to 1.00</td> </tr> <tr> <td>R</td> <td>5.03 to 1.00</td> </tr> </table> <p><u>TRANSMISSION COOLER</u> A plate and fin transmission oil cooler shall be provided using engine coolant to control the transmission oil temperature.</p> <p><u>DRIVELINE</u> Drivelines shall be a heavy-duty metal tube and be equipped with universal joints. The shafts shall be dynamically balanced before installation. A splined slip joint shall be provided in each driveshaft where the driveline design requires it.</p> <p><u>STEERING</u> Steering gear shall be provided with integral heavy-duty power steering. For reduced system temperatures, the power steering shall incorporate an air to oil cooler and hydraulic pump with integral pressure and flow control. All power steering lines shall have wire braded lines with crimped fittings. A tilt and telescopic steering column shall be provided to improve fit for a broader range of driver configurations.</p> <p><u>STEERING WHEEL</u> The steering wheel shall be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design.</p> <p><u>LOGO AND CUSTOMER DESIGNATION ON DASH</u> The dash panel shall have an emblem containing the fire apparatus manufacturer's logo and customer name. The emblem shall have three (3) rows of text for the customer's department name. There shall be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row. The first row of text shall be: Kenai</p>		1st	3.49 to 1.00	2nd	1.86 to 1.00	3rd	1.41 to 1.00	4th	1.00 to 1.00	5th	0.75 to 1.00	R	5.03 to 1.00		
1st	3.49 to 1.00														
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4th	1.00 to 1.00														
5th	0.75 to 1.00														
R	5.03 to 1.00														

Kenai Fire Department

	Bidder Complies	
	Yes	No
<p>The second row of text shall be: Fire</p> <p>The third row of text shall be: Department</p> <p><u>BUMPER</u> A one (1) piece, stainless steel bumper shall be attached to the front of the chassis frame.</p> <p>A 9.00" formed steel channel shall be mounted directly behind bumper for additional strength.</p> <p><u>GRAVEL PAN</u> A gravel pan, constructed of bright aluminum treadplate, shall be furnished between the bumper and cab face.</p> <p><u>TOW EYES</u> Two (2) painted steel tow eyes shall be installed under the bumper and attached to the front frame members. The tow eyes shall be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow eyes shall not be used for lifting of the apparatus.</p> <p>The inner and outer edges of the tow eyes shall have a .25" radius.</p> <p>The tow eyes shall be painted black.</p> <p><u>CAB</u> The cab shall be designed specifically for the fire service and manufactured by the chassis builder.</p> <p>The cab shall be built by the apparatus manufacturer in a facility located on the manufacturer's premises (no exception).</p> <p>For reasons of structural integrity and enhanced occupant protection, the cab shall be a heavy duty design, constructed to the following minimal standards.</p> <p>The cab shall have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts), and rear wall areas. The A-pillar shall be constructed of solid A356-T5 aluminum castings. The B-pillar and C-pillar shall be constructed from 0.13" wall extrusions. The rear wall shall be constructed of two (2) 2.00" x 2.00" outer aluminum extrusions and two (2) 2.00" x 1.00" inner aluminum extrusions. All main vertical structural members shall run from the floor to 4.625" x 3.864" x 0.090" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.25" thick corner casting at each of the front corners of the roof assembly.</p>		

Kenai Fire Department

	Bidder Complies	
	Yes	No
<p>The front of the cab shall be constructed of a 0.13" firewall plate, covered with a 0.090" front skin (for a total thickness of 0.22"), and reinforced with a full width x 0.50" thick cross-cab support located just below the windshield and fully welded to the engine tunnel. The cross-cab support shall run the full width of the cab and weld to each A-pillar, the 0.13" firewall plate, and the front skin.</p> <p>The cab floors shall be constructed of 0.125" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.375" of structural material at the front floor area. The front floor area shall also be supported with two (2) triangular 0.30" wall extrusions that also provides the mounting point for the cab lift. This tubing shall run from the floor wireway of the cab to the engine tunnel side plates, creating the structure to support the forces created when lifting the cab.</p> <p>The cab shall be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability (no exception).</p> <p>The forward cab section shall have an overall height (from the cab roof to the ground) of approximately 99.00". The crew cab section shall have a 10.00" raised roof, with an overall cab height of approximately 109.00". The overall height listed shall be calculated based on a truck configuration with the lowest suspension weight rating, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension shall increase the overall height listed.</p> <p>The floor to ceiling height inside the crew cab shall be 64.50" in the center and outboard positions.</p> <p>The crew cab floor shall measure 36.00" from the rear wall to the front of the rear facing seat risers.</p> <p>The engine tunnel, at the rearward highest point (knee level), shall measure 51.50" to the rear wall.</p> <p>The crew cab shall be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.</p> <p>The cab shall be a full tilt cab style.</p> <p>A 3-point cab mount system with rubber isolators shall improve ride quality by isolating chassis vibrations from the cab.</p>		

	Bidder Complies	
	Yes	No
<p><u>CAB ROOF DRIP RAIL</u> For enhanced protection from inclement weather, a drip rail shall be furnished on the sides of the cab. The drip rail shall be painted to match the cab roof, and bonded to the sides of the cab. The drip rail shall extend the full length of the cab roof.</p> <p><u>INTERIOR CAB INSULATION</u> The cab shall include 1.00" insulation in the ceiling, 1.50" insulation in the side walls, and 2.00" insulation in the rear wall to maximize acoustic absorption and thermal insulation.</p> <p><u>FENDER LINERS</u> Full circular inner fender liners in the wheel wells shall be provided.</p> <p><u>PANORAMIC WINDSHIELD</u> A 1-piece safety glass windshield shall be provided with over 2,775 square inches of clear viewing area. The windshield shall be full width and shall provide the occupants with a panoramic view. The windshield shall consist of three (3) layers: outer light, middle safety laminate, and inner light. The outer light layer shall provide superior chip resistance. The middle safety laminate layer shall prevent the windshield glass pieces from detaching in the event of breakage. The inner light shall provide yet another chip resistant layer. The cab windshield shall be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern shall be applied on the outside perimeter of the windshield for a finished automotive appearance.</p> <p><u>WINDSHIELD WIPERS</u> Three (3) electric windshield wipers with washer shall be provided that meet FMVSS and SAE requirements. The washer reservoir shall be able to be filled without raising the cab.</p> <p><u>ENGINE TUNNEL</u> Engine hood side walls shall be constructed of 0.375" aluminum. The top shall be constructed of 0.125" aluminum and shall be tapered at the top to allow for more driver and passenger elbow room. The engine hood shall be insulated for protection from heat and sound. The noise insulation keeps the dBA level within the limits stated in the current NFPA 1901 standards. The engine tunnel shall be no higher than 17.00" off the crew cab floor (no exception).</p> <p><u>INTERIOR CREW CAB REAR WALL ADJUSTABLE SEATING (PATENT PENDING)</u> The interior rear wall of the crew cab shall have mounting holes every 2.75" to allow for adjustability of the forward facing crew cab seating along the rear wall. Seats shall be adjustable</p>		

	Bidder Complies	
	Yes	No
<p>with use of simple hand tools allowing departments flexibility of their seating arrangement should their department needs change.</p> <p><u>CAB REAR WALL EXTERIOR COVERING</u> The exterior surface of the rear wall of the cab shall be overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered</p> <p><u>CAB LIFT</u> A hydraulic cab lift system shall be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves.</p> <p>Lift controls shall be located on the right side pump panel or front area of the body in a convenient location.</p> <p>The cab shall be capable of tilting 43 degrees to accommodate engine maintenance and removal.</p> <p>The cab shall be locked down by a 2-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system shall be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring loaded latch mechanisms shall return to the normally closed and locked position.</p> <p>The hydraulic cylinders shall be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position.</p> <p>For increased safety, a redundant mechanical stay arm shall be provided that must be manually put in place on the left side between the chassis and cab frame when the cab is in the raised position. This device shall be manually stowed to its original position before the cab can be lowered.</p> <p><u>Cab Lift Interlock</u> The cab lift system shall be interlocked to the parking brake. The cab tilt mechanism shall be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism shall be disabled.</p> <p><u>GRILLE</u> A single piece polished stainless steel grille and framework shall be provided on the front center of the cab.</p> <p><u>SIDE OF CAB MOLDING</u> Chrome molding shall be provided on both sides of cab.</p>		

	Bidder Complies	
	Yes	No
<p><u>MIRRORS</u> A dual vision, motorized, west coast style mirror, with chrome finish, shall be mounted on each side of the front cab door with spring loaded retractable arms. The flat glass and convex glass shall be heated and adjustable with remote control within reach of the driver.</p> <p><u>DOORS</u> To enhance entry and egress to the cab, the forward cab door openings shall be a minimum of 37.50" wide x 63.37" high. The crew cab doors shall be located on the sides of the cab and shall be constructed in the same manner as the forward cab doors. The crew cab door openings shall be a minimum of 34.30" wide x 73.25" high.</p> <p>The forward cab and crew cab doors shall be constructed of extruded aluminum with a nominal material thickness of 0.093". The exterior door skins shall be constructed from 0.090" aluminum.</p> <p>A customized, vertical, pull-down type door handle shall be provided on the exterior of each cab door. The exterior handle shall be designed specifically for the fire service to prevent accidental activation, and shall provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands. Each door shall also be provided with an interior flush, open style paddle handle that shall be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles shall provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands.</p> <p>The cab doors shall be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The locks shall be capable of activating when the doors are open or closed. The doors shall remain locked if locks are activated when the doors are opened, then closed.</p> <p>A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf shall be provided on all cab doors. There shall be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit.</p> <p>A chrome grab handle shall be provided on the inside of each cab door for ease of entry.</p> <p>The bottom cab step at each cab door location shall be located below the cab doors and shall be exposed to the exterior of the cab.</p> <p><u>DOOR PANELS</u> The inner cab door panels shall be constructed out of brushed stainless steel.</p> <p><u>MANUAL CAB DOOR WINDOWS</u> All cab entry doors shall contain a conventional roll down window.</p>		

	Bidder Complies	
	Yes	No
<p><u>CAB STEPS</u></p> <p>The forward cab and crew cab access steps shall be a full size two (2) step design to provide largest possible stepping surfaces for safe ingress and egress. The bottom steps shall be designed with a grip pattern punched into bright aluminum treadplate material to provide support, slip resistance, and drainage. The bottom steps shall be a bolt-in design to minimize repair costs should they need to be replaced. The forward cab steps shall be a minimum 25.00" wide, and the crew cab steps shall be 21.65" wide with a 10.00" minimum depth. The inside cab steps shall not exceed 16.50" in height.</p> <p>The vertical surfaces of the step well shall be aluminum treadplate.</p> <p><u>STEP LIGHTS</u></p> <p>There shall be six (6) white LED step lights installed for cab and crew cab access steps.</p> <ul style="list-style-type: none"> • One (1) light for the driver's access steps. • Two (2) lights for the driver's side crew cab access steps. • Two (2) lights for the passenger's side crew cab access steps. • One (1) light for the passenger's side access step. <p>In order to ensure exceptional illumination, each light shall provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light.</p> <p>The lights shall be activated when the battery switch is on and the adjacent door is opened.</p> <p><u>FENDER CROWNS</u></p> <p>Stainless steel fender crowns shall be installed at the cab wheel openings.</p> <p><u>AIR BOTTLE HOLDER(S)</u></p> <p>There shall be two (2) SCBA holder(s) with a collision restraint holding strap provided in the crew cab. The bracket(s) shall be located mounted on the rear interior wall of the crewcab, each side.</p> <p><u>MOUNTING PLATE(S)</u></p> <p>There shall be one (1) full length 0.188" aluminum mounting plate(s) provided and installed top of engine tunnel, full length. The mounting surface shall be painted to match the cab interior. The plates(s) shall be mounted on 1.00" spacer stand-offs.</p>		

	Bidder Complies	
	Yes	No
<p><u>CAB INTERIOR</u></p> <p>The cab interior shall be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service.</p> <p>The officer side dash shall be a flat faced design to provide easy maintenance and shall be constructed out of painted aluminum.</p> <p>The instrument cluster shall be surrounded with a high impact ABS plastic contoured to the same shape of the instrument cluster.</p> <p>The engine tunnel shall be padded and covered, on the top and sides, with light gray 46 ounce leather grain vinyl resistant to oil, grease, and mildew.</p> <p>The headliner shall be installed in both forward and rear cab sections. Headliner material shall be vinyl. A sound barrier shall be part of its composition. Material shall be installed on aluminum sheet and securely fastened to interior cab ceiling.</p> <p>Forward portion of cab headliner shall permit easy access for service of electrical wiring or other maintenance needs.</p> <p>All wiring shall be placed in metal raceways. Routing through holes in tubing shall not be accepted due to chaffing that installation shall cause.</p> <p><u>CAB INTERIOR UPHOLSTERY</u></p> <p>The cab interior upholstery shall be dark silver gray.</p> <p><u>CAB INTERIOR PAINT</u></p> <p>The cab interior metal surfaces shall be painted fire smoke gray, vinyl texture paint.</p> <p><u>CAB FLOOR</u></p> <p>The cab and crew cab floor areas shall be covered with floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler.</p> <p>The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.</p> <p><u>CAB DEFROSTER</u></p> <p>To provide maximum defrost and heating performance, a 43,500 BTU heater-defroster unit with 350 CFM of air flow shall be provided inside the cab. The defroster unit shall be strategically located under the center forward portion of the vacuum formed instrument panel. For easy access, a removable vacuum formed cover shall be installed over the defroster unit. The</p>		

	Bidder Complies	
	Yes	No
<p>defroster shall include an integral aluminum frame air filter, high performance dual scroll blowers, and ducts designed to provide maximum defrosting capabilities for the 1-piece windshield. The defroster ventilation shall be built into the design of the cab dash instrument panel and shall be easily removable for maintenance. The defroster shall be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system shall meet or exceed SAE J382 requirements.</p> <p><u>CAB/CREW CAB HEATER</u></p> <p>Two (2) 44,180 BTU auxiliary heaters with 276 CFM (each unit) of air flow shall be provided inside the crew cab, one (1) in each outboard rear-facing seat riser. The heaters shall include high performance dual scroll blowers, one (1) for each unit. Outlets for the heaters shall be located below each rear facing seat riser and below the fronts of the driver and passenger seats, for efficient airflow. An extruded aluminum plenum shall be incorporated in the cab structure that shall transfer heat to the forward cab seating positions.</p> <p>The heater/defroster and crew cab heaters shall be controlled by a single integral electronic control panel. The heater control panel shall allow the driver to control heat flow to the front and rear simultaneously. The control panel shall include variable adjustment for temperature and fan control, and be conveniently located on the dash in clear view of the driver. The control panel shall include highly visible, progressive LED indicators for both fan speed and temperature.</p> <p><u>SUN VISORS</u></p> <p>Two (2) smoked polycarbonate sun visors provided. The sun visors shall be located above the windshield with one (1) mounted on each side of the cab.</p> <p>There shall be no retention bracket provided to help secure each sun visor in the stowed position.</p> <p><u>GRAB HANDLES</u></p> <p>A black rubber covered grab handle shall be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handles shall be securely mounted to the post area between the door and windshield.</p> <p><u>ENGINE COMPARTMENT LIGHTS</u></p> <p>There shall be one (1) 12 volt DC, 3.00" white LED light(s) with chrome flange kit(s) installed under the cab to be used as engine compartment illumination.</p> <p>These light(s) shall be activated automatically when the cab is raised.</p>		

	Bidder Complies	
	Yes	No
<p><u>ACCESS TO ENGINE DIPSTICKS</u></p> <p>For access to the engine oil and transmission fluid dipsticks, there shall be a door on the engine tunnel, inside the crew cab. The door shall be on the rear wall of the engine tunnel, on the vertical surface.</p> <p>The engine oil dipstick shall allow for checking only. The transmission dipstick shall allow for both checking and filling.</p> <p>The door shall have a rubber seal for thermal and acoustic insulation. One (1) flush latch shall be provided on the access door.</p> <p><u>SEATING CAPACITY</u></p> <p>The seating capacity in the cab shall be five (5).</p> <p><u>DRIVER SEAT</u></p> <p>A seat shall be provided in the cab for the driver. The seat design shall be a cam action type, with air suspension. For increased convenience, the seat shall include a manual control to adjust the horizontal position (6.00" travel). The manual horizontal control shall be a towel-bar style located below the forward part of the seat cushion. To provide flexibility for multiple driver configurations, the seat shall have an adjustable reclining back. The seat back shall be a high back style with side bolster pads for maximum support. For optimal comfort, the seat shall be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control).</p> <p>The seat shall be furnished with a 3-point, shoulder type seat belt.</p> <p><u>OFFICER SEAT</u></p> <p>A seat shall be provided in the cab for the passenger. The seat shall be a fixed type with no suspension. For optimal comfort, the seat shall be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control).</p> <p>The seat back shall be an SCBA back style with 5 degree fixed recline angle. The SCBA cavity shall be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity shall be accomplished by unbolting, relocating, and re-bolting it in the desired location.</p> <p>The seat shall be furnished with a 3-point, shoulder type seat belt.</p> <p><u>RADIO COMPARTMENT</u></p> <p>A radio compartment shall be provided under the officer's seat.</p> <p>The inside compartment dimensions shall be 16.00" wide x 7.50" high x 15.00" deep, with the back of the compartment angled up to match the cab structure.</p>		

	Bidder Complies	
	Yes	No
<p>A drop-down door with a chrome plated lift and turn latch shall be provided for access.</p> <p>The compartment shall be constructed of smooth aluminum and painted to match the cab interior.</p> <p><u>REAR FACING DRIVER SIDE OUTBOARD SEAT</u></p> <p>One (1) rear facing SCBA seat shall be provided in the driver side outboard position in crew cab. The SCBA cavity shall be adjustable front to rear in 0.50" increments to accommodate different size SCBA bottles.</p> <p>Moving the SCBA cavity shall be accomplished by unbolting, relocating, and re-bolting in the desired location.</p> <p><u>REAR FACING PASSENGER SIDE EMS COMPARTMENT</u></p> <p>A rear facing EMS compartment shall be provided in the crew cab at the passenger side outboard position.</p> <p>The compartment shall be 24.50" wide x 34.00" high x 26.75" deep with one (1) Amdor roll up door, non-locking, with white finish. The clear door opening of the compartment shall be 15.00" wide x 23.75" high.</p> <p>The compartment shall also provide access from outside the cab with a double pan lap style door having a clear door opening of 17.00" wide x 24.50" high. The door shall include a non-locking D-ring latch and shall be located on the side of the cab over the wheelwell.</p> <p>The compartment shall be constructed of smooth aluminum and painted to match the cab interior. The exterior door shall be painted to match the cab.</p> <p><u>Compartment Light</u></p> <p>There shall be LED lighting installed in the compartment. The lights shall be controlled by an automatic door switch.</p> <p><u>FORWARD FACING CENTER SEATS</u></p> <p>There shall be two (2) forward facing seats provided at the center position in the crew cab. For optimal comfort, the seats shall be provided with 15.00" deep foam cushions designed with EVC (elastomeric vibration control).</p> <p>The seat back shall be an SCBA style with 90 degree back. The SCBA cavity shall be adjustable from front to rear in 1.00" increments to accommodate different sized SCBA cylinders. Moving the SCBA cavity shall be accomplished by unbolting, relocating, and re-bolting it in the desired location.</p>		

	Bidder Complies	
	Yes	No
<p>The seats shall be furnished with a 3-point, shoulder type seat belt.</p> <p><u>SHELVING</u> There shall be two (2) shelves provided in the EMS compartment. Each shelf shall be constructed of 0.090" aluminum with a .75" up-turned lip. Shelving shall be infinitely adjustable by means of a threaded tightener sliding in a track.</p> <p>The location shall be PS EMS comaprtnent.</p> <p><u>SEAT UPHOLSTERY</u> All seat upholstery shall be black material.</p> <p><u>AIR BOTTLE HOLDERS</u> All SCBA type seats in the cab shall have a "Hands-Free" auto clamp style bracket in its backrest. For efficiency and convenience, the bracket shall include an automatic spring clamp that allows the occupant to store the SCBA bottle by simply pushing it into the seat back. For protection of all occupants in the cab, in the event of an accident, the inertial components within the clamp shall constrain the SCBA bottle in the seat and shall exceed the NFPA standard of 9G. Bracket designs with manual restraints (belts, straps, buckles) that could be inadvertently left unlocked and allow the SCBA to move freely within the cab during an accident, shall not be acceptable.</p> <p>There shall be a quantity of four (4) SCBA brackets.</p> <p><u>SEAT BELTS</u> All cab and tiller cab (if applicable) seating positions shall have red seat belts. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length shall meet or exceed the current edition of NFPA 1901 and CAN/ULC - S515 standards.</p> <p>The 3-point shoulder type seat belts shall include height adjustment. This adjustment shall optimize the belts effectiveness and comfort for the seated firefighter. The 3-point shoulder type seat belts shall be furnished with dual automatic retractors that shall provide ease of operation in the normal seating position.</p> <p>The 3-point shoulder type belts shall also include a D-loop assembly to the shoulder belt system. This feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location.</p> <p>To ensure safe operation, the seats shall be equipped with seat belt sensors in the seat cushion and belt receptacle that shall activate an alarm indicating a seat is occupied but not buckled.</p>		

	Bidder Complies	
	Yes	No
<p><u>HELMET STORAGE PROVIDED BY FIRE DEPARTMENT</u></p> <p>NFPA 1901, 2016 edition, section 14.1.7.4.1 requires a location for helmet storage be provided.</p> <p>There is no helmet storage on the apparatus as manufactured. The fire department shall provide a location for storage of helmets.</p> <p><u>CAB DOME LIGHTS</u></p> <p>There shall be four (4) dual LED dome lights with black bezels provided. Two (2) lights shall be mounted above the inside shoulder of the driver and officer and two (2) lights shall be installed and located, one (1) on each side of the crew cab.</p> <p>The color of the LED's shall be red and white.</p> <p>The white LED's shall be controlled by the door switches and the lens switch.</p> <p>The color LED's shall be controlled by the lens switch.</p> <p>In order to ensure exceptional illumination, each white LED dome light shall provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat.</p> <p><u>PORTABLE HAND LIGHTS, PROVIDED BY FIRE DEPARTMENT</u></p> <p>NFPA 1901, 2016 edition, section 7.9.4 requires two portable hand lights mounted in brackets fastened to the apparatus.</p> <p>The hand lights are not on the apparatus as manufactured. The fire department shall provide and mount these hand lights.</p> <p><u>CAB INSTRUMENTATION</u></p> <p>The cab instrument panel shall be a molded ABS panel and include gauges, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches shall be identified by a label adjacent to each item. Actuation of the headlight switch shall illuminate the labels in low light conditions. Telltale indicator lamps shall not be illuminated unless necessary. The cab instruments and controls shall be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership.</p>		

	Bidder Complies	
	Yes	No
<p><u>GAUGES</u></p> <p>The gauge panel shall include the following ten (10) black faced gauges with black bezels to monitor vehicle performance:</p> <ul style="list-style-type: none"> • Voltmeter gauge (volts): <ul style="list-style-type: none"> ○ Low volts (11.8 VDC) <ul style="list-style-type: none"> ▪ Amber telltale light on indicator light display with steady tone alarm ○ High volts (15.5 VDC) <ul style="list-style-type: none"> ▪ Amber telltale light on indicator light display with steady tone alarm • Engine Tachometer (RPM) • Speedometer MPH (Major Scale), KM/H (Minor Scale) • Fuel level gauge (Empty - Full in fractions): <ul style="list-style-type: none"> ○ Low fuel (1/8 full) <ul style="list-style-type: none"> ▪ Amber indicator light in gauge dial with steady tone alarm • Engine Oil pressure Gauge (PSI): <ul style="list-style-type: none"> ○ Low oil pressure to activate engine warning lights and alarms <ul style="list-style-type: none"> ▪ Red indicator light in gauge dial with steady tone alarm • Front Air Pressure Gauges (PSI): <ul style="list-style-type: none"> ○ Low air pressure to activate warning lights and alarm <ul style="list-style-type: none"> ▪ Red indicator light in gauge dial with steady tone alarm • Rear Air Pressure Gauges (PSI): <ul style="list-style-type: none"> ○ Low air pressure to activate warning lights and alarm <ul style="list-style-type: none"> ▪ Red indicator light in gauge dial with steady tone alarm • Transmission Oil Temperature Gauge (Fahrenheit): <ul style="list-style-type: none"> ○ High transmission oil temperature activates warning lights and alarm <ul style="list-style-type: none"> ▪ Amber indicator light in gauge dial with steady tone alarm • Engine Coolant Temperature Gauge (Fahrenheit): <ul style="list-style-type: none"> ○ High engine temperature activates an engine warning light and alarms <ul style="list-style-type: none"> ▪ Red indicator light in gauge dial with steady tone alarm • Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions): <ul style="list-style-type: none"> ○ Low fluid (1/8 full) <ul style="list-style-type: none"> ▪ Amber indicator light in gauge dial <p><u>INDICATOR LAMPS</u></p> <p>To promote safety, the following telltale indicator lamps shall be located on the instrument panel in clear view of the driver. The indicator lamps shall be "dead-front" design that is only visible when active. The colored indicator lights shall have descriptive text or symbols.</p> <p>The following amber telltale lamps shall be present:</p>		

Kenai Fire Department

	Bidder Complies	
	Yes	No
<ul style="list-style-type: none"> • Low coolant • Trac cntl (traction control) (where applicable) • Check engine • Check trans (check transmission) • Air rest (air restriction) • DPF (engine diesel particulate filter regeneration) • HET (engine high exhaust temperature) (where applicable) • ABS (antilock brake system) • MIL (engine emissions system malfunction indicator lamp) (where applicable) • Regen inhibit (engine emissions regeneration inhibit) (where applicable) • Side roll fault (where applicable) • Front air bag fault (where applicable) • Aux brake overheat (auxiliary brake overheat) (where applicable) • The following red telltale lamps shall be present: • Ladder rack down • Parking brake • Stop engine • The following green telltale lamps shall be present: • Left turn • Right turn • Battery on • Ignition • Aux brake (auxiliary brake engaged) (where applicable) • The following blue telltale lamps shall be present: • High beam <p><u>ALARMS</u></p> <p>Audible steady tone warning alarm: A steady audible tone alarm shall be provided whenever a warning condition is active.</p> <p><u>INDICATOR LAMP AND ALARM PROVE-OUT</u></p> <p>A system shall be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms shall perform prove-out for 3 to 5 seconds when the ignition switch is moved to the on position with the battery switch on.</p>		

	Bidder Complies	
	Yes	No
<p><u>CONTROL SWITCHES</u></p> <p>For ease of use, the following controls shall be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches shall have backlit labels for low light applications.</p> <p>Headlight/Parking light switch: A three (3)-position maintained rocker switch shall be provided. The first switch position shall deactivate all parking and headlights. The second switch position shall activate the parking lights. The third switch shall activate the headlights.</p> <p>Panel back lighting intensity control switch: A three (3)-position momentary rocker switch shall be provided. Pressing the top half of the switch, "Panel Up" increases the panel back lighting intensity and pressing the bottom half of the switch, "Panel Down" decreases the panel back lighting intensity. Pressing the half or bottom half of the switch several times shall allow back lighting intensity to be gradually varied from minimum to maximum intensity level for ease of use.</p> <p>Ignition switch: A three (3)-position maintained/momentary rocker switch shall be provided. The first switch position shall turn off and deactivate vehicle ignition. The second switch position shall activate vehicle ignition and shall perform prove-out on the telltale indicators and alarms for 3 to 5 seconds after the switch is turned on. A green indicator lamp is activated with vehicle ignition. The third momentary position shall temporarily silence all active cab alarms. An alarm "chirp" may continue as long as alarm condition exists. Switching ignition to off position shall terminate the alarm silence feature and reset function of cab alarm system.</p> <p>Engine start switch: A two (2)-position momentary rocker switch shall be provided. The first switch position is the default switch position. The second switch position shall activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.</p> <p>Hazard switch shall be provided on the instrument panel or on the steering column.</p> <p>Heater and defroster controls.</p> <p>Turn signal arm: A self-canceling turn signal with high beam headlight controls.</p> <p>Windshield wiper control shall have high, low, and intermittent modes.</p> <p>Parking brake control: An air actuated push/pull park brake control.</p> <p>Chassis horn control: Activation of the chassis horn control shall be provided through the center of the steering wheel.</p>		

	Bidder Complies	
	Yes	No
<p>High idle engagement switch: A maintained rocker switch with integral indicator lamp shall be provided. The switch shall activate and deactivate the high idle function. The "OK To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch shall indicate when the high idle function is engaged.</p> <p>"OK To Engage High Idle" indicator lamp: A green indicator light shall be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.</p> <p>Emergency switching shall be controlled by multiple individual warning light switches for various groups or areas of emergency warning lights. An Emergency Master switch provided on the instrument panel that enables or disables all individual warning light switches is included.</p> <p>An additional "Emergency Master" button shall be provided on the lower left hand corner of the gauge panel to allow convenient control of the "Emergency Master" system from inside the driver's door when standing on the ground.</p> <p><u>CUSTOM SWITCH PANELS</u></p> <p>The design of cab instrumentation shall allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There shall be positions for up to four (4) switch panels in the lower instrument console and up to six (6) switch panels in the overhead visor console. All switches have backlit labels for low light conditions.</p> <p><u>DIAGNOSTIC PANEL</u></p> <p>A diagnostic panel shall be provided and accessible while standing on the ground. The panel shall be located inside the driver's side door left of the steering column. The diagnostic panel shall allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches shall allow ABS systems to provide blink codes should a problem exist.</p> <p>The diagnostic panel shall include the following:</p> <ul style="list-style-type: none"> • ENGINE/TRANSMISSION/ABS J1939 Diagnostic Port • ABS Diagnostic Switch and Indicator - The switch and amber indicator shall allow access to diagnostic mode and display of standard ABS system fault blink codes that may be generated by the ABS system • DPF REGEN (Diesel Particulate Filter Regeneration Switch) (where applicable) shall be provided to request regeneration of the engine emission system. An amber indicator shall be provided on top of the switch that shall illuminate in a "CHECK ENGINE" condition 		

	Bidder Complies	
	Yes	No
<ul style="list-style-type: none"> • REGEN INHIBIT (Diesel Particulate Filter Regeneration Inhibit Switch) (where applicable) shall be provided that shall request that regeneration be temporarily prevented. A green indicator shall be provided on top of the Regen Inhibit switch that shall illuminate when the Regen Inhibit feature is active. Regen Inhibit shall be disabled upon cycling of the ignition switch to the off state. <p><u>AIR RESTRICTION INDICATOR</u> A high air restriction warning indicator light (electronic) shall be provided.</p> <p><u>"DO NOT MOVE APPARATUS" INDICATOR</u> A flashing red indicator light, located in the driving compartment, shall be illuminated automatically per the current NFPA requirements. The light shall be labeled "Do Not Move Apparatus If Light Is On." The same circuit that activates the Do Not Move Apparatus indicator shall activate a pulsing alarm when the parking brake is released.</p> <p><u>WIPER CONTROL</u> Wiper control shall consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls.</p> <p><u>SPARE CIRCUIT</u> There shall be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires shall have the following features:</p> <ul style="list-style-type: none"> • The positive wire shall be connected directly to the battery power • The negative wire shall be connected to ground • Wires shall be protected to 20 amps at 12 volts DC • Power and ground shall terminate on the officer's side of the engine tunnel • Termination shall be with a 10-place bus bar with screws and removable cover • Wires shall be sized to 125% of the protection <p>This circuit(s) may be load managed when the parking brake is set.</p> <p><u>SPARE CIRCUIT</u> There shall be two (2) pair of wires, including a positive and a negative, installed on the apparatus. The above wires shall have the following features:</p>		

	Bidder Complies	
	Yes	No
<p>The positive wire shall be connected directly to the battery power</p> <p>The negative wire shall be connected to ground.</p> <p>Wires shall be protected to 15 amps at 12 volts DC.</p> <p>Power and ground shall terminate to be determined.</p> <p>Termination shall be with 15 amp, power point plug with rubber cover.</p> <p>Wires shall be sized to 125% of the protection.</p> <p>This circuit(s) may be load managed when the parking brake is set.</p> <p><u>VEHICLE DATA RECORDER</u></p> <p>There shall be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided.</p> <p>The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line.</p> <p>The vehicle data recorder shall be capable of recording the following data via hardwired and/or CAN inputs:</p> <ul style="list-style-type: none"> • Vehicle Speed - MPH • Acceleration - MPH/sec • Deceleration - MPH/sec • Engine Speed - RPM • Engine Throttle Position - % of Full Throttle • ABS Event - On/Off • Seat Occupied Status - Yes/No by Position • Seat Belt Buckled Status - Yes/No by Position • Master Optical Warning Device Switch - On/Off • Time - 24 Hour Time • Date - Year/Month/Day <p><u>Seat Belt Monitoring System</u></p> <p>A seat belt monitoring system (SBMS) shall be provided. The SBMS shall be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following:</p>		

	Bidder Complies	
	Yes	No
<ul style="list-style-type: none"> • Seat Occupied & Buckled = Green LED indicator illuminated • Seat Occupied & Unbuckled = Red LED indicator with audible alarm • No Occupant & Buckled = Red LED indicator with audible alarm • No Occupant & Unbuckled = No indicator and no alarm <p>The SBMS shall include an audible alarm that shall warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.</p> <p><u>INTERCOM SYSTEM</u></p> <p>There shall be digital, single radio interface, intercom located overhead, officer's side in the cab. The front panel shall have master volume, and squelch controls with illuminated indicators, allowing for independent level setting of radio and auxiliary audio devices.</p> <p>There shall be one (1) radio listen only / transmit control with select, monitor, receive, and transmit indicators. There shall be one (1) auxiliary audio input with select, and receive indicators.</p> <p>There shall be one (1) wireless base station for up to five (1-5) headset users provided. Wired headset jacks shall be provided for the officer, and three (3) crew positions located at two (2) forward facing seats and one (1) rear facing seat.</p> <p>The wireless base station shall have a 100' to 1100' range, line of sight. Objects between the transmitter and receiver affect range.</p> <p><u>RADIO INTERFACE NOT REQUIRED</u></p> <p>The apparatus manufacturer shall not provide a radio/intercom interface.</p> <p><u>WIRELESS UNDER HELMET, RADIO TRANSMIT ONLY HEADSET</u></p> <p>There shall be one (1) wireless under the helmet, radio transmit headset(s) provided. A heavy duty, coiled 12 volt charging pigtail with plug shall be provided driver's seat.</p> <p>Each headset shall feature:</p> <ul style="list-style-type: none"> • Noise cancelling electric microphone • Flexible microphone boom • Ear seals with 20 dB noise reduction • Stereo Listen-Through Ear dome microphones • Radio Push To Transmit button (Left or Right Side) • Rechargeable battery operates for 24 hours on a full charge • IP-66 when worn 		

	Bidder Complies	
	Yes	No
<p><u>UNDER THE HELMET HEADSET, INTERCOM ONLY</u></p> <p>There shall be one (1) under helmet, intercom only headset(s) provided officer seat.</p> <p>Each headset shall feature:</p> <ul style="list-style-type: none"> • Coiled cord • Noise cancelling electric microphone • Flex boom for left or right dress • Adjustable volume control • Ear seals with 24 dB noise reduction • Intercom Push To Talk button <p><u>OVER THE HEAD, INTERCOM ONLY HEADSET</u></p> <p>There shall be three (3) over head, intercom only headset(s) provided driver's side outboard rear facing seat, driver's side inboard forward facing seat and passenger's side inboard forward facing seat.</p> <p>Each headset shall feature:</p> <ul style="list-style-type: none"> • Coiled cord • Noise cancelling electric microphone • Flex boom rotates for left or right dress • Adjustable volume control • Ear seals with 24 dB noise reduction • Intercom Push To Talk button <p><u>HEADSET HANGERS</u></p> <p>There shall be five (5) headset hanger(s) installed driver's seat, officer's seat, driver's side inboard forward facing seat, driver's side outboard rear facing seat and passenger's side inboard forward facing seat. The hanger(s) shall meet NFPA 1901, Section 14.1.11, requirement for equipment mounting.</p> <p><u>RADIO ANTENNA MOUNT</u></p> <p>There shall be one (1) standard 1.125", 18 thread antenna-mounting base(s) installed center roof on the cab roof with high efficiency, low loss, coaxial cable(s) routed to behind the officer seat. A weatherproof cap shall be installed on the mount.</p> <p><u>VEHICLE CAMERA SYSTEM</u></p> <p>There shall be a color vehicle camera system provided with the following:</p>		

	Bidder Complies	
	Yes	No
<ul style="list-style-type: none"> • One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse. <p>The camera image shall be displayed on a 7.00" LCD display located in view of the driver on the engine tunnel. The display shall include manual camera activation capability and audio from the active camera.</p> <p>The following components shall be included:</p> <ul style="list-style-type: none"> • One (1) display • One (1) camera • All necessary cables <p><u>RECESS REAR CAMERA</u></p> <p>A rear camera recess shall be provided in the center at the rear .</p> <p><u>ELECTRICAL POWER CONTROL SYSTEM</u></p> <p>A compartment shall be provided in or under the cab to house the vehicle's electrical power and signal circuit protection and control components. The power and signal protection and control compartment shall contain circuit protection devices and power control devices. Power and signal protection and control components shall be protected against corrosion, excessive heat, excessive vibration, physical damage and water spray.</p> <p>Serviceable components shall be readily accessible.</p> <p>Circuit protection devices, which conform to SAE standard, shall be utilized to protect each circuit. All circuit protection devices shall be sized to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers shall be Type-I automatic reset (continuously resetting) and conform to SAE J553 or J258. When required, automotive type fuses conforming to SAE J554, J1284, J1888 or J2077 shall be utilized to protect electronic equipment.</p> <p>Power control relays and solenoids shall have a direct current (dc) rating of 125 percent of the maximum current for which the circuit is protected.</p> <p>Visual status indicators shall be supplied to identify control safety interlocks and vehicle status. In addition to visual status indicators, audible alarms designed to provide early warning of problems before they become critical shall be used.</p>		

	Bidder Complies	
	Yes	No
<p><u>VOLTAGE MONITOR SYSTEM</u></p> <p>A voltage monitor system shall be provided to indicate the status of each battery system connected to the vehicle's electrical load. The monitor system shall provide visual and audio warning when the system voltage is above or below optimum levels.</p> <p><u>POWER AND GROUND STUDS</u></p> <p>Spare circuits shall be provided in the primary distribution center for two-way radio equipment.</p> <p>The spare circuits shall consist of the following:</p> <ul style="list-style-type: none"> • One (1) 12-volt DC, 30 amp battery direct spare • One (1) 12-volt DC ground and un-fused switched battery stud located in or adjacent to the power distribution center <p><u>EMI/RFI PROTECTION</u></p> <p>The electrical system proposed shall include means to control undesired electromagnetic and radio frequency emissions. State of the art electrical system design and components shall be used to ensure radiated and conducted EMI (electromagnetic interference) and RFI (radio frequency interference) emissions are suppressed at their source.</p> <p>The apparatus proposed shall have the ability to operate in the electromagnetic environment typically found in fire ground operations. The contractor shall be able to demonstrate the EMI and RFI testing has been done on similar apparatus and certifies that the vehicle proposed meets SAE J551 requirements.</p> <p>EMI/RFI susceptibility shall be controlled by applying immune circuit designs, shielding, twisted pair wiring and filtering. The electrical system shall be designed for full compatibility with low level control signals and high powered two-way radio communication systems. Harness and cable routing shall be given careful attention to minimize the potential for conducting and radiated EMI-RFI susceptibility.</p> <p><u>ELECTRICAL</u></p> <p>All 12-volt electrical equipment installed by the apparatus manufacturer shall conform to modern automotive practices. All wiring shall be high temperature crosslink type. Wiring shall be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers shall be provided which conform to SAE Standards. Wiring shall be color, function and number coded. Function and number codes shall be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors shall be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.</p>		

	Bidder Complies	
	Yes	No
<p>Electrical wiring and equipment shall be installed utilizing the following guidelines:</p> <ol style="list-style-type: none"> 1. All holes made in the roof shall be caulked with silicon, rope caulk is not acceptable. Large fender washers, liberally caulked, shall be used when fastening equipment to the underside of the cab roof. 2. Any electrical component that is installed in an exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it. Exposed area shall be defined as any location outside of the cab or body. 3. Electrical components designed to be removed for maintenance shall not be fastened with nuts and bolts. Metal screws shall be used in mounting these devices. Also a coil of wire shall be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work. 4. Corrosion preventative compound shall be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections shall require this compound IN the plug to prevent corrosion and for easy separation (of the plug). 5. All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area. 6. All electrical terminals in exposed areas shall have silicon (1890) applied completely over the metal portion of the terminal. <p>All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, shall be furnished. Rear identification lights shall be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads shall be protected from damage by installing a false bulkhead inside the rear compartments.</p> <p>An operational test shall be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.</p> <p>The results of the tests shall be recorded and provided to the purchaser at time of delivery.</p> <p><u>BATTERY SYSTEM</u></p> <p>There shall be four (4) 12 volt batteries that include the following features shall be provided:</p> <ul style="list-style-type: none"> • 950 CCA, cold cranking amps • 190 amp reserve capacity • High cycle • Group 31 • Rating of 3800 CCA at 0 degrees Fahrenheit • 760 minutes of reserve capacity • Threaded stainless steel studs 		

	Bidder Complies	
	Yes	No
<p>Each battery case shall be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover shall be manifold vented with a central venting location to allow a 45 degree tilt capacity.</p> <p>The inside of each battery shall consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.</p> <p><u>BATTERY SYSTEM</u></p> <p>There shall be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel.</p> <p><u>MASTER BATTERY SWITCH</u></p> <p>There shall be a master battery switch provided within the cab within easy reach of the driver to activate the battery system.</p> <p>An indicator light shall be provided on the instrument panel to notify the driver of the status of the battery system.</p> <p><u>BATTERY COMPARTMENTS</u></p> <p>Batteries shall be placed on non-corrosive mats and be stored in well ventilated compartments located under the cab.</p> <p>Heavy-duty battery cables shall be used to provide maximum power to the electrical system. Cables shall be color coded.</p> <p>Battery terminal connections shall be coated with anti-corrosion compound. Battery solenoid terminal connections shall be encapsulated with semi-permanent rubberized compound.</p> <p><u>JUMPER STUDS</u></p> <p>One (1) set of battery jumper studs with plastic color-coded covers shall be included on the battery compartments.</p> <p><u>BATTERY CHARGER</u></p> <p>There shall be a battery charger with controller provided.</p> <p>The battery charger shall be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.</p> <p>There shall be a remote indicator included.</p> <p>The battery charger shall be located in the left body compartment mounted on the left wall as high as possible.</p>		

	Bidder Complies	
	Yes	No
<p>The battery charger indicator shall be located on the driver's seat riser.</p> <p><u>AUTO EJECT FOR SHORELINE</u></p> <p>There shall be one (1) 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus.</p> <p>The shoreline inlet(s) shall include red weatherproof flip up cover(s).</p> <p>There shall be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting.</p> <p>The shoreline(s) shall be connected to the battery charger.</p> <p>There shall be a mating connector body supplied with the loose equipment.</p> <p>There shall be a label installed near the inlet(s) that state the following:</p> <ul style="list-style-type: none"> • Line Voltage • Current Rating (amps) • Phase • Frequency <p>The shoreline receptacle shall be located on the driver side of cab, above wheel.</p> <p><u>ALTERNATOR</u></p> <p>An alternator shall be provided. It shall have a rated output current of 350 amp as measured by SAE method J56. The alternator shall feature an integral, self diagnostic regulator and rectifier. The alternator shall be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.</p> <p><u>ELECTRONIC LOAD MANAGEMENT</u></p> <p>An electronic load management (ELM) system shall be provided that monitors the vehicles 12-volt electrical system, and automatically reduces the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system.</p> <p>The ELM shall monitor the vehicle's voltage while at the scene (parking brake applied). It shall sequentially shut down individual electrical loads when the system voltage drops below a preset value. Two (2) separate electrical loads shall be controlled by the load manager. The ELM shall sequentially re-energize electrical loads as the system voltage recovers.</p> <p><u>HEADLIGHTS</u></p> <p>There shall be four (4) rectangular LED lights with heated lens mounted in the front quad style, chrome housing on each side of the cab grille:</p>		

	Bidder Complies	
	Yes	No
<ul style="list-style-type: none"> the outside light on each side shall contain a low beam module the inside light on each side shall contain a high beam module the headlight to include chrome bezels <p>The low beam lights shall be activated when the headlight switch is on.</p> <p>The high beam and low beam lights shall be activated when the headlight switch and the high beam switch is activated.</p> <p><u>DIRECTIONAL LIGHTS</u></p> <p>There shall be two (2) amber LED populated arrow directional lights provided on the front of the cab, above the headlights. Each light shall be housed in the same quad common bezel as the front warning light. The lens color(s) to be clear.</p> <p><u>INTERMEDIATE LIGHT</u></p> <p>There shall be two (2) amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light shall double as a turn signal and marker light.</p> <p><u>CAB CLEARANCE/MARKER/ID LIGHTS</u></p> <p>There shall be five (5) amber LED lights provided to indicate the presence and overall width of the vehicle in the following locations:</p> <ul style="list-style-type: none"> Three (3) amber LED identification lights shall be installed in the center of the cab above the windshield. Two (2) amber LED clearance lights shall be installed, one (1) on each outboard side of the cab above the windshield. <p><u>FRONT CAB SIDE DIRECTIONAL/MARKER LIGHTS</u></p> <p>There shall be two (2) amber LED lights installed front of the cab door, one (1) on each side of the cab.</p> <p>The lights shall activate as marker lights with the headlight switch and directional lights with the corresponding directional circuit.</p> <p><u>REAR CLEARANCE/MARKER/ID LIGHTING</u></p> <p>There shall be a three (3) LED light bar used as identification lights located at the rear of the apparatus per the following:</p> <ul style="list-style-type: none"> As close as practical to the vertical centerline Centers spaced not less than 6.00" or more than 12.00" apart Red in color All at the same height 		

	Bidder Complies	
	Yes	No
<p>There shall be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following:</p> <ul style="list-style-type: none"> • To indicate the overall width of the vehicle • One (1) each side of the vertical centerline • As near the top as practical • Red in color • To be visible from the rear • All at the same height <p>There shall be two (2) LED lights installed on the side of the apparatus used as marker lights as close to the rear as practical per the following:</p> <ul style="list-style-type: none"> • To indicate the overall length of the vehicle • One (1) each side of the vertical centerline • As near the top as practical • Red in color • To be visible from the side • All at the same height <p>There shall be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground.</p> <p>There shall be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground.</p> <p>Per FMVSS 108 and CMVSS 108 requirements.</p> <p><u>REAR FMVSS LIGHTING</u></p> <p>The rear stop/tail and directional LED lighting shall consist of the following:</p> <ul style="list-style-type: none"> • Two (2) red LED stop/tail lights • Two (2) amber LED arrow turn lights <p>The lights shall be provided with color lenses.</p> <p>The lights shall be mounted in a polished combination housing.</p> <p>There shall be two (2) LED backup lights provided in the tail light housing.</p>		

	Bidder Complies	
	Yes	No
<p><u>LICENSE PLATE BRACKET</u></p> <p>There shall be one (1) license plate bracket mounted on the rear of the body.</p> <p>A white LED light shall illuminate the license plate. A polished stainless steel light shield shall be provided over the light that shall direct illumination downward, preventing white light to the rear.</p> <p><u>LIGHTING BEZEL</u></p> <p>There shall be two (2) four (4) place chromed ABS housings provided for the rear stop/tail, directional, back up, scene lights or warning lights.</p> <p><u>BACK-UP ALARM</u></p> <p>A solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse shall be provided. The device shall sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.</p> <p><u>CAB PERIMETER SCENE LIGHTS</u></p> <p>There shall be four (4) 20.00" white LED strip lights provided, one (1) for each cab door.</p> <p>These lights shall be activated automatically when the battery switch is on and the exit doors are opened or by the same means as the body perimeter scene lights.</p> <p><u>PUMP HOUSE PERIMETER LIGHTS</u></p> <p>There shall be two (2) 20.00" LED weatherproof strip lights with brackets provided under the pump panel running boards, one (1) each side.</p> <p>The lights shall be controlled by the same means as the body perimeter lights.</p> <p><u>BODY PERIMETER SCENE LIGHTS</u></p> <p>There shall be two (2) 20.00" 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear.</p> <p>The perimeter scene lights shall be activated when the parking brake is applied.</p> <p><u>STEP LIGHTS</u></p> <p>Four (4) white LED step lights shall be provided. One (1) step light shall be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard.</p> <p>In order to ensure exceptional illumination, each light shall provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light.</p>		

	Bidder Complies	
	Yes	No
<p>These step lights shall be actuated with the pump panel light switch.</p> <p>All other steps on the apparatus shall be illuminated per the current edition of NFPA 1901.</p> <p><u>12 VOLT LIGHTING</u></p> <p>There shall be one (1) 12 volt LED recessed scene light(s) provided rear, center.</p> <p>The painted parts to be white.</p> <p>The light(s) shall be controlled in the following way:</p> <ul style="list-style-type: none"> • a switch at the driver's side switch panel • no additional switch location • no additional switch location • no additional switch location <p>The light(s) may be load managed when the parking brake is applied.</p> <p><u>12 VOLT LIGHTING</u></p> <p>There shall be one (1) 12 volt LED surface mounted scene light(s) with white bezel(s) provided passenger's side of cab.</p> <p>The light(s) shall be controlled in the following way:</p> <ul style="list-style-type: none"> • a switch at the driver's side switch panel • no additional switch location • no additional switch location • no additional switch location <p>The light(s) may be load managed when the parking brake is applied.</p> <p><u>12 VOLT LIGHTING</u></p> <p>There shall be one (1) 12 volt LED surface mounted scene light(s) with white bezel(s) provided driver's side of the cab.</p> <p>The light(s) shall be controlled in the following way:</p> <ul style="list-style-type: none"> • a switch at the driver's side switch panel • no additional switch location • no additional switch location • no additional switch location <p>The light(s) may be load managed when the parking brake is applied.</p>		

	Bidder Complies	
	Yes	No
<p><u>DECK LIGHTS</u></p> <p>There shall be two (2) 12 volt DC LED floodlights with stud bail mount provided. One (1) shall be located at the rear of the hose bed, and one (1) shall be located at the head of the hose bed, that location shall be each side.</p> <p>The painted parts to be black.</p> <p>The lights shall be activated by a control from the driver side switch panel.</p> <p><u>WALKING SURFACE LIGHT</u></p> <p>There shall be 4" round black 12 volt DC LED floodlight with bolt mount provided to illuminate the entire designated walking surface on top of the body.</p> <p>The light shall be activated when the body step lights are on.</p> <p><u>WATER TANK, 2000 GALLON POLYPROPYLENE</u></p> <p>The tank shall be built by United Plastic Fabricating, Inc. The booster tank shall have a capacity of 2000 gallons and be constructed of polypropylene plastic.</p> <p>The joints and seams shall be nitrogen welded inside and out. Tank to be baffled in accordance with NFPA Bulletin 1901 requirements. The baffles shall have vent openings at both the top and bottom to permit movement of air and water between compartments. The longitudinal partitions shall be constructed of .38" polypropylene plastic and shall extend from the bottom of the tank through the top cover to allow positive welding. The transverse partitions shall extend from 4.00" off the tank bottom to the underside of the top cover. All partitions shall interlock and shall be welded to the tank bottom and sides.</p> <p>The tank top shall be constructed of .50" polypropylene. It shall be recessed .38" from the top of the tank and shall be welded to the tank sides and the longitudinal partitions. Top shall be sufficiently supported to keep it rigid during fast filling conditions. Construction shall include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels shall be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes.</p> <p>A sump that is 8.00" x 8.00" x 6.00" deep shall be provided at the bottom of the water tank. The sump shall include a drain plug and the tank outlet.</p> <p>The tank shall be installed in a fabricated cradle assembly constructed on 3.00" x 3.00" x .25" angle iron.</p> <p>Rubber cushions, .50" thick x 3.00" wide, shall be placed on all horizontal surfaces that the tank rests on.</p>		

	Bidder Complies	
	Yes	No
<p>Fill tower shall be constructed of .50" polypropylene and shall be a minimum of 10.00" wide x 16.00" long. The fill tower shall be located in the center of the tank on the driver's side.</p> <p>Fill tower shall be furnished with a .25" thick polypropylene screen and a hinged cover.</p> <p>An overflow pipe, constructed of 6.00" schedule 40 polypropylene, shall be installed approximately halfway down the fill tower and extend through the water tank and dump to the rear of the rear axle.</p> <p>One (1) sleeve shall be provided in the water tank for a 3.00" pipe to the rear.</p> <p><u>WATER TANK RESTRAINT</u></p> <p>A heavy-duty water tank restraint shall be provided.</p> <p><u>DIRECT TANK FILL</u></p> <p>There shall be one (1) 4.00" semi-automatic tank fill(s) installed and properly labeled at the rear of the water tank, located passenger's side, with the valve installed as low as practical for easy hose connection.</p> <p>Piping, for the fill, shall be routed through the rear wall of the tank and include a flow deflector to break up the stream of water entering the water tank.</p> <p>A 4.00" (F)NST x 5.00" Storz hard coat aluminum 30 degree elbow adapter and 5.00" blind cap shall be provided for the tank fill.</p> <p><u>TANK DUMP</u></p> <p>A tank dump shall be installed through the rear body panel in the area over the tailboard.</p> <p>Dump shall be gated with a 10.00" square Newton dump valve.</p> <p>This dump valve shall have a side actuated electric control.</p> <p>Controls for the valve shall be located inside the cab and at the rear of the body. A guard shall be provided for each switch.</p> <p>A 180 degree, mild steel swivel dump chute shall be provided. The chute shall include a mild steel telescopic extension to allow the chute to extend past the body side for dumping.</p> <p>The water tank design shall include additional support for this chute. In addition, a heavy-duty chute support system shall be provided on the exterior of the body.</p> <p><u>SWITCH, MASTER FOR DUMP VALVE</u></p> <p>One (1) master on/off switch shall be provided for the water tank dump valves. The switch shall be located at the cab instrument panel.</p>		

	Bidder Complies	
	Yes	No
<p><u>HOSE BED</u></p> <p>The hose bed shall be fabricated of .125"-5052 aluminum with a nominal 38,000 psi tensile strength.</p> <p>The sides shall not form any portion of the fender compartments.</p> <p>Hose bed width shall be minimum of 70.00" inside.</p> <p>Upper and rear edges of side panels shall have a double break for rigidity, a split tube finish shall not be acceptable.</p> <p>The upper inside area of the beavertails shall be covered with brushed stainless steel to prevent damage to painted surface when hose is removed.</p> <p>Flooring of the hose bed shall be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats shall be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.</p> <p>Hose bed shall accommodate 600' of 3", 600' of 5" and 150' of 3".</p> <p><u>HOSE BED DIVIDER</u></p> <p>Two (2) adjustable hosebed dividers shall be furnished for separating hose.</p> <p>Each divider shall be constructed of a .25" brushed aluminum sheet. Flat surfaces shall be sanded for uniform appearance, or constructed of brushed aluminum.</p> <p>Divider shall be fully adjustable by sliding in tracks, located at the front and rear of the hose bed.</p> <p>Divider shall be held in place by tightening bolts, at each end.</p> <p>Acorn nuts shall be installed on all bolts in the hose bed which have exposed threads.</p> <p><u>HOSE BED COVER</u></p> <p>A four (4) section hose bed cover, constructed of .125" bright aluminum treadplate shall be furnished. The covers shall be hinged with full length stainless steel piano hinge. The sides shall be slanted down. A cross support shall be provided between the rear and forward sections.</p> <p>The cover is designed with the left cover opening first.</p> <p>If access to water tank fill tower is blocked by the hose bed cover, then a hinged door shall be provided in it so that tank may be filled without raising cover doors.</p>		

	Bidder Complies	
	Yes	No
<p>Chrome grab handles and eight (8) gas filled cylinders shall be provided to assist in opening and closing the covers. A handrail is to be provided at the rear, in the center of the support, to assist in opening the cover.</p> <p><u>HOSEBED END FLAP</u></p> <p>A pair of red vinyl flaps shall be installed on the rear, one for each of the aluminum treadplate hose bed covers.</p> <p>Each vinyl flap shall have three (3) nylon tie down straps, with quick release thumb spring buckles. Stainless steel buckles shall be attached to the flaps. These vinyl end skirts shall be installed directly to the hosebed frame.</p> <p>Rubber coated hooks and stainless steel footman loops shall secure the end skirts/bed covers to the main body.</p> <p><u>RUNNING BOARDS</u></p> <p>Running boards shall be fabricated of .125" bright aluminum treadplate.</p> <p>Each running board shall be supported by a welded 2.00" square tubing and channel assembly, which shall be bolted to the pump compartment substructure.</p> <p>Running boards shall be 12.75" deep and spaced .50" away from the pump panel.</p> <p>A splash guard shall be provided above the running board treadplate.</p> <p><u>TAILBOARD</u></p> <p>The tailboard shall also be constructed of .125" bright aluminum treadplate supported by a structural steel assembly.</p> <p>The tailboard area shall be 20.00" deep.</p> <p>The exterior side shall be flanged down and in for increased rigidity of tailboard structure.</p> <p><u>REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL</u></p> <p>The rear facing surfaces of the center rear wall shall be smooth aluminum.</p> <p>The bulkheads, the surface to the rear of the side body compartments, shall be smooth and the same material as the body.</p> <p>Any inboard facing surfaces below the height of the hosebed shall be aluminum diamondplate .</p> <p><u>TOW EYES</u></p> <p>Two (2) rear painted tow eyes shall be located at the rear of the apparatus and shall be mounted directly to the chassis frame rails. The inner and outer edges of the tow eyes shall have a radius.</p>		

	Bidder Complies	
	Yes	No
<p><u>RUNNING BOARD HOSE RESTRAINT</u></p> <p>A hinged, bright aluminum treadplate cover shall be provided over each hose tray. The cover shall have a D-ring latch in the center. The latch shall secure the cover in the closed position and a pneumatic stay arm shall hold the cover in the open position.</p> <p>There shall be Two (2) hose trays located one (1) in each side running board.</p> <p><u>HOSE TRAY</u></p> <p>Two (2) hose trays shall be recessed one (1) in each side running board.</p> <p>Capacity of the tray shall be 100' of 1.50" hose.</p> <p>Rubber matting shall be installed on the floor of the tray to provide proper ventilation.</p> <p><u>COMPARTMENTATION</u></p> <p>Body and compartments shall be fabricated of .125" 5052 aluminum.</p> <p>Side compartments shall be an integral assembly with the rear fenders.</p> <p>Circular fender liners shall be provided for prevention of rust pockets and ease of maintenance.</p> <p>Compartment flooring shall be .125" and of the sweep out design, with the floor higher than the compartment door lip.</p> <p>The compartment door opening shall be framed by flanging the edges in 1.75" and bending out again .75" to form an angle.</p> <p>Drip protection shall be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate, or polished stainless steel.</p> <p>The top of the compartment shall be covered with bright aluminum treadplate rolled over the edges on the front, rear, and outward side. These covers shall have the corners welded.</p> <p>Side compartment covers shall be separate from the compartment tops.</p> <p>Front facing compartment walls shall be covered with bright aluminum treadplate.</p> <p>All screws and bolts which protrude into a compartment shall have acorn nuts on the ends to prevent injury.</p> <p><u>UNDERBODY SUPPORT SYSTEM</u></p> <p>Due to the severe loading requirements of this pumper, a method of body and compartment support suitable for the intended load shall be provided.</p>		

	Bidder Complies	
	Yes	No
<p>The backbone of the support system shall be the chassis frame rails, which is the strongest component of the chassis and designed for sustaining maximum loads.</p> <p>Support system shall include .375" thick steel vertical angle supports bolted to the chassis frame rails with .50" diameter bolts.</p> <p>Attached to the bottom of the steel vertical angles shall be horizontal angles gusseted and welded to the vertical members, extending to the outside edge of the body.</p> <p>A design with body compartments hanging on the chassis, unsupported, shall not be acceptable.</p> <p><u>AGGRESSIVE WALKING SURFACE</u></p> <p>All exterior surfaces designated as stepping, standing, and walking areas shall comply with the required average slip resistance of the current NFPA standards.</p> <p><u>COMPARTMENT VENTILATION</u></p> <p>All compartments shall be ventilated. A louvered vent shall be furnished in a wall of the lower compartments to provide the proper airflow inside the compartment and to prevent water from dripping into the compartment. These louvers shall be formed into the metal and not added to the compartment as a separate plate.</p> <p><u>DRIVER'S SIDE COMPARTMENTS</u></p> <p>The driver's side compartments shall consist of:</p> <p>A full height, roll-up door compartment ahead of the rear wheels shall be provided. The interior dimensions of this compartment shall be 44.50" wide x 64.25" high x 24.00" deep in the lower 26.00" of the compartment and 12.00" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 43.00" wide x 58.25" high.</p> <p>Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.</p> <p>A roll-up door compartment shall be behind the rear wheels, 54.50" wide x 29.75" high x 24.00" deep inside, with a door opening of 47.75" wide x 18.87" high.</p> <p>Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.</p> <p>An enclosed compartment to store a portable water tank shall be provided to the rear of the forward compartment and above the rear wheels and rearward compartment. The compartment shall be a minimum of 33.00" high, 11.00" wide. A stainless steel access door shall be provided</p>		

	Bidder Complies	
	Yes	No
<p>at the rear of the apparatus that is as wide and as high as possible. Stainless steel tracks shall be provided to guide the portable tank into the compartment.</p> <p><u>RIGHT SIDE COMPARTMENTATION</u></p> <p>The right side compartmentation shall consist of four rollup door compartments.</p> <p>A full height, rollup door compartment ahead of the rear wheels shall be provided. The interior dimensions of this compartment shall be 44.00" wide x 67.00" high x 24.38" deep in the lower 25.75" of the compartment and 11.00" deep in the remaining upper portion. The clear door opening shall be a minimum of 38.25" wide x 57.25" high.</p> <p>A rollup door compartment over the forward tandem wheel shall be provided. The interior dimensions of this compartment shall be 54.38" wide x 33.13" high x 11.00" deep. The clear door opening shall be a minimum of 48.75" wide x 23.38" high.</p> <p>A rollup door compartment over the rear tandem wheel shall be provided. The interior dimensions of this compartment shall be 57.50" wide x 33.13" high x 11.00" deep. The clear door opening shall be a minimum of 48.75" wide x 23.38" high.</p> <p>A full height, rollup door compartment behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 51.75" wide x 68.00" high x 24.38" deep in the lower 25.65" of height and 11.00" deep in the remaining upper section of the compartment. The clear door opening shall be a minimum of 48.75" wide x 58.25" high.</p> <p>The interior height of the compartments shall be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments shall be measured from the back wall to the inside of the door frame.</p> <p>Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.</p> <p><u>ROLL-UP DOORS, SIDE COMPARTMENTS</u></p> <p>There shall be six (6) compartment doors installed on the side compartments, double faced, aluminum construction, painted one (1) color to match the lower portion of the body.</p> <p>Door(s) shall be constructed using 1.00" extruded double wall aluminum slats which shall feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats shall be connected with a structural driven ball and socket hinge designed to provide</p>		

	Bidder Complies	
	Yes	No
<p>maximum curtain diaphragm strength. Mounting and adjusting the curtain shall be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats shall be mounted in reusable slat shoes with positive snap-lock securement.</p> <p>Each slat shall incorporate weather tight recessed dual durometer seals. One (1) fin shall be designed to locate the seal within the extrusion. The second shall serve as a wiping seal which shall also allow for compression to prevent water ingress.</p> <p>The doors shall be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials.</p> <p>Bottom panel flange of roll-up door shall be equipped with two (2) cut-outs to allow for easier access with gloved hands.</p> <p>A stainless steel lift bar to be provided for opening the door and located at the bottom of each door with latches on the outer extrusion of the door frame. A ledge to be supplied over lift bar for additional area to aid in closing the door. The lift bar shall be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers shall include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.</p> <p>All injection molded roll-up door wear components shall be constructed of Type 6 nylon.</p> <p>Each roll-up door shall have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door. A garage door style shall not acceptable.</p> <p>The header for the roll-up door assembly shall not exceed 4.00".</p> <p>A heavy-duty magnetic switch shall be used for control of open compartment door warning lights.</p> <p><u>REAR COMPARTMENT</u></p> <p>A tool compartment shall be provided at the rear of the apparatus. The compartment shall be approximately 26.00" wide x 8.00" high x 6.00" deep.</p> <p>A drop-down door constructed of bright aluminum treadplate with a pawl latch shall be provided.</p>		

	Bidder Complies	
	Yes	No
<p><u>COMPARTMENT LIGHTING</u></p> <p>There shall be six (6) compartment(s) with two (2) white 12 volt DC LED compartment light strips. The dual light strips shall be centered vertically along each side of the door framing. There shall be two (2) light strips per compartment. The dual light strips shall be in all body compartment(s).</p> <p>Any remaining compartments without light strips shall have a 6.00" diameter light. Each light shall have a number 1076 one filament, two wire bulb.</p> <p>Opening the compartment door shall automatically turn the compartment lighting on.</p> <p><u>MOUNTING TRACKS</u></p> <p>There shall be four (4) sets of tracks for mounting shelf(s) in D2, D1, P1 and P4. These tracks shall be installed vertically to support the adjustable shelf(s), and shall be full height of the compartment. The tracks shall be painted to match the compartment interior.</p> <p><u>FIXED SHELVES</u></p> <p>There shall be six (6) shelves with a capacity of 500 lb provided. The shelf construction shall consist of .188" aluminum with 2.00" sides. Each shelf shall be painted spatter gray to match the compartment interior. Each shelf shall be fixed in its location in the compartment</p> <p>The shelves shall be held in place by .12" thick stamped plated brackets and bolts or angles bolted to the compartment as the engineer or shop floor see fit.</p> <p>The location shall be to be determined.</p> <p><u>SLIDE-OUT FLOOR MOUNTED TRAY</u></p> <p>There shall be one (1) floor mounted slide-out tray(s) provided.</p> <p>Each tray shall have 2.00" high sides and a minimum capacity rating of 500 lb in the extended position.</p> <p>Each tray shall be constructed of aluminum painted spatter gray</p> <p>There shall be two undermount-roller bearing type slides rated at 250lb each provided. The pair of slides shall have a safety factor rating of 2.</p> <p>To ensure years of dependable service, the slides shall be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.</p> <p>To ensure years of easy operation, the slides shall require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file shall have been generated from</p>		

	Bidder Complies	
	Yes	No
<p>accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance shall be provided upon request.</p> <p>Automatic locks shall be provided for both the "in" and "out" positions. The trip mechanism for the locks shall be located at the front of the tray for ease of use with a gloved hand.</p> <p>The location(s) shall be P1.</p> <p><u>RUB RAIL</u> Bottom edge of the side compartments shall be trimmed with a bright aluminum extruded rub rail.</p> <p>Trim shall be 2.12" high with 1.38" flanges turned outward for rigidity.</p> <p>The rub rails shall not be an integral part of the body construction, which allows replacement in the event of damage.</p> <p><u>BODY FENDER CROWNS</u> Black rubber fender crowns shall be provided around the rear wheel openings.</p> <p><u>HARD SUCTION HOSE</u> Two (2) lengths of 6.00" clear corrugated PVC hard suction hose, 10' in length, shall be provided. The hose shall be equipped with a long handle female coupling on one (1) end and a rocker lug male coupling on the other end. Couplings shall be hard coated aluminum.</p> <p><u>HOSE TROUGHS</u> Hard suction hose shall be carried in two (2) V-shaped troughs, one (1) each side, and held in place by chrome plated, quarter turn, spring loaded clamps.</p> <p>Troughs shall be constructed of aluminum and painted job color.</p> <p><u>HANDRAILS</u> The handrails shall be 1.25" diameter anodized aluminum extrusion, with a ribbed design, to provide a positive gripping surface.</p> <p>Chrome plated end stanchions shall support the handrail. Plastic gaskets shall be used between end stanchions and any painted surfaces.</p> <p>Drain holes shall be provided in the bottom of all vertically mounted handrails.</p> <p>Handrails shall be provided to meet NFPA 1901 section 15.8 requirements. The handrails shall be installed as noted on the sales drawing.</p>		

	Bidder Complies	
	Yes	No
<p><u>HANDRAILS</u> One (1) vertical handrail, not less than 29.00" long, shall be located on each rear beavertail. One (1) full width horizontal handrail shall be provided below the hose bed at the rear of the apparatus.</p> <p><u>AIR PAC STORAGE (SINGLE)</u> A total of two (2) special design air pack compartment(s) shall be provided. The compartment(s) shall be located on the driver's and passenger's of the body between the tandem axles. The air pack compartment(s) shall be 16.00" wide at the top x 6.00" wide at the bottom with angled and tapered sides. The compartment(s) shall also be 12.00" high x 26.00" deep so that an air pack can fit. Flooring shall be rubber lined and have a drain hole. A bottom hinged stainless steel drop-down door with a chrome plated latch shall be provided to contain the air pack. A dielectric barrier shall be provided between the door hinge, hinge fasteners and the body sheet metal.</p> <p><u>AIR BOTTLE STORAGE (SINGLE)</u> A quantity of two (2) air bottle compartments, 7.75" in diameter x 26.00" deep, shall be provided on the passenger side forward of the rear wheels and on the passenger side rearward of the rear wheels. A brushed stainless steel door with a chrome plated flush lift & turn latch shall be provided to contain the air bottle. A dielectric barrier shall be provided between the door hinge, hinge fasteners and the body sheet metal. Inside the compartment, black rubber matting shall be provided.</p> <p><u>EXTENSION LADDER</u> There shall be a 24' two-section aluminum extension ladder provided.</p> <p><u>ROOF LADDER</u> There shall be a 14' aluminum roof ladder provided.</p> <p><u>LADDER STORAGE</u> The ladders shall be stored between the water tank and the right side compartments. The ladders shall not extend into the pump compartment. A rack shall be provided for storage of one (1) 2-section ground ladder, one (1) roof ladder and one (1) folding ladder. The ground ladder and roof ladder shall be stored vertically in separate</p>		

	Bidder Complies	
	Yes	No
<p>stainless steel storage troughs. An additional stainless steel trough shall be provided for storage of the folding ladder.</p> <p>The ladder storage area shall be enclosed as practical by means of sheet metal to protect the ladders from road dirt.</p> <p>Each ladder shall be stored vertically in a separate stainless steel storage trough. Each stainless steel trough shall be lined with smooth nylon slides.</p> <p>There shall be a single pan, vertically hinged door at the rear of the ladder storage compartment. The door shall be constructed from smooth aluminum and have a D-handle latch .</p> <p>This compartment shall not reduce the capacity of the water tank unless the addition of this compartment would cause the overall tank size to exceed the design space of the body configuration in which it is installed. In that case, the water tank capacity shall be maximized as much as practical but may be less than the capacity as stated elsewhere in this specification.</p> <p><u>FOLDING LADDER</u></p> <p>One (1) 10.00' aluminum folding ladder shall be installed in a U-shaped trough inside the ladder storage compartment.</p> <p><u>10' PIKE POLE</u></p> <p>There shall be One (1) pike pole pike pole(s), ten (10)-feet long with a fiberglass handle provided and located ladder storage.</p> <p><u>6' PIKE POLE</u></p> <p>There shall be one (1) 6' pike pole(s) with fiberglass handles provided and located ladder storage.</p> <p><u>STEPS, REAR</u></p> <p>Bright aluminum treadplate corner steps shall be provided at the rear, low. All steps shall provide adequate surface for stepping.</p> <p>A full width 9.00" deep bright aluminum treadplate shall be provided at the rear of the apparatus for access to the hose bed.</p> <p>Chrome folding steps shall be provided at the rear, upper. All steps shall provide adequate surface for stepping.</p> <p><u>MIDSHIP FIRE PUMP</u></p> <p>Midship fire pump shall be a 1750 gpm, single (1) stage midship mounted centrifugal type.</p> <p>Pump shall be the class "A" type.</p>		

Kenai Fire Department

	Bidder Complies	
	Yes	No
<p>Pump shall deliver the percentage of rated discharges at the pressures indicated below:</p> <ul style="list-style-type: none"> - 100% of rated capacity at 150 psi net pump pressure. - 100% of rated capacity at 165 psi net pump pressure. -70% of rated capacity at 200 psi net pump pressure. -50% of rated capacity at 250 psi net pump pressure. <p>Entire pump and both suction and discharge passages shall be hydrostatically tested to a pressure of 500 psi.</p> <p>Pump shall be fully tested at the pump manufacturer's factory to the performance requirements as outlined by the current NFPA 1901 standards and shall be free from objectionable pulsation and vibration.</p> <p>Pump body and related parts shall be of fine grain, alloy cast iron with a minimum tensile strength of 30,000 psi (2041.2 bar).</p> <p>All moving parts in contact with water shall be of high quality bronze or stainless steel. Pumps utilizing castings made of lower tensile strength cast iron shall not be acceptable.</p> <p>Pump body shall be horizontally split, on a single plane in two (2) sections, for easy removal of entire impeller assembly, including wear rings and bearings from beneath the pump, without disturbing pump piping or the mounting of the pump in the chassis.</p> <p>Pump shall have one (1) double suction impeller. The pump body shall have two (2) opposed discharge volute cutwaters to eliminate radial unbalance.</p> <p>Pump impeller shall be hard, fine grain bronze of the mixed flow design, accurately machined, hand-ground, and individually balanced. The vanes of the impeller intake eyes shall be hand-ground and polished to a sharp edge. They shall be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower.</p> <p>Impeller clearance rings shall be bronze and easily renewable without replacing impeller or pump volute body. They shall be of the wrap-around double labyrinth design for maximum efficiency.</p> <p>Pump shaft shall be electric furnace heat-treated, corrosion resistant stainless steel. It shall be super-finished under packing with galvanic corrosion (zinc separators in packing) protection for longer shaft life. Pump shaft shall be sealed with double oil seal to keep road dirt and water out of drive unit.</p>		

	Bidder Complies	
	Yes	No
<p>Pump shaft shall be rigidly supported by three (3) bearings for minimum deflection. A high lead bronze sleeve bearing shall be located immediately adjacent to the impeller (on the side opposite of the drive unit). The sleeve bearing shall be automatically oil lubricated and pressure balanced to exclude foreign material. The remaining bearings shall be heavy-duty, deep groove ball bearings in the gearbox and shall be splash lubricated.</p> <p><u>PUMP PACKING</u></p> <p>Pump shaft shall have one (1) packing gland located on inlet side of the pump, and shall be of the split design for ease of repacking.</p> <p>Packing gland shall be a full-circle threaded design to exert uniform pressure on packing and prevent "cocking" and uneven packing load when it is tightened (no exception).</p> <p>The packing gland shall be easily adjusted by hand (with a rod or screwdriver), no special tools or wrenches required.</p> <p>Packing rings shall be of a unique, permanently lubricated, long-life graphite composition, and have sacrificial zinc foil separators to protect the pump shaft from galvanic corrosion.</p> <p><u>PUMP TRANSMISSION</u></p> <p>The drive unit shall be cast and completely manufactured and tested at the pump manufacturer's factory. The pump drive unit shall be of sufficient size to withstand up to 16,000 foot/pound of torque from the engine in both road and pump operating conditions. The drive unit shall be designed with ample lubrication reserve to maintain the proper operating temperature.</p> <p>The gearbox drive shafts shall be of heat treated chrome nickel steel and at least 2.75" in diameter on both the input and output drive shafts. They shall be designed to withstand the full torque of the engine in both road and pump operating conditions. All gears, both drive and pump, shall be of the highest quality, electric furnace, chrome nickel steel.</p> <p>Bores shall be ground to size and teeth integrated, crown-shaved and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability. An accurately cut spur design shall be provided to eliminate all possible end thrust.</p> <p>The pump ratio shall be selected by the apparatus manufacturer to provide the maximum performance with the engine and transmission selected.</p> <p>Three (3) green warning lights shall be provided to indicate to the operator(s) when the pump has completed the shift from Road to Pump position. Two (2) lights shall be located in the truck driving compartment and one (1) light on pump operator's panel, adjacent to the throttle control.</p>		

	Bidder Complies	
	Yes	No
<p><u>PUMPING MODE</u> An interlock system shall be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system shall be designed to allow stationary pumping only.</p> <p><u>AIR PUMP SHIFT</u> Pump shift engagement shall be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab.</p> <p>Two (2) indicator lights shall be provided adjacent to the pump shift inside the cab. One (1) green light shall indicate the pump shift has been completed and be labeled "pump engaged". The second green light shall indicate when the pump has been engaged and the chassis transmission is in pump gear. This indicator light shall be labeled "ok to pump".</p> <p>Another green indicator light shall be installed adjacent to the hand throttle on the pump panel and indicate either the pump is engaged and the road transmission is in pump gear, or the road transmission is in neutral and the pump is not engaged. This light shall be labeled "Warning: Do not open throttle unless light is on".</p> <p>The pump shift shall be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements.</p> <p>The pump shift control in the cab shall be illuminated to meet NFPA requirements.</p> <p><u>TRANSMISSION LOCK-UP</u> The direct gear transmission lock-up for the fire pump operation shall engage automatically when the pump shift control in the cab is activated.</p> <p><u>AUXILIARY COOLING SYSTEM</u> A supplementary heat exchange cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the engine water. Heat exchanger shall be cylindrical type and shall be a separate unit. It shall be installed in the pump or engine compartment with the control located on the pump operator's control panel. Exchanger shall be plumbed to the master drain valve.</p> <p><u>INTAKE RELIEF VALVE - PUMP</u> A relief valve shall be installed on the suction side of the pump preset at 125 psig.</p> <p>The relief valve shall have a working range of 75 psig to 250 psig.</p> <p>The outlet shall terminate below the frame rails with a 2.50" National Standard hose thread adapter and shall have a "do not cap" warning tag.</p>		

	Bidder Complies	
	Yes	No
<p>The relief valve pressure control shall be located behind an access door at the right side pump panel.</p> <p><u>PRESSURE CONTROLLER</u></p> <p>A pressure governor shall be provided.</p> <p>A pressure transducer shall be installed in the water discharge manifold on the pump.</p> <p>The display panel shall be located at the pump operator's panel.</p> <p><u>PRIMING PUMP</u></p> <p>The priming pump shall be a compressed air powered, high efficiency, multistage venturi based priming system, conforming to standards outlined in the current edition of NFPA 1901.</p> <p>All wetted metallic parts of the priming system are to be of brass and stainless steel construction.</p> <p>One (1) priming control shall open the priming valve and start the pump primer.</p> <p><u>PUMP MANUALS</u></p> <p>There shall be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals shall be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual shall cover pump operation, maintenance, and parts.</p> <p><u>PLUMBING, STAINLESS STEEL AND HOSE</u></p> <p>All inlet and outlet lines shall be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's shall be equipped with brass or stainless steel couplings. All stainless steel hard plumbing shall be a minimum of a schedule 10 wall thickness.</p> <p>Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping shall be equipped with victaulic or rubber couplings.</p> <p>Plumbing manifold bodies shall be ductile cast iron or stainless steel.</p> <p>All piping lines are to be drained through a master drain valve or shall be equipped with individual drain valves. All drain lines shall be extended with a hose to drain below the chassis frame.</p> <p>All water carrying gauge lines shall be of flexible polypropylene tubing.</p> <p>All piping, hose and fittings shall have a minimum of a 500 PSI hydrodynamic pressure rating.</p>		

	Bidder Complies	
	Yes	No
<p><u>MAIN PUMP INLETS</u> A 6.00" pump manifold inlet shall be provided on each side of the vehicle. The suction inlets shall include screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.</p> <p><u>MAIN PUMP INLET CAP</u> The main pump inlets shall have National Standard Threads with a long handle chrome cap. The cap shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).</p> <p><u>INTAKE VALVE</u> A 5" jumbo ball intake valve Two (2) shall be provided. One (1) 5.00" cap with chain shall be provided for each valve.</p> <p><u>VALVES</u> All discharges shall use in-line ball valves.</p> <p><u>LEFT SIDE INLET</u> There shall be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet shall be provided with a strainer, chrome swivel and plug.</p> <p><u>RIGHT SIDE INLET</u> There shall be one (1) auxiliary inlet with a 2.50" valve at the right side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet shall be provided with a strainer, chrome swivel and plug. The location of the valve for the one (1) inlet shall be recessed behind the pump panel.</p> <p><u>INLET CONTROL</u> The side auxiliary inlet(s) shall incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism shall indicate the position of the valve.</p> <p><u>INLET BLEEDER VALVE</u> A 0.75" bleeder valve shall be provided for each side gated inlet. The valves shall be located behind the panel with a swing style handle control extended to the outside of the panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and</p>		

	Bidder Complies	
	Yes	No
<p>provides excellent leverage. The water discharged by the bleeders shall be routed below the chassis frame rails.</p> <p><u>TANK TO PUMP</u> The booster tank shall be connected to the intake side of the pump with 4.00" heavy duty piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line shall run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling shall be included in this line to prevent damage from vibration or chassis flexing.</p> <p>A check valve shall be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.</p> <p><u>TANK REFILL</u> There shall be one (1) 2.50" combination tank refill and pump recirculation line provided. The tank refill shall incorporate a quarter-turn ball valve with the control located at the pump operator's panel.</p> <p><u>LEFT SIDE DISCHARGE OUTLETS</u> There shall be two (2) discharge outlets with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.</p> <p><u>RIGHT SIDE DISCHARGE OUTLETS</u> There shall be two (2) discharge outlets with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.</p> <p><u>LARGE DIAMETER DISCHARGE OUTLET</u> There shall be a 4.00" discharge outlet with a 3.50" valve with a 3.00" ball, installed on the right side of the apparatus, terminating with a 4.00" (M) National Standard hose thread adapter. This discharge outlet shall be actuated with a handwheel control with position indicator at the pump operator's control panel.</p> <p><u>REAR DISCHARGE OUTLET</u> There shall be one (1) discharge outlet piped to the rear of the hose bed, passenger's side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing shall consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel.</p> <p><u>DISCHARGE CAPS</u> Chrome plated, rocker lug, caps with chains shall be furnished for all side discharge outlets.</p>		

	Bidder Complies	
	Yes	No
<p>The cap shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).</p> <p><u>OUTLET BLEEDER VALVE</u></p> <p>A 0.75" bleeder valve shall be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application.</p> <p>The valves shall be located behind the panel with a swing style handle control extended to the outside of the side pump panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders shall be located at the bottom of the pump panel. They shall be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders shall be routed below the chassis frame rails.</p> <p><u>LEFT SIDE OUTLET ELBOWS</u></p> <p>The 2.50" discharge outlets located on the left side pump panel shall be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.</p> <p>The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).</p> <p><u>RIGHT SIDE OUTLET ELBOWS</u></p> <p>The 2.50" discharge outlets located on the right side pump panel shall be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.</p> <p>The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).</p> <p><u>REAR OUTLET ELBOWS</u></p> <p>The 2.50" discharge outlets located at the rear of the apparatus shall be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.</p> <p>The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).</p> <p><u>LARGE DIAMETER OUTLET ELBOWS</u></p> <p>The 4.00" outlet(s) shall be furnished with one (1) 4.00" (F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap.</p>		

	Bidder Complies	
	Yes	No
<p><u>DISCHARGE OUTLET CONTROLS</u></p> <p>The discharge outlets shall incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism shall indicate the position of the valve.</p> <p>If a handwheel control valve is used, the control shall be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel.</p> <p><u>DELUGE RISER</u></p> <p>A 3.00" deluge riser shall be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping shall be installed securely so no movement develops when the line is charged. The riser shall be gated and controlled at the pump operator's panel with a handwheel control.</p> <p><u>TELESCOPIC PIPING</u></p> <p>The deluge riser piping shall include a 18.00" extension.</p> <p>This extension shall be telescopic to allow the deluge gun to be raised 18.00" increasing the range of operation.</p> <p>A position sensor shall be provided on the telescopic piping that shall activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.</p> <p><u>MONITOR</u></p> <p>A monitor package shall be properly installed on the deluge riser.</p> <p>The monitor package shall include a 1250 GPM monitor with a 10.00" stream shaper and quad stack tips.</p> <p>A Safe-Tak portable base unit with one (1) 5.00" Storz inlet shall be provided.</p> <p>The monitor shall be painted to match the body.</p> <p>The deluge riser shall have provisions for direct mounting a monitor.</p> <p><u>CROSSLAY HOSE BEDS</u></p> <p>Two (2) crosslays with 1.50" outlets shall be provided. Each bed to be capable of carrying 200' of 1.75" double jacketed hose and shall be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve.</p> <p>Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.</p> <p>The crosslay controls shall be at the pump operator's panel.</p>		

	Bidder Complies	
	Yes	No
<p>The center crosslay dividers shall be fabricated of 0.25" aluminum and shall provide adjustment from side to side. The divider shall be unpainted with a brushed finish.</p> <p>Vertical scuffplates constructed of stainless steel shall be provided at the front and rear ends of the bed on each side of vehicle.</p> <p>Crosslay bed flooring shall consist of removable perforated brushed aluminum.</p> <p><u>CROSSLAY/DEADLAY HOSE RESTRAINT</u></p> <p>A black 1.00" nylon webbing design with 2.00" box pattern shall be provided across each end of three (3) crosslay/deadlay(s) to secure the hose during travel. The webbing shall be permanently attached at the back of the crosslay/deadlay opening(s). 1.00" web straps shall loop through footman loops located at the opposite end of the permanently attached webbing. The straps shall attach with a pair of velcro straps fasteners.</p> <p><u>CROSSLAY 8.00" LOWER THAN STANDARD</u></p> <p>The crosslays shall be lowered 8.00" from standard.</p> <p><u>DEADLAY HOSE BED</u></p> <p>One (1) deadlay bed without plumbing, shall be provided above the pump compartment capable of carrying two stacks of 1.75" match crosslay height.</p> <p>Stainless steel vertical scuffplates shall be provided at hose bed ends (each side of vehicle). The bottom of hose bed ends (each side) shall also be equipped with a stainless steel scuffplate.</p> <p>rear of crosslays</p> <p>Deadlay bed flooring shall consist of removable perforated brushed aluminum.</p> <p><u>FOAM PROPORTIONER</u></p> <p>A foam proportioning system shall be provided that is an on demand, automatic proportioning, single point, direct injection system suitable for all types of Class A and B foam concentrates, including the high viscosity (6000 cps), alcohol resistant Class B foams. Operation shall be based on direct measurement of water flow, and remain consistent within the specified flows and pressures. The system shall automatically proportion foam solution at rates from .1 percent to 3.0 percent regardless of variations in water pressure and flow, up to the maximum rated capacity of the foam concentrate pump.</p> <p>The design of the system shall allow operation from draft, hydrant, or relay operation.</p>		

	Bidder Complies	
	Yes	No
<p><u>SYSTEM CAPACITY</u></p> <p>The system shall have the ability to deliver the following minimum foam solution flow rates at accuracies that meet or exceed NFPA requirements at a pump rating of 150 psi.</p> <p>100 gpm @ 3 percent</p> <p>300 gpm @ 1 percent</p> <p>600 gpm @ 0.5 percent</p> <p>Class A foam setting in .1 percent increments from .1 percent to 1 percent. Typical settings of 1 percent, .5 percent and .3 percent (maximum capacity shall be limited to the plumbing and water pump capacity).</p> <p><u>CONTROL SYSTEM</u></p> <p>The system shall be equipped with a digital electronic control display located on the pump operators panel. Push button controls shall be integrated into the panel to turn the system on/off, control the foam percentage, and to set the operation modes.</p> <p>The percent of injection shall have a preset. This preset can be changed at the fire department as desired. The percent of injection shall be able to be easily changed at the scene to adjust to changing demands.</p> <p>Three (3) .50 tall LEDs shall display the foam percentage in numeric characters. Three (3) indicator LEDs shall also be included, one (1) green, one (1) red, and one (1) yellow. The LEDs shall indicate various system operation or error states.</p> <p>The indications shall be:</p> <p>Solid Green - System On</p> <p>Solid Red - Valve Position Error</p> <p>Solid Yellow - Priming System</p> <p>Flashing Green - Injecting Foam</p> <p>Flashing Red - Low Tank Level</p> <p>Flashing Yellow - Refilling Tank</p> <p>The control display shall house a microprocessor, which receives input from the systems water flow meter while also monitoring the position of the foam concentrate pump. The microprocessor shall compare the values of the water flow versus the position/rate of the foam</p>		

	Bidder Complies	
	Yes	No
<p>pump, to ensure the proportion rate is accurate. One (1) check valve shall be installed in the plumbing to prevent foam from contaminating the water pump.</p> <p><u>HYDRAULIC DRIVE SYSTEM</u></p> <p>The foam concentrate pump shall be powered by an electric over hydraulic drive system. The hydraulic system and motor shall be integrated into one (1) unit.</p> <p><u>FOAM CONCENTRATE PUMP</u></p> <p>The foam concentrate pump shall be of positive displacement, self-priming; linear actuated design, driven by the hydraulic system. The pump shall be constructed of brass body; chrome plated stainless steel shaft, with a stainless steel piston. In order to increase longevity of the pump, no aluminum shall be present in its construction.</p> <p>A relief system shall be provided which is designed to protect the drive system components and prevent over pressuring the foam concentrate pump</p> <p>The foam concentrate pump shall have minimum capacity for 3 gpm with all types of foam concentrates with a viscosity at or below 6000 cps including protein, fluoroprotein, AFFF, FFFP, or AR-AFFF. The system shall deliver only the amount of foam concentrate flow required, without recirculating foam back to the storage tank. Recirculating foam concentrate back to the storage tank can cause agitation and premature foaming of the concentrate, which can result in system failure. The foam concentrate pump shall be self-priming and have the ability to draw foam concentrate from external supplies such as drums or pails.</p> <p><u>EXTERNAL FOAM CONCENTRATE CONNECTION</u></p> <p>An external foam pick-up shall be provided to enable use of a foam agent that is not stored on the vehicle. The external foam pick-up shall be designed to allow continued operation after the on-board foam tank is empty, or the use of foam different than the foam in the foam tank.</p> <p><u>PANEL MOUNTED EXTERNAL PICK-UP CONNECTION / VALVE</u></p> <p>A bronze three (3)-way valve shall be provided. The unit shall be mounted to the pump panel. The valve unit shall function as the foam system tank to pump valve and external suction valve. The external foam pick-up shall be one (1) .75" male connection GHT (garden hose thread) with a cap.</p> <p><u>PICK-UP HOSE</u></p> <p>A .75" flexible hose with an end for insertion into foam containers shall be provided. The hose shall be supplied with a .75" female swivel GHT (garden hose thread) swivel connector. The hose shall be shipped loose.</p>		

	Bidder Complies	
	Yes	No
<p><u>DISCHARGES</u> The foam system shall be plumbed to the right rear outlet, front crosslay and rear crosslay.</p> <p><u>SYSTEM ELECTRICAL LOAD</u> The maximum current draw of the electric motor and system shall be no more than 55 amperes at 12 VDC.</p> <p><u>SINGLE FOAM TANK REFILL</u> The foam system's proportioning pump shall be used to fill the foam tank. This shall allow use of the auxiliary foam pick-up to pump the foam from pails or a drum on the ground into the foam tank. A foam shut-off switch shall be installed in the fill dome of the tank to shut the system down when the tank is full. The fill operation shall be controlled by a mode in the foam system controller. While the proportioner pump is filling the tank, the controller shall display a flashing yellow LED to indicate that the tank is filling. When the tank is full, as determined by the float switch in the tank dome, the pump shall stop and the controller shall shut the yellow LED off. If it attempted to use tank fill and the refill valve and suction valve are in the wrong position(s), then a red LED shall illuminate to indicate the improper valve position(s). When the valves are positioned properly, then filling shall commence.</p> <p><u>FOAM SYSTEM TRAINING</u> The fire department shall order one (1) vehicle with this foam system. A demonstration shall be provided at the apparatus manufacturers facility on the operation of the foam system.</p> <p>This demonstration shall include:</p> <ul style="list-style-type: none"> - A review of the foam system manual emphasizing key areas - A walk around review of the system components on the finished truck - A hands-on foam system start-up and foam discharge session - Instructions on the use of the manual overrides - The proper way to shut down and flush the foam system. <p><u>FOAM TANK</u> The foam tank shall be an integral portion of the polypropylene water tank. The cell shall have a capacity of 20 gallons of foam with the intended use of Class A foam. The foam cell shall reduce the capacity of the water tank. The foam cell shall have a screen in the fill dome and a breather in the lid.</p>		

	Bidder Complies	
	Yes	No
<p><u>FOAM TANK DRAIN</u> The foam tank drain shall be a 1.00" quarter turn drain valve located inside the pump/plumbing compartment.</p> <p><u>PUMP COMPARTMENT</u> The pump compartment shall be separate from the hose body and compartments so that each may flex independently of the other. It shall be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards.</p> <p>The pump compartment shall be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist.</p> <p>Pump compartment, pump, plumbing and gauge panels shall be removable from the chassis in a single assembly.</p> <p><u>PUMP MOUNTING</u> Pump shall be mounted to a substructure which shall be mounted to the chassis frame rail using rubber isolators. The mounting shall allow chassis frame rails to flex independently without damage to the fire pump.</p> <p><u>LEFT SIDE PUMP CONTROL PANELS</u> All pump controls and gauges shall be located at the left (driver's) side of the apparatus and properly identified.</p> <p>Layout of the pump control panel shall be ergonomically efficient and systematically organized.</p> <p>The pump operator's control panel shall be removable in two (2) main sections for ease of maintenance:</p> <p>The upper section shall contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels shall be removable from the face of the pump panel for ease of maintenance. Below the sub panels shall be located all valve controls and line pressure gauges.</p> <p>The lower section of the panel shall contain all inlets, outlets, and drains.</p> <p>All push/pull valve controls shall have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods shall be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls shall be capable of locking in any position. The control rods shall pull straight out of the panel and shall be equipped with universal joints to eliminate binding.</p>		

	Bidder Complies	
	Yes	No
<p><u>IDENTIFICATION TAGS</u></p> <p>The identification tag for each valve control shall be recessed in the face of the tee handle.</p> <p>All discharge outlets shall have color coded identification tags, with each discharge having its own unique color. Color coding shall include the labeling of the outlet and the drain for each corresponding discharge.</p> <p>All line pressure gauges shall be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting shall be removable from the face of the pump panel for ease of maintenance. The casting shall be color coded to correspond with the discharge identification tag.</p> <p>All remaining identification tags shall be mounted on the pump panel in chrome plated bezels.</p> <p>The pump panel on the right (passenger's) side shall be removable with lift and turn type fasteners.</p> <p>Trim rings shall be installed around all inlets and outlets.</p> <p>The trim rings for the side discharge outlets shall be color coded and labeled to correspond with the discharge identification tag.</p> <p><u>PUMP PANEL CONFIGURATION</u></p> <p>The pump panel configuration shall be arranged and installed in an organized manner that shall provide user-friendly operation.</p> <p><u>PUMP AND GAUGE PANEL</u></p> <p>The pump and gauge panels shall be constructed of aluminum with a painted FormCoat black finish. A polished aluminum trim molding shall be provided around each panel.</p> <p>The passenger's side pump panel shall be removable and fastened with swell type fasteners.</p> <p><u>PUMP COMPARTMENT LIGHT</u></p> <p>There shall be one (1) 3.00" white 12 volt DC LED light(s) with flange(s) installed in the pump compartment.</p> <p>There shall be a switch accessible through a door on the pump panel included with this installation.</p> <p>Engine monitoring graduated LED indicators shall be incorporated with the pressure controller.</p>		

	Bidder Complies	
	Yes	No
<p><u>AIR HORN BUTTON</u> An air horn control button shall be provided at the pump operator's control panel. This button shall be red in color and properly labeled and put within easy reach of the operator.</p> <p><u>PASSENGERS SIDE DRAINS</u> The drains on the passengers side pump panel shall be located to keep the area under the main pump inlet clear for customer installed piston intake valve.</p> <p><u>DRAINS, DRIVERS SIDE</u> The drains on the drivers side pump panel shall be located to keep the area under the main pump inlet clear for customer installed piston intake valve.</p> <p><u>VACUUM AND PRESSURE GAUGES</u> The pump vacuum and pressure gauges shall be liquid filled. The gauges shall be a minimum of 4.00" in diameter and shall have white faces with black lettering, with a pressure range of 30.00"-0-600#. Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut. The pump pressure and vacuum gauges shall be installed adjacent to each other at the pump operator's control panel. Test port connections shall be provided at the pump operator's panel. One (1) shall be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They shall have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They shall be marked with a label. This gauge shall include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.</p> <p><u>PRESSURE GAUGES</u> The individual "line" pressure gauges for the discharges shall be interlube filled. They shall be a minimum of 2.00" in diameter and shall have white faces with black lettering. Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut. Gauges shall have a pressure range of 30"-0-400#. The individual pressure gauge shall be installed as close to the outlet control as practical.</p>		

	Bidder Complies	
	Yes	No
<p>This gauge shall include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.</p> <p><u>WATER LEVEL GAUGE</u></p> <p>There shall be an electronic water level gauge provided on the operator's panel that registers water level by means of five (5) colored LED lights. The lights shall be durable, ultra-bright five (5) LED design viewable through 180 degrees. The water level indicators shall be as follows:</p> <ul style="list-style-type: none"> • 100 percent = Green • 75 percent = Yellow • 50 percent = Yellow • 25 percent = Yellow • Refill = Red <p>The light shall flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights shall flash sequentially when the water tank is empty.</p> <p>The level measurement shall be based on the sensing of head pressure of the fluid in the tank.</p> <p>The display shall be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design shall provide complete protection from water and environmental elements. An industrial pressure transducer shall be mounted to the outside of the tank. The field calibratable display measures head pressure to accurately show the tank level.</p> <p><u>WATER LEVEL GAUGE, CAB SIDES</u></p> <p>There shall be three (3) additional water level indicator, LED module, installed one (1) each side rearward of the crew cab doors and one (1) at the rear.</p> <p>This light module shall include four (4) colored levels, and function similar to the water level indicator located at the operators panel:</p> <p>First green module indicates a full water level.</p> <p>Second blue module indicates a water level above 3/4 full.</p> <p>Third amber module indicates a water level above 1/2 full.</p> <p>Last red module indicates a water level above 1/4 full and empty.</p> <p>Above 1/4 this light shall be steady burning.</p>		

	Bidder Complies	
	Yes	No
<p>At empty this light shall be flashing.</p> <p>This module shall be activated when the parking brake is applied.</p> <p><u>FOAM LEVEL GAUGE</u></p> <p>An electronic foam level gauge shall be provided on the operator's panel that registers foam level by means of five (5) colored LED lights. The lights shall be durable, ultra-bright five (5) LED design viewable through 180 degrees. The foam level indicators shall be as follows:</p> <ul style="list-style-type: none"> • 100 percent = Green • 75 percent = Yellow • 50 percent = Yellow • 25 percent = Yellow • Refill = Red <p>The light shall flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights shall flash sequentially when the foam tank is empty.</p> <p>The level measurement shall be based on the sensing of head pressure of the fluid in the tank.</p> <p>The display shall be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design shall provide complete protection from foam and environmental elements. An industrial pressure transducer shall be mounted to the outside of the tank. The display shall be able to be calibrated in the field and shall measure head pressure to accurately show the tank level.</p> <p><u>LIGHT SHIELD</u></p> <p>There shall be a polished, 16 gauge stainless steel light shield installed over the pump operator's panel.</p> <ul style="list-style-type: none"> • There shall be 12 volt DC white LED lights installed under the stainless steel light shield to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights shall be activated by the pump panel light switch. Additional lights shall be included every 18.00" depending on the size of the pump house. • One (1) pump panel light shall come on when the pump is in ok to pump mode. <p>There shall be a light activated above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel.</p>		

	Bidder Complies	
	Yes	No
<p>There shall be a green pump engaged indicator light activated on at the operator's panel when the pump is shifted into gear from inside the cab.</p> <p><u>AIR HORN SYSTEM</u></p> <p>There shall be two (2) air horns recessed in the front bumper. The horn system shall be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve shall be installed in-line to prevent loss of air in the air brake system.</p> <p><u>Air Horn Location</u></p> <p>The air horns shall be located on each side of the bumper, towards the outside.</p> <p><u>AIR HORN CONTROL</u></p> <p>A lanyard rope pull control shall be provided within reach of the driver.</p> <p><u>ELECTRONIC SIREN</u></p> <p>An electronic siren with noise canceling microphone shall be provided.</p> <p>This siren to be active when the battery switch is on and the emergency master switch is on.</p> <p>Electronic siren head shall be located in the center console.</p> <p>The electronic siren shall be controlled on the siren head only. No horn button or foot switches shall be required.</p> <p><u>SPEAKERS</u></p> <p>There shall be two (2) speakers with chrome finish provided. Each speaker shall be connected to the siren amplifier.</p> <p>The speakers shall be recessed in each side of the front bumper, inside of the frame rails.</p> <p><u>FRONT ZONE UPPER WARNING LIGHTS</u></p> <p>There shall be one (1) 72.00" lightbar mounted on the cab roof.</p> <p>The lightbar shall include the following:</p> <ul style="list-style-type: none"> • One (1) red flashing LED module in the driver's side end position. • One (1) red flashing LED module in the driver's side front corner position. • One (1) red flashing LED module in the driver's side first front position. • One (1) red flashing LED module in the driver's side second front position. • Open in the driver's side third front position. • Open in the driver's side fourth front position. • One (1) white flashing LED module in the driver's side fifth front position. 		

	Bidder Complies	
	Yes	No
<ul style="list-style-type: none"> • One (1) LED traffic light controller set to national standard high priority in the center positions. • One (1) white flashing LED module in the passenger's side fifth front position. • Open in the passenger's side fourth front position. • Open in the passenger's side third front position. • One (1) red flashing LED module in the passenger's side second front position. • One (1) red flashing LED module in the passenger's side first front position. • One (1) red flashing LED module in the passenger's side front corner position. • One (1) red flashing LED module in the passenger's side end position. <p>There shall be clear lenses included on the lightbar.</p> <p>The following switches may be installed in the cab on the switch panel to control the lightbar:</p> <ul style="list-style-type: none"> • a switch to control the flashing LED modules. • the traffic light controller shall be activated by a cab switch with emergency master control, • and there shall be no momentary switch to activate the traffic light controller. <p>The two (2) white flashing LED modules and the traffic light controller shall be disabled when the parking brake is applied.</p> <p>The four (4) red flashing LED modules in the front positions may be load managed when the parking brake is applied.</p> <p><u>LIGHTS, FRONT ZONE LOWER</u></p> <p>Two (2) LED flashing warning lights shall be installed on the cab face above the headlights, in a common bezel with the directional lights.</p> <p>The driver's side front warning light to be blue.</p> <p>The passenger's side front warning light to be red.</p> <p>Both lights shall include a clear lens.</p> <p>There shall be a switch located in the cab on the switch panel to control the lights.</p> <p><u>HEADLIGHT FLASHER</u></p> <p>The high beam headlights shall flash alternately between the left and right side.</p> <p>There shall be a switch installed in the cab on the switch panel to control the high beam flash. This switch shall be live when the battery switch and the emergency master switches are on.</p>		

	Bidder Complies	
	Yes	No
<p>The flashing shall automatically cancel when the hi-beam headlight switch is activated or when the parking brake is set.</p> <p><u>SIDE ZONE LOWER LIGHTING</u></p> <p>There shall be six (6) flashing LED warning lights with chrome trim installed per the following:</p> <ul style="list-style-type: none"> • Two (2) lights, one (1) each side on the front cab corner. The side front lights to be red. • Two (2) lights, side of cab. The side middle lights to be blue. • Two (2) lights, wheel well. The side rear lights to be red. • The lights shall include clear lenses. <p>There shall be a switch in the cab on the switch panel to control the lights.</p> <p><u>REAR ZONE LOWER LIGHTING</u></p> <p>There shall be two (2) LED flashing warning lights with chrome flanges located at the rear of the apparatus.</p> <ul style="list-style-type: none"> • The driver's side rear light to be blue • The passenger's side rear light to be red <p>Both lights shall include a lens that is clear.</p> <p>There shall be a switch located in the cab on the switch panel to control the lights.</p> <p><u>REAR OF HOSE BED WARNING LIGHTS</u></p> <p>There shall be two (2) 4.00" high x 7.18" in diameter LED warning beacons provided at the rear of the truck.</p> <ul style="list-style-type: none"> • The driver's side beacon to include red LED's. • The passenger's side beacon to include blue LED's. • The lens shall be clear. <p>There shall be one (1) switch located in the cab on the switch panel that controls the beacons when the battery switch is on.</p> <p><u>REAR UPPER ZONE BLOCKING LIGHTS</u></p> <p>There shall be two (2) flashing LED lights provided at the rear of apparatus at a level of 62.00" or higher, high on rear wall.</p> <p>The color of these lights shall driver side blue LED/clear lens, passenger side red LED/clear lens.</p> <p>The lights shall be activated with the rear upper warning switch.</p>		

	Bidder Complies	
	Yes	No
<p>These lights shall be installed without a flange.</p> <p>The rear warning lights shall be mounted on stainless steel brackets with all wiring totally enclosed. These brackets shall also support the rear deck lights and clearance/marker lights.</p> <p><u>LIGHT TOWER</u></p> <p>There shall be one (1) Command Light Model SL442D-RT, light tower provided on the apparatus.</p> <p>There shall be four (4) 12 volt DC light heads included on this tower.</p> <p>This tower shall not include the back light option.</p> <p>This tower shall not include a strobe light.</p> <p>The lights included on this tower may be load managed when the parking brake is applied.</p> <p>This tower shall activate the Do Not Move Truck Indicator light in the cab if not in the stowed position when the parking brake is released.</p> <p><u>LIGHT TOWER LOCATION</u></p> <p>The light tower shall be installed in the front hose bed area.</p> <p><u>LIGHT TOWER CONTROLLER</u></p> <p>There shall be a handheld wired controller included with the light tower.</p> <p><u>LOCATION FOR THE LIGHT TOWER CONTROLLER</u></p> <p>The light tower controller shall be installed in the driver's side front body compartment.</p> <p><u>120 VOLT RECEPTACLE</u></p> <p>There shall be one (1), 15/20 amp 120 volt AC three (3) wire straight blade duplex receptacle(s) with interior stainless steel wall plate(s), installed EMS compartment. The NEMA configuration for the receptacle(s) shall be 5-20R.</p> <p>The receptacle(s) shall be powered from the shoreline inlet.</p> <p>There shall be a label installed near the receptacle(s) that state the following:</p> <ul style="list-style-type: none"> • Line Voltage • Current Rating (amps) • Phase • Frequency • Power Source 		

Kenai Fire Department

	Bidder Complies	
	Yes	No
<p><u>LOOSE EQUIPMENT</u></p> <p>The following equipment shall be furnished with the completed unit:</p> <p>- One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit</p> <p><u>NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT</u></p> <p>The following loose equipment as outlined in NFPA 1901, 2016 edition, section 7.9.3.1, 7.9.3.2, and 7.9.4 shall be provided by the fire department.</p> <ul style="list-style-type: none"> • 200 ft (60 m) of 2.50" (65 mm) or larger fire hose. • 100 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose (if equipped with a fire pump). • One (1) handline nozzle, 95 gpm (360 L/min) minimum (if equipped with a fire pump). • One (1) first aid kit. • Two (2) combination spanner wrenches. • One (1) hydrant wrench. • One (1) double female adapter, sized to fit 2.50" (65 mm) or larger fire hose. • One (1) double male adapter, sized to fit 2.50" (65 mm) or larger fire hose. • One (1) rubber mallet, for use on suction hose connections (if equipped with a fire pump). • One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, <i>Standard for High Visibility Public Safety Vests</i>, and have a five-point breakaway feature that includes two at the shoulders, two at the sides, and one at the front. • Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band. • Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities. • One (1) automatic external defibrillator (AED). • If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side shall be carried. Any intake connection larger than 3.00" (75 mm) shall include a pressure relief device that meets the requirements of 16.6.6 (if equipped with pump). • If the apparatus does not have a 2.50" National Hose (NH) intake, an adapter from 2.50" NH female to a pump intake shall be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake. 		

	Bidder Complies	
	Yes	No
<ul style="list-style-type: none"> If the supply hose carried has other than 2.50" National Hose (NH) threads, adapters shall be carried to allow feeding the supply hose from a 2.50" NH thread male discharge and to allow the hose to connect to a 2.50" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake. <p><u>SOFT SUCTION HOSE PROVIDED BY FIRE DEPARTMENT</u></p> <p>NFPA 1901, 2016 edition, section 7.8.2.1 requires a minimum of 20' of suction hose or 15' of supply hose.</p> <p>Hose is not on the apparatus as manufactured. The fire department shall provide suction or supply hose.</p> <p><u>STRAINER PROVIDED BY FIRE DEPARTMENT</u></p> <p>NFPA 1901, 2016 edition, section 7.8.2.1.1 requires a suction strainer when suction hose is provided.</p> <p>The strainer is not on the apparatus as manufactured. The fire department shall provide the suction strainer.</p> <p><u>DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</u></p> <p>NFPA 1901, 2016 edition, section 7.9.4 requires one (1) approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus.</p> <p>The extinguisher is not on the apparatus as manufactured. The fire department shall provide and mount the extinguisher.</p> <p><u>WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</u></p> <p>NFPA 1901, 2009 edition, section 7.7.3.1 requires one (1) 2.5 gallon or larger water extinguisher mounted in a bracket fastened to the apparatus.</p> <p>The extinguisher is not on the apparatus as manufactured. The fire department shall provide and mount the extinguisher.</p> <p><u>PAINT PROCESS</u></p> <p>The exterior custom cab and/or body painting procedure shall consist of a seven (7) step finishing process. A commercial chassis paint process shall follow similar processes as determined by the chassis manufacturer. The following procedure shall be used by the apparatus manufacturer:</p> <ol style="list-style-type: none"> <u>Manual Surface Preparation</u> - All exposed metal surfaces on the custom cab and body shall be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces shall be removed and sanded to a smooth finish. Exterior seams shall be sealed 		

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	Bidder Complies	
	Yes	No
<p>before painting. Exterior surfaces that shall not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate.</p> <ol style="list-style-type: none"> 2. <u>Chemical Cleaning and Pretreatment</u> - All surfaces shall be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces shall be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces shall be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. A final pure water rinse shall be applied to all metal surfaces. 3. <u>Surfacer Primer</u> - The Surfacer Primer shall be applied to a chemically treated metal surface to provide a strong corrosion protective base coat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a critical aesthetic finish. The surfacer primer shall be a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded. 4. <u>Finish Sanding</u> - The surfacer primer shall be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat. 5. <u>Sealer Primer</u> - The sealer primer is applied prior to the base coat in all areas that have not been previously primed with the surfacer primer. The sealer primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when top coated. 6. <u>Base coat Paint</u> - Two coats of a high performance, two component high solids polyurethane base coat shall be applied. The Base coat shall be applied to a thickness that shall achieve the proper color match. The Base coat shall be used in conjunction with a urethane clear coat to provide protection from the environment. 7. <u>Clear Coat</u> - Two (2) coats of clear coat shall be applied over the base coat color. The clear coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style doors shall be clear coated to match the body. Paint warranty for the roll-up doors shall be provided by the roll-up door manufacturer. <p>Specifications are written to define cyclic corrosion testing, physical strengths, durability and minimum appearance requirements must be met in order for an exterior paint finish to be considered acceptable as a quality finish.</p> <p>Each batch of base coat color shall be checked for a proper match before painting of the cab and the body. After the cab and body are painted, the color is verified again to make sure that it matches the color standard. Electronic color measuring equipment shall be used to compare the color sample to the color standard entered into the computer. Color specifications are used to</p>		

	Bidder Complies	
	Yes	No
<p>determine the color match. A Delta E reading shall be used to determine a good color match within each family color.</p> <p>All removable items such as brackets, compartment doors, door hinges, and trim shall be removed and separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly shall be finish painted before assembly.</p> <p><u>PAINT - ENVIRONMENTAL IMPACT</u></p> <p>Contractor shall meet or exceed all current State regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water and soil. Controls shall include the following conditions:</p> <ul style="list-style-type: none"> • Topcoats and primers shall be chrome and lead free. • Metal treatment chemicals shall be chrome free. The wastewater generated in the metal treatment process shall be treated on-site to remove any other heavy metals. • Particulate emission collection from sanding operations shall have a 99.99% efficiency factor. • Particulate emissions from painting operations shall be collected by a dry filter or water wash process. If the dry filter is used, it shall have an efficiency rating of 98.00%. Water wash systems shall be 99.97% efficient • Water from water wash booths shall be reused. Solids shall be removed on a continual basis to keep the water clean. • Paint wastes shall be disposed of in an environmentally safe manner. • Empty metal paint containers shall be recycled to recover the metal. • Solvents used in clean-up operations shall be recycled on-site or sent off-site for distillation and returned for reuse. <p>Additionally, the finished apparatus shall not be manufactured with or contain products that have ozone depleting substances. Contractor shall, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with the state EPA rules and regulations.</p> <p><u>PAINT</u></p> <p>The cab and the body shall be painted to be determined</p> <p><u>PAINT CHASSIS FRAME ASSEMBLY</u></p> <p>The chassis frame assembly shall be finished with black before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc.</p> <p>Components treated with epoxy E-coat protection prior to paint:</p>		

	Bidder Complies	
	Yes	No
<ul style="list-style-type: none"> • Two (2) C-channel frame rails <p>Components that are included with the chassis frame assembly that shall be painted not e-coated are:</p> <ul style="list-style-type: none"> • Cross members • Axles • Suspensions • Steering gear • Battery boxes • Bumper extension weldment • Frame extensions • Body mounting angles • Rear Body support substructure (front and rear) • Pump house substructure • Air tanks • Fuel tank • Castings • Individual piece parts used in chassis and body assembly <p>The E-coat process shall meet the technical properties shown.</p> <p><u>PAINT, FRONT WHEELS</u> All wheel surfaces, inside and outside, shall be provided with TBD.</p> <p><u>PAINT, REAR WHEELS</u> All wheel surfaces, inside and outside, shall be provided with TBD.</p> <p><u>COMPARTMENT INTERIOR PAINT</u> The interior of compartmentation shall be painted with a gray spatter type paint.</p> <p><u>REFLECTIVE BAND</u> A 10.00" white reflective band shall be provided across the front of the vehicle and along the sides of the body.</p> <p>The reflective band provided on the cab face shall be at the headlight level.</p> <p><u>REAR CHEVRON STRIPING</u> There shall be alternating chevron striping located on the rear-facing vertical surface of the apparatus.</p>		

	Bidder Complies	
	Yes	No
<p>The colors shall be red and yellow diamond grade.</p> <p>Each stripe shall be 6.00" in width.</p> <p>This shall meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface shall be covered with chevron striping.</p> <p><u>CAB DOOR REFLECTIVE STRIPE</u></p> <p>A 6.00" x 16.00" white reflective stripe shall be provided across the interior of each cab door. The stripe shall be located approximately 1.00" up from the bottom, on the door panel.</p> <p>This stripe shall meet the NFPA 1901 requirement.</p> <p><u>LETTERING</u></p> <p>The lettering shall be totally encapsulated between two (2) layers of clear vinyl.</p> <p><u>LETTERING</u></p> <p>Forty-one (41) to sixty (60) genuine gold leaf lettering, 3.00" high, with outline and shade shall be provided.</p> <p><u>FIRE APPARATUS PARTS CD MANUAL</u></p> <p>There shall be two (2) custom parts manuals for the complete fire apparatus provided in CD format with the completed unit.</p> <p>The manuals shall contain the following:</p> <ul style="list-style-type: none"> • Job number • Part numbers with full descriptions • Table of contents • Parts section sorted in functional groups reflecting a major system, component, or assembly • Parts section sorted in alphabetical order • Instructions on how to locate parts <p>The manuals shall be specifically written for the chassis and body model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.</p> <p><u>SERVICE PARTS INTERNET SITE</u></p> <p>The service parts information included in these manuals are also available on the factory website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.</p>		

	Bidder Complies	
	Yes	No
<p><u>CHASSIS SERVICE CD MANUALS</u></p> <p>There shall be two (2) CD format chassis service manuals containing parts and service information on major components provided with the completed unit.</p> <p>The manual shall contain the following sections:</p> <ul style="list-style-type: none"> • Job number • Table of contents • Troubleshooting • Front Axle/Suspension • Brakes • Engine/Tires • Wheels • Cab • Electrical, DC • Air Systems • Plumbing • Appendix <p>The manual shall be specifically written for the chassis model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.</p> <p><u>CHASSIS OPERATION CD MANUALS</u></p> <p>There shall be two (2) CD format chassis operation manuals provided.</p> <p><u>ONE (1) YEAR MATERIAL AND WORKMANSHIP</u></p> <p>Each new piece of apparatus shall be provided with a minimum one (1) year basic apparatus material and workmanship limited warranty. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (no exception).</p> <p><u>ENGINE WARRANTY</u></p> <p>A five (5) year limited engine warranty shall be provided. A copy of the warranty certificate shall be submitted with the bid package.</p> <p><u>STEERING GEAR WARRANTY</u></p> <p>A one (1) year limited steering gear warranty shall be provided. A copy of the warranty certificate shall be submitted with the bid package.</p>		

	Bidder Complies	
	Yes	No
<p><u>FIFTY (50) YEAR STRUCTURAL INTEGRITY</u> The chassis frame shall be provided with a fifty (50) year material and workmanship limited warranty. The warranty shall cover the chassis frame as being free from defects in material and workmanship that would arise under normal use and service.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (no exception).</p> <p><u>FRONT AXLE WARRANTY</u> A five (5)-year/100,000 mile parts and labor warranty shall be provided.</p> <p><u>REAR AXLE TWO (2) YEAR MATERIAL AND WORKMANSHIP WARRANTY</u> A two (2) year axle limited warranty shall be provided.</p> <p><u>BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY</u> A three (3) year brake system limited warranty shall be provided.</p> <p><u>TEN (10) YEAR STRUCTURAL INTEGRITY</u> The new cab shall be provided with a ten (10) year material and workmanship limited warranty. The warranty shall cover such portions of the cab built by the manufacturer as being free from structural failures caused by defects in material and workmanship that would arise under normal use and service.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (no exception).</p> <p><u>TEN (10) YEAR PRO-RATED PAINT AND CORROSION</u> Each new piece of apparatus shall be provided with a ten (10) year pro-rated paint and corrosion limited warranty on the apparatus cab. The warranty shall cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (no exception).</p> <p><u>CAMERA SYSTEM WARRANTY</u> A fifty four (54) month warranty shall be provided for the camera system.</p> <p><u>COMPARTMENT LIGHT WARRANTY</u> A ten (10) year material and workmanship limited warranty shall be provided for the 12 volt DC LED strip lights. The warranty shall cover the LED strip lights to be free from defects in material and workmanship that would arise under normal use.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (no exception).</p>		

	Bidder Complies	
	Yes	No
<p><u>TRANSMISSION WARRANTY</u> The transmission shall have a five (5) year/unlimited mileage warranty covering 100 percent parts and labor. The warranty is to be provided by transmission supplier and not the apparatus builder.</p> <p><u>TRANSMISSION COOLER WARRANTY</u> The transmission cooler shall carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty shall also be in effect for the first three (3) years of the warranty coverage and shall not exceed \$10,000 per occurrence. A copy of the warranty certificate shall be submitted with the bid package.</p> <p><u>WATER TANK WARRANTY</u> The poly water tank shall be provided with a lifetime material and workmanship limited warranty. A copy of the warranty certificate shall be submitted with the bid package (no exception).</p> <p><u>FIVE (5) YEAR STRUCTURAL INTEGRITY</u> Each new piece of apparatus shall be provided with a five (5) year material and workmanship limited warranty on the apparatus body. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service. A copy of the warranty certificate shall be submitted with the bid package (no exception).</p> <p><u>ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY</u> A roll-up door limited warranty shall be provided. The mechanical components of the roll-up door shall be warranted against defects in material and workmanship for the lifetime of the vehicle. A six (6) year limited warranty shall be provided on painted and satin roll up doors. A copy of the warranty certificate shall be submitted with the bid package.</p> <p><u>PUMP WARRANTY</u> The five (5) year limited warranty on parts and two (2) year limited warranty on labor shall be provided for the pump. A copy of the warranty certificate shall be submitted with the bid package (no exception).</p> <p><u>TEN (10) YEAR PUMP PLUMBING WARRANTY</u> The stainless steel plumbing components and ancillary brass fittings used in the construction of the water/foam plumbing system shall be warranted for a period of ten (10) years or 100,000 miles. This covers structural failures caused by defective design or workmanship, or perforation</p>		

	Bidder Complies	
	Yes	No
<p>caused by corrosion, provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original purchaser for a period of ten years from the date of delivery.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (no exception).</p> <p><u>FOAM SYSTEM WARRANTY</u></p> <p>A one (1) year material and workmanship limited warranty shall be provided on the foam system. A five (5) year material and workmanship limited warranty shall be provided on the foam system control head.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (no exception).</p> <p><u>TEN (10) YEAR PRO-RATED PAINT AND CORROSION</u></p> <p>Each new piece of apparatus shall be provided with a ten (10) year pro-rated paint and corrosion limited warranty on the apparatus body. The warranty shall cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (no exception).</p> <p><u>THREE (3) YEAR MATERIAL AND WORKMANSHIP</u></p> <p>The gold leaf lamination shall be provided with a three (3) year material and workmanship limited warranty. The warranty shall cover the gold leaf lamination as being free from defects in material and workmanship that would arise under normal use and service.</p> <p>A copy of the warranty certificate shall be submitted with the bid package (no exception).</p> <p><u>VEHICLE STABILITY CERTIFICATION</u></p> <p>The fire apparatus manufacturer shall provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification shall be provided at the time of bid.</p> <p><u>ENGINE INSTALLATION CERTIFICATION</u></p> <p>The fire apparatus manufacturer shall provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification shall be provided at the time of bid.</p>		

	Bidder Complies	
	Yes	No
<p><u>POWER STEERING CERTIFICATION</u></p> <p>The fire apparatus manufacturer shall provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification shall be provided at the time of bid.</p> <p><u>CAB INTEGRITY CERTIFICATION</u></p> <p>The fire apparatus manufacturer shall provide a cab crash test certification with this proposal. Testing shall meet or exceed the requirements below:</p> <ul style="list-style-type: none"> - European Occupant Protection Standard ECE Regulation No.29. - SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks. - SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks. <p>There shall be no exception to any portion of the cab integrity certification. Nonconformance shall lead to immediate rejection of bid.</p> <p><u>CAB DOOR DURABILITY CERTIFICATION</u></p> <p>Robust cab doors help protect occupants. Cab doors shall survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder shall certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.</p> <p><u>WINDSHIELD WIPER DURABILITY CERTIFICATION</u></p> <p>Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers shall survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 <i>Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles</i>. The bidder shall certify that the wiper system design has been tested and that the wiper system has met these criteria.</p> <p><u>SEAT BELT ANCHOR STRENGTH</u></p> <p>Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design shall withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder shall certify that each anchor design was pull tested to the required force and met the appropriate criteria.</p> <p><u>SEAT MOUNTING STRENGTH</u></p> <p>Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design shall be tested to withstand 20 G's of force</p>		

	Bidder Complies	
	Yes	No
<p>in accordance with FMVSS 571.207 Seating Systems. The bidder shall certify, at time of delivery, that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.</p> <p><u>CAB DEFROSTER CERTIFICATION</u></p> <p>Visibility during inclement weather is essential to safe apparatus performance. The defroster system shall clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles. The bidder shall certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.</p> <p><u>CAB HEATER CERTIFICATION</u></p> <p>Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. The cab heaters shall warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder shall certify, at time of delivery, that a substantially similar cab has been tested and has met these criteria.</p> <p><u>AMP DRAW REPORT</u></p> <p>The bidder shall provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.</p> <p>The manufacturer of the apparatus shall provide the following:</p> <ul style="list-style-type: none"> • Documentation of the electrical system performance tests. • A written load analysis, which shall include the following: <ul style="list-style-type: none"> ○ The nameplate rating of the alternator. ○ The alternator rating under the conditions specified per: <ul style="list-style-type: none"> ▪ Applicable NFPA 1901 or 1906 (Current Edition). ○ The minimum continuous load of each component that is specified per: <ul style="list-style-type: none"> ▪ Applicable NFPA 1901 or 1906 (Current Edition). ○ Additional loads that, when added to the minimum continuous load, determine the total connected load. ○ Each individual intermittent load. <p>All of the above listed items shall be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).</p>		