



**SOUTH FIRE DISTRICT OF THE CITY OF MIDDLETOWN
445 RANDOLPH ROAD
MIDDLETOWN, CT 06457**

REQUEST FOR PROPOSAL #3918

CUSTOM FIRE RESCUE / PUMPER

Bids Due: January 12, 2022 at 2:00 p.m. EST

Bid Opening: January 12, 2022 at 2:30 p.m. EST

via Zoom: <https://us02web.zoom.us/j/83512516925>

or Dial In: 646-558-8656 - Meeting ID 835 1251 6925

PROPOSAL CHECKLIST

This standardized checklist has been provided to assist the bidder with the submission of their proposal package. This checklist cannot be construed as identifying all required submittal documents for this project. The bidders remain responsible for reading the entire proposal document to ensure they comply. Proposals may be considered subject to rejection if, in the sole opinion of the South Fire District (District), there is a serious omission, unauthorized alteration of form, unauthorized alternate proposal, incomplete or unbalanced unit price, or irregularities of any kind.

- ☐ Proposal Cover Page
- ☐ Proposal Form(s)
- ☐ Exceptions/Deviations Page
- ☐ W-9
- ☐ Copy of Required/Applicable Licenses or Certifications
- ☐ Specifications
- ☐ All Warranty Information
- ☐ Required Number of Proposal Copies (1 Original and 6 Copies = 7 Total)

CALENDAR OF EVENTS/RFP TIMELINE

Listed below are the important dates and times by which the actions noted must be completed. All dates are subject to change by the South Fire District. If the South Fire District finds it necessary to change any of these dates or times prior to the RFP due date, the change will be accomplished by addendum.

ACTION	COMPLETION DATE
Issue RFP	December 2, 2021
Last Day for Questions	January 5, 2022
Proposals Due	January 12, 2022
Bid Opening	January 12, 2022
Notice of Award	January 28, 2022

PART 1 – INTENT AND GENERAL INFORMATION

REQUEST FOR PROPOSALS

Sealed proposals must be received by the South Fire District located at 445 Randolph Road, Middletown, CT 06457, no later than 2:00 p.m. EST on January 12, 2022 for: RFP Custom Fire Rescue Pumper. Bidders shall take careful notice of the following conditions of this Request for Proposals:

- Submissions by facsimile or other electronic media will not be accepted under any circumstances.
- Late submissions will not be accepted under any circumstances.
- Submitters may withdraw and/or replace at any time until the deadline for submission of proposals.
- All questions received by 4:00 p.m. EST on January 5, 2022 will be considered. Questions must be in writing via email to Chief James Trzaski at jamestrzaski@southfiredistrict.com with *RFP- Custom Fire Rescue/Pumper* in the subject line. Answers to all questions will be posted on the District's website at www.southfiredistrict.com

FORMS AND SPECIFICATIONS

Details, proposal forms, and specifications are available on the South Fire District's website, www.southfiredistrict.com. Submitters are required to use the official "PROPOSAL FORMS" and all attachments itemized herein are to be submitted as a single document.

EXCEPTIONS AND DEVIATIONS

Any variation from the minimum specifications must be clearly stated and explained in detail on the EXCEPTION/DEVIATION FORM. These specifications are based upon design and performance criteria. Subsequently, these specifications reflect the only type of fire apparatus that is acceptable. Therefore, major exceptions to these base specifications will not be accepted. The bidder will make accurate statements as to the apparatus weight and dimensions. All proposals will include a complete set of detailed manufacturer's specifications. Omissions and unacceptable variations will result in immediate rejection of the proposal. Proposals that are found to have deviations without listing them will be rejected. No exceptions.

No prototype apparatus will be considered. All design, operational, and material features must fully comply with the State and Federal Motor Vehicle Safety Standards.

HOW TO SUBMIT A PROPOSAL

One complete proposal form set (1 original plus 6 copies) with all required documents as itemized and included herein is to be submitted in a sealed envelope, on the outside of which shall be prominently marked with the name and address of the submitter. The RFP should be neat, professional in appearance and bound appropriately for the document's thickness. The original document shall have original signatures and clearly noted with *ORIGINAL* on the cover. All proposals shall be mailed or hand-delivered to the South Fire District at the address given, by date and time set forth herein.

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VENDOR RESPONSIBILITY

Submitters are fully and completely responsible for labeling, identification, and delivery of their proposals. The South Fire District will not be responsible for any mislabeled or misdirected submissions, nor those handled by delivery persons, couriers, or the U.S. Postal Service.

PROPOSAL DOCUMENTS REQUIRED

The following documents and forms in the following arrangement must accompany each proposal or alternate proposal submitted:

- Proposal Cover Page – This is to be used as the first page of the proposal. This page must be fully completed and signed by an authorized officer of the vendor.
- Proposal Form
- Exceptions or Deviations to Specifications Form
- W-9
- Specifications
- All Warranty Information

EXAMINATION OF PROPOSAL DOCUMENTS

Each vendor shall carefully examine the drawings and/or specifications and other applicable documents and inform himself/herself thoroughly regarding any and all conditions and requirements that may in any manner affect cost, progress, or performance of the work to be performed under the contract. Ignorance on the part of the vendor will in no way relieve him/her of the obligations and responsibilities assumed under the contract.

Should a vendor find discrepancies or ambiguities in, or omissions from, the drawings and/or specifications, or should he/she be in doubt as to their meaning, he/she shall at once notify Fire Chief James Trzaski in writing, jamestrzaski@southfiredistrict.com.

INTERPRETATIONS AND CLARIFICATIONS

No oral interpretations will be made to any vendor as to the meaning of the proposal documents. Any inquiry or request for interpretation received by the South Fire District before 4:00 p.m. EST on January 5, 2022 will be given consideration. All such inquiries will be made in writing in the form of an email to Chief James Trzaski at jamestrzaski@southfiredistrict.com, with *RFP-Custom Fire Rescue/Pumper* in the subject line. All questions and answers will be posted on the District's website at www.southfiredistrict.com.

CERTIFICATES OF INSURANCE - SPECIFIC REQUIREMENTS

The bidder whose proposal is accepted will be required to furnish evidence of insurance (workers' compensation, commercial general liability, and business automobile liability) within ten (10) days from date of Notice of Award.

NON-COLLUSIVE BID AGREEMENT

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid, each party thereto certifies as to its own organization under penalty of perjury, that to the best of his/her knowledge and belief:

1. The prices of this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
2. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and
3. No attempt has been made or will be made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a bid for the purpose of restricting competition.

TERMINATION

If the bidder fails to fulfill its obligations under this Agreement or violates any of the covenants, agreements, or stipulations of this Agreement, or if the District deems that the bidder's conduct could have a negative effect on the reputation of the District, the District shall have the right, in its sole discretion, to terminate this Agreement immediately. The District also shall have the right, in its sole discretion, to terminate this Agreement without cause by giving thirty (30) days written notice to the bidder of such termination specifying the date of such termination. Upon termination of the Agreement, the District shall have no obligation to pay vendor for services not performed or goods not received.

PART 2 – EVALUATION PROCESS

PROPOSAL EVALUATION

This Request for Proposal includes following all the procedures in this document and sending the sealed proposal information to the South Fire District by the due date and time. Proposals will be evaluated on the following criteria:

Once proposals are received, the District's Apparatus Purchasing Committee members will independently review each submittal and score each proposal based on the evaluation criteria. The award will be based on the proposal that is most advantageous to the District.

The District reserves the right to apply the evaluation criteria in any manner it deems necessary and to evaluate each firm separately or comparatively, using these criteria in any weight or importance as it sees fits. The District also reserves the right to seek clarification from prospective firms on any issue in a response, invite specific firms for site visits, or oral presentations, or take any action it feels necessary to properly evaluate the submissions and construct a solution in the District's best interest. Failure to submit the requested information or required documentation may result in the lessening of the proposal score or the disqualification of the proposal response.

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Do not attempt to contact any District Apparatus Purchasing Committee member, staff member, or person other than Chief James Trzaski at jamestrzaski@southfiredistrict.com for questions related to this project. Anyone attempting to lobby District representatives will be disqualified.

The District's Apparatus Purchasing Committee will recommend one proposal to Fire Chief James Trzaski with final anticipated approval by the South District Board of Fire Commissioners. Anticipated Date of Notice of Award: February 1, 2022.

PART 3 – PROPOSAL SUBMITTAL

One original and six copies (for a total of 7) of each proposal shall be submitted in a sealed package. Proposals submitted in express, overnight, or courier envelopes, boxes or other packages must be prominently marked on the outside with the words "Custom Fire Rescue/Pumper" and contents sealed as required.

Deadline for submissions in response to the Request for Proposals: Proposals must be received no later than 2:00 p.m. EST on January 12, 2022. Proposals submitted by facsimile or other electronic media will not be accepted under any circumstances. Late proposals will not be accepted, and will be returned, unopened, to the bidder, at the bidder's expense.

The South Fire District reserves the right to reject any/or all proposals, reserves the right to waive any informalities or irregularities in the proposal, and reserves the right to award contract(s) in the best interest of the District.

PART 4 – PROPOSAL DOCUMENTS

South Fire District of the City of Middletown
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PROPOSAL COVER PAGE

Name of Firm, Entity, or Organization:

Federal Employer Identification Number (FEIN):

Name of Contact Person:

Title:

Email Address:

Mailing Address:

Street Address (if different):

City, State, Zip:

Telephone:

Organizational Structure – please check one:

☐ Corporation ☐ Partnership ☐ Proprietorship ☐ Joint Venture ☐ Other:

If Corporation:

Date of Incorporation:

State of Incorporation:

States Registered in as Foreign Corporation:

Authorized Signature:

Print Name:

Title:

Phone:

This document must be completed and returned with your submittal.

PROPOSAL FORM

SOUTH FIRE DISTRICT OF THE CITY OF MIDDLETOWN



Name of Firm Submitting Proposal: _____

Name of Person Submitting Proposal: _____

PROPOSAL ACKNOWLEDGMENT

"The undersigned, as bidder, hereby declares that he/she has informed himself/herself fully in regard to all conditions of the work to be done and that he/she has examined the RFP and specifications for the work and comments hereto attached. The vendor proposes and agrees, if this proposal is accepted, to contract with the South Fire District of the City of Middletown to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation, labor, and service necessary to complete the work covered by the RFP and contract documents for this project. The bidder agrees to accept in full compensation for each item at the prices named in the schedules incorporated herein."

TOTAL SUM PROPOSAL: \$

VENDOR REQUIRED PAYMENT SCHEDULE *(please indicate dollar amounts and timelines):*

Printed Name

Signature

Date

This document must be completed and returned with your submittal.

EXCEPTIONS OR DEVIATIONS TO SPECIFICATIONS

Note: Bidder must sign the appropriate statement below as applicable.

- () Bidder understands and agrees to all terms, conditions, requirements, and specifications stated herein.

Firm: _____

Signature: _____

- () Bidder takes exceptions to terms, conditions, requirements, or specifications stated herein. (Bidder must itemize each exception below and return with the proposal form.)

Firm: _____

Signature: _____

Bidder should note that any exceptions taken from the stated terms and/or specifications *may*, but not necessarily will, be cause for their submittal to be deemed "non-responsive," risking rejecting of the submittal.

Attached are _____ additional pages.

This document must be completed and returned with your submittal.

SAMPLE NOTICE OF AWARD

TO: _____

The South Fire District of the City of Middletown has selected you to complete the work in response to its **RFP – CUSTOM FIRE RESCUE/PUMPER** in accordance with the Agreement documents and specifications at the following cost:

\$ _____ Dollars \$
Bid Amount (Written in Words) *Bid Amount (Written in Numerals)*

VENDOR will be authorized to proceed with this work or provide the specified items and/or service subject to the following: receipt and approval of the required insurance certificate(s) as specified in the Agreement documents and execution of the Agreement incorporating the contract documents by the Fire Chief of the South Fire District of the City of Middletown.

You are required to execute the Agreement and furnish the required certificates of insurance(s) within **ten (10)** calendar days from the date of this notice to you.

If you fail to execute the Agreement and to furnish the required insurance certificate(s) within ten (10) calendar days of this notice, the South Fire District of the City of Middletown will be entitled to consider all your rights arising out the District's acceptance of your bid as abandoned and the District will seek whatever remedies to which it is entitled by law and in equity.

You are required to return an acknowledged copy of this Notice of Award to the Department.

Dated this _____ day of _____, 2022

By: _____
James Trzaski, Fire Chief

ACCEPTANCE OF NOTICE

The receipt of the above Notice of Award is hereby acknowledged by

Signature _____

this the _____ day of _____, 2022

Name/Title _____

South Fire District of the City of Middletown
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Bid Return Label

Always use mailing label below on all packages when submitting bids to the South Fire District of City of Middletown for clear identification of your bid response.

Official Bid Documents Enclosed:

CUSTOM FIRE RESCUE / PUMPER

Return Date: Wednesday, January 12, 2022 2:00 p.m. EST

**South Fire District of the City of Middletown
445 Randolph Road
Middletown, CT 06457**

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER

**Bidder
Complies**

Yes No

INTENT OF SPECIFICATIONS

It is the intent of these specifications to cover the furnishing and delivery to the purchaser a complete apparatus equipped as hereinafter specified. With a view of obtaining the best results and the most acceptable apparatus for service in the fire department, these specifications cover only the general requirements as to the type of construction and tests to which the apparatus must conform, together with certain details as to finish, equipment, and appliances with which the successful bidder must conform. Minor details of construction and materials where not otherwise specified are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all features. The apparatus shall conform to the requirements of the current (at the time of bid) National Fire Protection Association Pamphlet #1901 for Motor Fire Apparatus unless otherwise specified in these specifications.

Bids shall only be considered from companies which have an established reputation in the field of fire apparatus construction and have been in business for a minimum of ten (10) years.

Each bid shall be accompanied by a set of "Contractor's Specifications" consisting of a detailed description of the apparatus and equipment proposed and to which the apparatus furnished under contract must conform. Computer run-off sheets are not acceptable as descriptive literature.

The specifications shall indicate size, type, model and make of all component parts and equipment.

STATEMENT OF EXCEPTIONS TO NFPA 1901

If, at the time of delivery, the apparatus manufacturer is not in compliance, a statement of exceptions must be provided as follows:

- The specific standard affected.
- A statement describing why the manufacturer is not in compliance.
- A description of the remedy, and who the responsible party is.

The document must be signed by an officer of the company, and an authorized agent of the purchaser. **NO EXCEPTIONS**

QUALITY AND WORKMANSHIP

The design of the apparatus must embody the latest approved automotive engineering practices.

The workmanship must be the highest quality in its respective field. Special consideration shall be given to the following points: accessibility to various areas requiring periodic maintenance, ease of operation (including both pumping and driving) and symmetrical proportions.

Construction must be rugged and ample safety factors must be provided to carry loads as specified and to meet both on and off-road requirements and speed as set forth under "Performance Test and Requirements."

PERFORMANCE TESTS AND REQUIREMENTS

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p>A road test shall be documented with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts, and rear axles shall run quietly and free from abnormal vibration or noise throughout the operating range of the apparatus. The apparatus, when loaded, shall be approximately 66% on the rear axle. The successful bidder shall furnish a weight certification showing weight on the front and rear axle, and the total weight of the completed apparatus at the time of delivery.</p> <p>a) The apparatus must be capable of accelerating to 30 MPH from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed engine RPM.</p> <p>b) The service brakes shall be capable of stopping the fully loaded vehicle within 35 feet from a speed of 25 MPH on a level concrete highway.</p> <p>c) The apparatus, fully loaded, shall be capable of obtaining a speed of 50 MPH on a level highway with the engine not exceeding 95% of its governed RPM (full load).</p> <p>d) The apparatus shall be tested and approved by a qualified testing agency in accordance with their standard practices for pumping engines.</p> <p>e) The contractor shall furnish copies of the Pump Manufacturer's Certification of Hydrostatic Test (if applicable), the Engine Manufacturer's current Certified Brake Horsepower Curve, and the Manufacturer's Record of Construction Details.</p> <p><u>FAILURE TO MEET TESTS</u></p> <p>In the event the apparatus fails to meet the test requirements of these specifications on the first trial, a second trial may be made at the option of the bidder within thirty (30) days of the date of the first trials. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Permission to keep and/or store the apparatus in any building owned or occupied by the purchaser shall not constitute acceptance of same.</p> <p><u>EXCEPTIONS TO SPECIFICATIONS</u></p> <p>The following specifications shall be strictly adhered to. Exceptions shall be considered if they are deemed equal to or superior to the specifications, provided they are fully explained on a separate page entitled "EXCEPTIONS TO SPECIFICATIONS." Exceptions shall be listed by page and paragraph.</p> <p><u>ITEMS EXCEEDING SPECIFICATIONS</u></p> <p>If a specification is exceeded and the manufacturer deems that it adds significant value to apparatus, it should be noted on a separate page entitled "ITEMS EXCEEDING SPECIFICATIONS."</p> <p>Failure to denote exceptions in the above manner shall result in immediate rejection of the proposal. In addition, a general statement taking "TOTAL EXCEPTION" to the specifications shall result in immediate rejection of bid.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER

**Bidder
Complies**

Yes No

GENERAL CONSTRUCTION

The apparatus shall be designed, and the equipment mounted, with due consideration to distribution of load between the front and rear axles so that all specified equipment, including filled water tank, a full complement of personnel and fire hose shall be carried without injury to the apparatus. Weight balance and distribution shall be in accordance with the recommendations of the International Association of Fire Chiefs and National Fire Association (or American Insurance Association). Certified Laboratories certificate shall be submitted by the manufacturer. Weight of apparatus shall meet all federal axle load laws.

DELIVERY REQUIREMENTS

The apparatus shall be completely equipped as per these specifications upon arrival and on completion of the required tests shall be ready for immediate service in the fire department of the purchaser. Any and all alterations required at the scene of delivery to comply with these specifications must be done at the contractor's expense.

PURCHASER RIGHTS

The Purchaser reserves the right to accept or reject any bid. The purchaser also reserves the right to award in their best interest and reserves the right to waive any formalities.

The entire apparatus shall be assembled within the borders of the Continental United States to insure more readily available parts (without added costs and delays caused by tariffs and customs) and service, as well as protecting the purchaser should legal action ever be required.

MANUFACTURER'S EXPERIENCE

Each manufacturer shall have been in business making similar apparatus for a minimum of - thirty-five (35) years.

ELIMINATION OF DIVIDED RESPONSIBILITY

It is required that each bidder **produce both the chassis and complete apparatus**. To eliminate divided responsibility and service, the chassis and body **must be** manufactured by the same company. Manufacturer shall state the number of years the company has been producing their own chassis and body. Manufacturer shall state compliance with the paragraph. **NO EXCEPTIONS**.

FAMA COMPLIANCE

Manufacturer must be a current member of the Fire Apparatus Manufacturer's Association.

PROPOSAL DRAWINGS

Six (6) - 18x24 and one (1) - 24x36 general layout color drawings depicting the apparatus layout and appearance shall be provided with the bid. The drawing shall consist of left side, right side, frontal, rear and overhead elevation views. Apparatus equipped with a fire pump shall have a general layout view of the pump operators panel scaled the same as the

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER

**Bidder
Complies**

Yes No

elevation views. The drawing shall be a depiction of the actual apparatus proposed and not of a generic similar product.

APPROVAL DRAWING

After the award of bid and pre-construction conference, a detailed layout drawing depicting the apparatus layout and appearance including any changes agreed upon shall be provided for customer review and signature. The drawing will become part of the contract documents. The drawing shall consist of left side, right side, frontal, and rear elevation views. Apparatus equipped with a fire pump, shall have a general layout view of the pump operators panel scaled the same as the elevation views.

WIRING SCHEMATIC

A CD containing wiring diagrams of the apparatus shall be provided at the time of delivery.

PRE-CONSTRUCTION CONFERENCE

After award of the contract, and prior to construction of the apparatus, a pre-construction conference shall be held at South Fire District Headquarters.

INSPECTION TRIPS

Two (2) inspection trips shall be provided at the manufacturer's facility, one (1) after body has been mounted on chassis, and one (1) for final inspection. A provision shall be provided in the bid price for all travel, food and lodging for up to three (3) fire department personnel.

PROPOSAL GUARANTEE

A certified check or bid bond in the sum of ten percent (10%) of the total bid price shall be submitted with the "Bid Proposal" at the time of the bid. The full amount of the bid surety shall be returned to the unsuccessful bidders following the award of the contract to the successful bidder.

PERFORMANCE BOND

Within twenty (20) days of notification to the successful bidder by the purchaser, prior to any work commencing on the proposed apparatus, the successful bidder shall, at their own expense, obtain and submit to the purchasing entity a performance bond in the amount of 100% equal to the total contract price.

Additionally, each bidder must disclose the price/amount it pays for bonding, per \$1,000. This is to demonstrate the economic stability and credit worthiness of the bidder. **NO EXCEPTIONS.**

Cost of bond per \$1,000.00: _____

Total cost of Performance Bond: _____

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p><u>LOCAL SERVICE REQUIREMENTS</u></p> <p>The Purchaser places a very high priority on service. The local service requirement section of these specifications will be a major factor in determining the successful bidder. All bidders shall therefore provide details of their ability to service the apparatus proposed, including but not limited to the following:</p> <ol style="list-style-type: none"> 1. Service Facility: Size, location(s), bays, engine, transmission, paint, and body capabilities. 2. Service Vehicles: Number and limitations. 3. Certified Service Employees: Number of NAEVT* & ASE* certified technicians. *Copies of certifications are to be included in the proposal binder. 4. Service: Hours of operation. 5. Emergency contingency offerings. <p>Limited manpower does not allow for the apparatus to be taken to various places for repairs. It is the desire of the purchaser that warranty repairs to the apparatus which can be reasonably accomplished in the fire station shall be done so to reduce the out of service time of the apparatus, without additional fee.</p> <p>The bidder's authorized service center shall have a minimum of one fully equipped service vehicle, which shall carry spare parts and repair equipment needed to work on the apparatus proposed.</p> <p>The bidder's service center shall have a fully enclosed and heated facility, which shall be located <u>within forty-five (45) miles of South Fire District Headquarters</u> and shall be located within the State of Connecticut. This facility shall have adequate security to protect this agency's equipment while undergoing necessary service or repair. The service center shall be certified by the apparatus builder and shall be able to provide body, pump, electrical, hydraulic, HVAC, and chassis repairs. Photos of the repair facility are to be enclosed in the bidder's proposal. Proposals from companies without a repair facility as described above will be disqualified from consideration.</p> <p>The local service center shall be available for an inspection by designated representatives of the Purchaser prior to bid award if deemed necessary.</p> <p><u>APPARATUS OVERALL HEIGHT</u></p> <p>The apparatus shall be no taller than 10' 8" in height.</p> <p><u>APPARATUS LENGTH</u></p> <p>The apparatus shall be no longer than 35'.</p> <p><u>CUSTOM FIRE CHASSIS</u></p> <p>A custom fire service severe duty cab and chassis system shall be provided. The chassis shall be manufactured in the factory of the bidder. The chassis shall be designed and</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p>manufactured for heavy duty service with adequate strength and capacity of all components for the intended load to be sustained and the type of service required. The cab and chassis system shall be considered the bidders "Top of the Line."</p> <p>There shall be no divided responsibility in the production of the apparatus.</p> <p>State the model of the cab you are proposing: _____</p> <p><u>WHEELBASE</u></p> <p>State the wheelbase in inches of the proposed apparatus: _____</p> <p><u>DOUBLE FRAME RAILS</u></p> <p>The chassis frame shall be of a ladder type design utilizing industry accepted engineering best practices. The frame shall be specifically designed for fire apparatus use.</p> <p>Each rail is media blasted to remove scale, oil, and contaminants. Frame rails shall be hot dipped galvanized. Frame rails to be painted topcoat black.</p> <p>A 20-year corrosion warranty shall be provided per manufacturers written statement.</p> <p>A lifetime warranty shall be provided, per manufacturer's written statement.</p> <p><u>FRONT TOW EYES, BELOW BUMPER</u></p> <p>There shall be two front tow eyes with 3" diameter holes attached directly to the chassis frame, accessible below the front bumper. The tow eyes shall be chamfered.</p> <p><u>TOW EYES, PAINTED FINISH</u></p> <p>The front tow eyes shall be painted to match the color of the chassis frame.</p> <p><u>REAR TOW EYES</u></p> <p>There shall be two (2) tow eyes attached directly to the chassis frame rail and shall be chromate acid etched for superior corrosion resistance and painted to match the chassis. The tow eyes shall be chamfered.</p> <p><u>STEERING</u></p> <p>It shall have an 18" diameter slip resistant rubber covered steering wheel. Steering column shall have six position tilt and 2" telescopic adjustment.</p> <p><u>DRIVE LINE</u></p> <p>The driveline shall consist of Spicer 1810 series dual grease fitting universal joints with "half-round" end yokes. The drive shaft shall be built with a heavy-duty steel tube 4.095" outside diameter x .180 wall thickness. The shafts shall be dynamically balanced prior to installation into the chassis. A splined slip joint shall be provided in each shaft assembly.</p>		

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**Bidder
Complies**

Yes No

Universal joints shall be extended life. There shall be two (2) Zerk fittings in each universal joint assembly so the joint can be greased without turning the shaft.

ENGINE

The apparatus shall be powered by a Cummins Diesel X 12 500 HP @ 1800 R.P.M., 1695 ft. lb. torque @ 1000 R.P.M.

Displacement: 11.8-liter displacement.

Cylinders: 6

Bore: 5.2" (132mm)

Stroke: 5.67" (144mm)

AIR COMPRESSOR

The air compressor shall be an 18.7 CFM engine driven Wabco.

STARTER

A 12-volt starter shall be provided, controlled by a switch on the left lower cab dash.

EXHAUST SYSTEM

The engine exhaust system shall include the following components:

- Diesel Particulate Filter (DPF)
- Diesel Oxidation Catalyst (DOC) Diesel Exhaust Fluid (DEF)
- Selective Catalytic Reduction Filter (SCR)

The SCR catalyst utilizes the DEF fluid, which consists of urea and purified water, to convert NOx into nitrogen and water. This shall meet or exceed 2017 EPA emissions requirements.

The engine exhaust system shall be horizontal design constructed from heavy-duty truck components. The exhaust tubing shall be stainless steel to the DPF through to the SCR, aluminized steel from the SCR to the exhaust tip. A heavy-duty stainless-steel bellows tube shall be used to isolate the exhaust system from the engine. The system shall be equipped with single canister consisting of a Diesel Oxidation Catalyst (DOC) and a Diesel Particulate Filter (DPF), and shall be mounted under the right-side frame rail, meeting the specific engine manufacturer's specifications and current emission level requirements. The outlet shall be directed to the forward side of the rear wheels, exiting the right side with a heavy-duty heat diffuser. The heat diffuser shall prevent the exhaust temperature from exceeding 851 deg. F during a regeneration cycle. A heat- absorbing sleeve shall be provided on the exhaust pipe in the engine compartment area to reduce the heat, protect the alternator, and to protect personnel while servicing the engine compartment.

AFTER TREATMENT SYSTEM

To meet EPA requirements of Particulate output, a DPF (Diesel Particulate Filter) is used. To meet EPA requirements of Nitrous Oxide output an SCR (Selective Catalytic Reduction) system utilizing DEF (Diesel Exhaust Fluid) is used.

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p><u>ON-BOARD DIAGNOSTIC (OBD) SYSTEM</u></p> <p>The engine shall be equipped with an on-board diagnostic (OBD) system which shall monitor emissions- related engine systems and components and alert the operator of any malfunctions. The OBD system is designed to further enhance the engine and operating system by providing early detection of emission- related faults. The engine control unit (ECU) will manage smart sensors located throughout the engine and after-treatment system. The system shall monitor component verification and sensor operation. There shall be warning lights located in the dash instrument panel to alert the operator of a malfunction. A data port shall be provided under the driver's side dash for the purpose of code reading and troubleshooting. All communication shall be provided through the J1939 data link.</p> <p><u>ENGINE WARRANTY</u></p> <p>The engine shall have a five (5) year or 100,000-mile warranty and approval by Cummins Diesel for Full Engine Coverage Plan (RVF) – which is their most complete engine coverage plan, which includes EGR components installation in the chassis. There shall be no deductible for the first two (2) years. A one-hundred-dollar deductible shall apply for service beginning the third year.</p> <p><u>AIR CLEANER/INTAKE</u></p> <p>The engine air intake and filter shall be designed in accordance with the engine manufacturer's recommendations. It shall be 99.9% effective in removing airborne contaminants when tested per the industry standard SAE J726 procedure and offer a dirt holding capacity of at least 3.0 gm/cfm of fine dust (tested per SAE J726) offering superior engine protection.</p> <p>The air filter shall be located at the front of the apparatus and shall be at least 66" above the ground, to allow fording deep water in an emergency situation.</p> <p>An ember separator shall be provided in the engine air intake meeting, the requirements of NFPA 1901. An Air Restriction warning light shall be provided and located on the cab dash.</p> <p><u>PRIMARY FUEL FILTER/WATER SEPARATOR</u></p> <p>A Fleetguard FH23049 fuel filter/water separator shall be remote mounted to the chassis frame rail.</p> <p><u>12VDC HEATER</u></p> <p>A 12V DC heater shall be provided for the Fleetguard Fuel Pro FH230 fuel filter/water separator.</p> <p><u>SECONDARY FUEL FILTER</u></p> <p>A Cummins approved FH23049 fuel filter w/ heater will be mounted on the driver's side of the engine.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER

**Bidder
Complies**

Yes No

FUEL PRIMER

An electric fuel primer shall be provided for the apparatus engine. The primer shall be mounted on the engine with a bypass ball valve that can be opened for the priming function and closed during normal operation. The primer pump shall be activated with a 12-volt switch located next to the primer pump.

TRANSMISSION

The chassis shall be equipped with a Generation 5 Allison EVS4000 six (6) speed automatic transmission. It shall be programmed five (5) speed, sixth gear locked out, for fire apparatus vocation, in concert with the specified engine.

The transmission is communicated on the J-1939 through the communication port. The fifth gear shall be an overdrive ratio, permitting the vehicle to reach its top speed at the engine's governed speed. The dipstick is dipped in a rubber coating for ease in checking oil level when hot.

The chassis to transmission wiring harness shall utilize Metri-Pack 280 connectors with triple lip silicone seals and clip-type positive seal connections to protect electrical connections from contamination without the use of coatings.

Ratings: Max Input (HP) 600

Max Input (Torque) 1850 (lb. ft) Max Turbine (Torque) 2600 (lb. ft)

Mechanical Ratios:

1st - 3.51:1

2nd - 1.91:1

3rd - 1.43:1

4th - 1.00:1

5th - 0.74:1

Reverse - 5.00:1

ENGINE BRAKE

The engine shall be equipped with a Jacobs compression engine brake. An "On/Off" switch and a control for "Low/Medium/High" shall be provided on the instrument panel within easy reach of the driver.

The engine brake shall interface with the Wabco ABS brake controller to prevent engine brake operations during adverse braking conditions.

A pump shift interlock circuit shall be provided to prevent the engine brake from activating during pumping operations.

The brake light shall activate when the engine brake is engaged.

TRANSMISSION COOLER

The apparatus transmission shall be equipped with a Liquid-to-Liquid remote mounted cooler with aluminum internal components. The cooler shall be encased in an aluminum housing

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER

**Bidder
Complies**

Yes No

and mounted to the outside of the officer's side frame rail for accessibility and ease of service.

TRANSMISSION FLUID

Will be synthetic fluid, trans-synd or equal.

TRANSMISSION SHIFTER

An Allison "Touch Pad" shift selector shall be mounted to the right of the driver on the engine cover accessible to the driver. The shift position indicator shall be indirectly lit for nighttime operation.

COOLING SYSTEM

The cooling system shall be designed to keep the engine properly cooled under all conditions of road and pumping operations. The cooling system shall be designed and tested to meet or exceed the engine and transmission manufacturer's requirements, and EPA regulations.

The complete cooling system shall be mounted in a manner to isolate the system from vibration and stress. The individual cores shall be mounted in a manner to allow expansion and contraction at various rates without inducing stress to the adjoining core(s).

The cooling system shall be comprised of a charge air cooler to radiator serial flow package that provides the maximum cooling capacity for the specified engine as well as serviceability. The main components shall include a surge tank, a charge air cooler, bolted to the top of the radiator to maximize cooling, recirculation shields, a shroud, a fan, and required tubing. All components shall consist of an individually sealed system.

RADIATOR

The radiator shall be a cross-flow design constructed completely of aluminum with welded side tanks. The radiator shall be bolted to the bottom of the charge air cooler to allow a single depth core, thus allowing a more efficient and serviceable cooling system.

The radiator shall be equipped with a drain cock to drain the coolant for serviceability. The drain cock shall be located at the lowest point of the aluminum cooling system to maximize draining of the system.

CHARGE AIR COOLER

The charge air cooler shall be of a cross-flow design and constructed completely of aluminum with extruded tanks. The charge air cooler shall be bolted to the top of the radiator to allow a single depth core.

COOLANT

The cooling system shall be filled with a 50/50 mix. The coolant makeup shall contain ethylene glycol and deionized water to prevent the coolant from freezing to a temperature of -34 degrees F.

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER

**Bidder
Complies**

Yes No

HOSES & CLAMPS

Gates Green Stripe silicone hoses shall be provided for all engine coolant lines. All radiator hose clamps shall be spring loaded stainless steel constant torque hose clamps for all main hose connections to prevent leaks. Recirculation shields shall be installed where required to prevent heated air from reentering the cooling package and affecting performance.

FAN

The engine cooling system shall incorporate a heavy-duty composite 11- blade Z-series fan. It shall provide the highest cooling efficiently while producing the lowest amount of noise. This robust yet light-weight fan results in less wear and stress on motors and bearings.

A shroud and recirculation shield system shall be used to ensure air that has passed through the radiator is not drawn through again. The fan tip to radiator core clearance shall be kept at a minimal distance to increase the efficiency of the fan and reduce fan blast noise.

FAN CLUTCH

A fan clutch shall be provided that shall allow the cooling fan to operate only when needed. The fan shall remain continuously activated when the truck is placed in pump gear.

SURGE TANK

The cooling system shall be equipped with an aluminum surge tank mounted to the officer's side of the cooling system core. The surge tank shall house a low coolant probe and sight glass to monitor the coolant level. Low coolant shall be alarmed with the check engine light. The surge tank shall be equipped with a dual seal cap that meets the engine manufacturer's pressure requirements, and system design requirements.

The tank shall allow for expansion and to remove entrained air from the system. There shall also be an extended fill neck to prevent system overflow and encroachment of expansion air space. Baffling shall be installed in the tank to prevent agitated coolant from being drawn into the engine cooling system.

ANTIFREEZE

The radiator shall be filled with Long Life antifreeze.

FUEL TANK

The chassis shall be equipped with a 65-gallon stainless steel rectangular fuel tank. The fuel tank shall be certified to meet FMVSS 393.67 tests. It shall also maintain engine manufacturer's recommended expansion room of 5%.

Dual pick-up and return ports with a single 3/4" tank drawtube shall be provided for diesel generators if required.

The fuel lines shall be nylon braid reinforced fuel hose with brass fittings. The lines shall be carefully routed along the inside of the frame rails. All fuel lines are covered in high temperature rated split plastic loom. Single suction and return fuel lines shall be provided.

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	Yes	No
<p>The fuel tank shall be mounted with stainless steel straps The bottom of the fuel tank shall contain a 1/2" drain plug.</p> <p><u>FUEL FILL</u></p> <p>The fuel tank shall be equipped with a 2-1/4" filler neck assembly with a 3/4" vent located on the driver's side of the truck. A fuel fill cap attached with a lanyard shall be provided.</p> <p><u>FUEL COOLER</u></p> <p>Installed on the apparatus fuel system shall be an Air-to-Liquid aluminum fuel cooler. The fuel cooler shall be located in the lowest module of the cooling system.</p> <p><u>DIESEL EXHAUST FLUID TANK</u></p> <p>The exhaust system shall include a molded cross linked polyethylene tank. The tank shall have a capacity of 5 usable gallons and shall be mounted on the left side of the chassis frame. The DEF tank fill neck shall accept only a 19mm dispensing nozzle versus the standard 22mm diesel fuel dispensing nozzle to prevent cross contamination. The DEF tank cap shall be blue in color to further prevent cross contamination.</p> <p>A placard shall accompany fill location noting DEF specifications.</p> <p><u>EXHAUST ADAPTER</u></p> <p>The exhaust shall terminate to accept a station mounted PlymoVent® exhaust system.</p> <p><u>ALTERNATOR</u></p> <p>A 320 ampere Delco alternator with serpentine belt shall be provided. The alternator shall generate 260 amperes at idle. A low voltage alarm, audible and visual, shall be provided.</p> <p><u>BATTERIES</u></p> <p>The battery system shall be a single system consisting of <u>four (4)</u> negative ground, 12-volt Group 31 MHD batteries, cranking performance of 950 CCA each with total of 3800 amps, 185-minute reserve capacity with 25 ampere draw at 80 degrees Fahrenheit. Each battery shall have 114 plates. Warranty shall be accepted nationwide.</p> <p>The batteries shall be installed in a vented 304 stainless steel battery box with a removable aluminum cover to protect the batteries from road dirt and moisture. The battery cover shall be secured with four "T" handle rubber hold downs to provide easy access for maintenance and inspection. Stainless steel hardware will be used for installation. The batteries are to be placed on dri-deck and secured with a hold down. The batteries shall be wired directly to starter motor and alternator.</p> <p>The battery cables shall be 3/0 gauge. Battery cable terminals shall be soldering dipped, color-coded, and labeled on heat shrink tubing with a color-coded rubber boot protecting the terminals from corrosion.</p> <p>The batteries shall be manufactured in the same year as the truck.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p><u>BATTERY JUMPER TERMINAL</u></p> <p>There shall be one set (two studs) of battery jumper terminals located by the battery box under the cab. The terminals shall have plastic color-coded covers. Each terminal shall be tagged to indicate positive/negative.</p> <p><u>120V SHORELINE INLET & AUTO EJECT</u></p> <p>The apparatus shall be equipped with a 120V shoreline inlet to provide power to the battery charger from an external source. The inlet shall include a Kussmaul 091-55-120 Super 20 Auto Eject featuring a 12-volt solenoid, which shall eject the shoreline cord away from vehicle path upon sensing engine start. After ejection, a weatherproof cover shall snap into position over inlet. A 20-amp connector shall be provided and shipped loose for connecting the external shoreline cord to the inlet. The Auto Eject shall be RED in color.</p> <p><u>120-VOLT OUTLET WIRED TO SHORELINE INLET</u></p> <p>Seven (7) 120-volt outlets with weatherproof cover shall be provided. All 120-volt wiring shall be installed in liquid tight conduit. The outlets shall be mounted as follows:</p> <ul style="list-style-type: none"> • One (1) on the inside of the cab, behind the driver's seat on the floor. • One (1) on the inside of the cab, behind the officer's seat on the floor. • One (1) in the EMS compartment on the back wall, driver's side. • One (1) in the EMS compartment on the back wall, officer's side. • One (1) in the overhead raised roof crew compartment – centered. • Two (2) in designated body compartments for powering battery operated tools. Locations will be determined at the pre-construction conference. <p><u>BATTERY CHARGER</u></p> <p>2 Kussmaul Auto power 3000w inverter charger model #091-269-12-3000 battery charger shall be provided and installed in the cab. The unit shall include an auxiliary 15-amp output circuit with power source selector for operating accessory loads. The charger shall include a Model #091-200-IND remote bar graph display.</p> <p><u>CORD REEL</u></p> <p>200' of 10/3 wire with a 4-way 20-amp junction box. Location to be determined at pre-build</p> <p><u>FRONT AXLE</u></p> <p>A Hendrickson STEERTEK NXT non-driving, front steer axle with a capacity of 23,000 pound shall be provided. The axle shall have a 3.74" drop and will have a fabricated boxed shaped cross section, a one-piece knuckle, and serviceable king pin. Adjustable Ackerman settings shall be available and determine based on wheelbase. The axle shall have 10 bolt hubs piloted and furnished with oil seals.</p> <p><u>SUSPENSION (FRONT)</u></p> <p>The front suspension shall be a parabolic taper-leaf spring design w/dual shock absorbers.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p><u>FRONT TIRES</u></p> <p>Front tires shall be Michelin 425/65R22.5, load range L, XFE highway tread, single tubeless type with a GAWR of 23,000 pounds. The rating shall be achieved with the Fire Service Intermittent Service Rating. Wheels shall be disc type, hub piloted, 22.5 x 12.25 10 stud 11.25 bolt circle. The tires shall be manufactured in the same year as the truck.</p> <p><u>REAR AXLE</u></p> <p>The rear axle shall be a Meritor™ RS-35-185 Single reduction drive axle with a capacity of 35,000 lbs. The axles shall be hub piloted, 10 studs, furnished with oil seals. Shall be of a locking differential type.</p> <p><u>TOP SPEED</u></p> <p>The top speed shall be approximately 60 MPH.</p> <p><u>SUSPENSION (REAR)</u></p> <p>It shall be of Leaf spring design. The ground rating of the suspension shall be 35,000 pounds and include dual shock absorbers</p> <p><u>REAR TIRES</u></p> <p>Rear tires shall be Michelin 315/80R22.5, load range J, XDN2 GRIP tread, dual tubeless type with a GAWR up to 35,000 pounds. Wheels shall be disc type, hub piloted, 22.5 x 9 10 stud with 11.25" bolt circle. The tires shall be manufactured in the same year as the truck.</p> <p><u>WHEELS</u></p> <p>The front and rear wheels shall be ALCOA® brand aluminum. DURA-BRIGHT® finish shall be provided on front and outside rear wheels. Inside rear wheels will be standard aluminum finish</p> <p><u>HUB COVERS</u></p> <p>Polished stainless steel hub covers shall be provided for the front and rear axle.</p> <p><u>LUG NUT CAPS</u></p> <p>Chrome plated lug nut caps shall be provided for the front and rear wheels.</p> <p><u>FRONT MUD FLAPS</u></p> <p>Hard rubber mud flaps shall be provided for front tires.</p> <p><u>REAR MUD FLAPS</u></p> <p>Hard rubber mud flaps shall be provided for rear tires.</p>		

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	Yes	No
<p><u>REAR MUD FLAPS (FULL WIDTH)</u></p> <p>A second, full width hard rubber mud flap shall be provided for rear tires. The mounting location of this mud flap shall be discussed at Pre-Construction.</p> <p><u>BRAKES, Front</u></p> <p>The front brakes shall be Arvin Meritor DiscPlus EX225 Air Disc Brakes. Each disc brake assembly shall include one (1) 17" vented rotor, one (1) lightweight hub, one (1) twin-piston caliper, and two (2) quick-change pads.</p> <p><u>BRAKES, Rear</u></p> <p>The rear brakes shall be Meritor S-cam style. They shall be 16.5" x 8.625" with heavy duty return springs, and a double anchor pin design. They shall also have quick change shoes for fast easy brake relining.</p> <p><u>AIR BRAKE SYSTEM</u></p> <p>The vehicle shall be equipped with air operated brakes. The system shall meet or exceed the design and performance requirements of current FMVSS-121 and test requirements of current NFPA 1901 standards.</p> <p>Each wheel shall have a separate brake chamber. A dual treadle valve shall split the braking power between the front and rear systems. All main brake lines shall be color-coded nylon type protected in high temperature rated split plastic loom. The brake hoses from frame to axle shall have spring guards on both ends to prevent wear and crimping as they move with the suspension. All fittings for brake system plumbing shall be brass. A Meritor Wabco System Saver 1200 air dryer shall be provided. The air system shall be provided with a rapid build-up feature, designed to meet current NFPA 1901 requirements. The system shall be designed so the vehicle can be moved within 60 seconds of startup. The quick build up system shall provide sufficient air pressure so that the apparatus has no brake drag and is able to stop under the intended operating conditions following the 60-second buildup time. The vehicle shall not be required to have a separate on-board electrical air compressor or shoreline hookup to meet this requirement.</p> <p>Four (4) supply tanks shall be provided. One air reservoir shall serve as a wet tank and a minimum of one tank shall be supplied for each the front and rear axles. A Schrader fill valve shall be mounted in the front of the driver's step well.</p> <p>A spring actuated air release emergency/parking brake shall be provided on the rear axle. One (1) parking brake control shall be provided and located on the dashboard within easy reach of the driver and officer. The parking brake shall automatically apply at 35 ±10 PSI reservoir pressure. A Meritor WABCO IR-2 Inversion Relay Valve, supplied by both the Primary and Secondary air systems, shall be used to activate the parking brake and to provide parking brake modulation in the event of a primary air system failure. Accessories plumbed from the air system shall go through a pressure protection valve and to a manifold so that if accessories fail, they shall not interfere with the air brake system.</p>		

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	Yes	No
<p><u>ELECTRONIC STABILITY CONTROL SYSTEM</u></p> <p>An Arvin Meritor / Wabco Electronic Stability Control (ESC) system shall be provided and installed. The ESC system continually monitors the vertical acceleration, and yaw (horizontal plain rotation) of the vehicle and compares it to a critical threshold where vehicle rollover may occur. When the critical threshold is met, the ESC shall intervene by reducing engine torque and engaging the engine retarder, while automatically applying both the steering and drive axle brakes as needed. In many cases, activation occurs before the driver is even aware it is needed.</p> <p><u>ROLL TEK</u></p> <p>It shall be equipped with Roll-Tek for rollover protection</p> <p><u>SIDE AND FRONTAL IMPACT AIR BAGS</u></p> <p>It shall be equipped with side and frontal airbags to be deployed on side and frontal impact</p> <p><u>AIR BRAKING ABS SYSTEM</u></p> <p>A Wabco ABS system shall be provided to improve vehicle stability and control by reducing wheel lock-up during braking. This braking system shall be fitted to axles and all electrical connections shall be environmentally sealed from water and weather and be vibration resistant.</p> <p>The system shall constantly monitor wheel behavior during braking. Sensors on each wheel transmit wheel speed data to an electronic processor, which shall sense approaching wheel lock and instantly modulate brake pressure up to 5 times per second to prevent wheel lock-up. Each wheel shall be individually controlled. To improve field performance, the system shall be equipped with a dual circuit design. The system circuits shall be configured in a diagonal pattern. Should a malfunction occur, that circuit shall revert to normal braking action. A warning light at the driver's instrument panel shall indicate malfunction to the operator.</p> <p>The system shall consist of a sensor clip, sensor, electronic control unit and solenoid control valve. The sensor clip shall hold the sensor in close proximity to the tooth wheel. An inductive sensor consisting of a permanent magnet with a round pole pin and coil shall produce an alternating current with a frequency proportional to wheel speed. The unit shall be sealed, corrosion-resistant, and protected from electro- magnetic interference. The electronic control unit shall monitor the speed of each wheel sensor and a microcomputer shall evaluate wheel slip in milliseconds.</p> <p><u>AUTOMATIC SLIP RESPONSE</u></p> <p>The Rockwell/Wabco 4 Channel Anti-lock braking system shall be provided. The system shall be supplied with (ASR) Automatic slip response. The ASR controls slip under acceleration. Manual switch on/off located on dash.</p> <p><u>AUTOMATIC TIRE CHAIN SYSTEM</u></p> <p>The apparatus shall be equipped with an On-Spot brand Automatic Tire Chain System.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p>There will be one driver's side and one passenger's side chain unit.</p> <p>A continuous duty solenoid shall be provided and activated by the dashboard switch, which opens and allows compressed air to flow to the chain units. Compressed air will be delivered to the solenoid from the vehicle's air tank. The solenoid shall be mounted on the frame rail or crossmember in close proximity of the chain units. This air/electric solenoid shall be 12-volts and draw no more than 1 ampere of current. Electrical wire shall be in accordance with NFPA 1901.</p> <p>A 12-volt dashboard switch shall be provided so that the operator may engage the chains from the driver's seat. The switch shall be lighted to indicate when the chains are engaged. The switch shall come complete with a switch guard to avoid accidental engagement of the automatic chains. The switch guard shall be properly labeled. A dashboard sticker with operating instructions shall be provided.</p> <p><u>MISCELLANEOUS CHASSIS EQUIPMENT</u></p> <ul style="list-style-type: none"> • Fluid capacity plate affixed below driver's seat. • Chassis filter part number plate affixed below driver's seat. • Maximum rated tire speed plaque near driver. • Tire pressure label near each wheel location. • Cab occupancy capacity label affixed next to transmission shifter. • "Do not wear helmet while riding" plaque for each seating position. • NFPA compliant seat belt and standing warning plates provided. <p><u>ALUMINUM CAB</u></p> <p>The cab shall be a full tilt minimum 5-person 18" rear raised roof cab designed specifically for the fire service and manufactured by the chassis builder. Apparatus cabs that are not manufactured by the apparatus manufacturer shall not be acceptable.</p> <p><u>CAB DESIGN</u></p> <p>The apparatus chassis shall be of an engine forward, fully enclosed tilt cab design. There shall be four (4) side entry doors. The cab shall be of a fully open design with no divider wall or window separating the front and rear cab sections. The cab shall be designed in a manner that allows for the optimum forward-facing vision for crew.</p> <p><u>CAB INTERIOR</u></p> <p>Interior panels including dashboard, door panels and engine cover shall be of extreme duty design without the use of ABS plastic</p> <p><u>CAB DIMENSIONS</u></p> <p>The cab shall be designed to satisfy the following minimum width and length dimensions:</p> <ul style="list-style-type: none"> • Cab width (excluding mirrors) 96" • Cab Length (from C/L of front axle) <ul style="list-style-type: none"> • To front of cab (excluding bumper) 68" • To rear of cab 78" • Total cab length (excluding bumper) 149" 		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p><u>ROOF DESIGN</u></p> <p>The cab shall be of a minimum 18" raised roof design with side drip rails and shall satisfy the minimum height dimensions:</p> <p><u>FENDER CROWNS</u></p> <p>Black rubber fenderettes with full depth radiused bolted in wheel well liners shall be provided on both axles.</p> <p><u>CAB INSULATION</u></p> <p>The exterior walls, doors, and ceiling of the cab shall be insulated from the heat and cold, and to further reduce noise levels inside the cab. The cab interior sound levels shall not exceed 90 decibels at 45 mph in all cab seat positions.</p> <p><u>EXTERIOR GLASS</u></p> <p>The cab windshield shall be of a one-piece curved design utilizing tinted, laminated, automotive approved safety glass. The window shall be held in place by an extruded rubber molding. The cab shall be finished painted prior to the window installation.</p> <p><u>SUN VISORS</u></p> <p>The sun visors shall be made of padded vinyl to match interior There shall be a visor located at both the driver and officer positions, recessed in a molded form for a flush finish.</p> <p><u>CAB STEPS</u></p> <p>The lower cab steps shall be no more than 22" from the ground. An intermediate step shall be provided, mid-way between the lower cab step, and the cab floor. The intermediate step shall be slightly inset to provide for safer ingress and egress. All steps shall be covered with material that meets or exceeds the NFPA requirements for stepping surfaces.</p> <p><u>STEP LIGHTS</u></p> <p>A white LED strip light shall illuminate each interior cab step. These lights shall illuminate whenever the battery switch is on and the cab door is opened.</p> <p><u>CAB STRUCTURAL INTEGRITY</u></p> <p>The cab of the apparatus shall be designed and so attached to the vehicle as to eliminate, to the greatest possible extent, the risk of injury to the occupants in the event of an accident.</p> <p>The apparatus cab shall be tested to specific load and impact tests with regard to the protection of occupants of a commercial vehicle.</p> <p>A test shall be conducted to evaluate the frontal impact strength of the apparatus cab to conform to the test J2420 and the "United Nations Regulation 29, Annex 3, paragraph 4, (Test A). A second test shall be conducted to evaluate the roof strength of the apparatus cab to conform to the Society Of Automotive Engineers (SAE) SAE J2422/SAE J2420 and "United Nations Regulation 29, Annex 3, paragraph 5, (Test B) and SAE J2420. The</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p>evaluation shall consist of the requirements imposed by ECE Regulation 29, Paragraph 5. The test shall be conducted by a certified independent third-party testing institution.</p> <p><u>SEAT BELT TESTING</u></p> <p>The seat belt anchorage system shall be tested to meet FMVSS 207 Section 4.2a and FMVSS 210 section 4.2. Testing shall be conducted by an independent third-party product evaluation company.</p> <p><u>CAB LOCKDOWN LATCHES</u></p> <p>Cab lockdown latches shall be provided to prevent the cab from being tilted in the down position. Once the cab tilt switch is engaged the cab latches will release to allow the cab to be tilted.</p> <p><u>CAB TILT SYSTEM</u></p> <p>An electrically powered hydraulic cab tilt system shall be provided and shall lift the cab to an angle of 45 degrees, exposing the engine and accessories for fluid checks and service work. The system shall be interlocked to only operate when the parking brake is set.</p> <p>The lift system shall be comprised of two (2) hydraulic lift cylinders, an electrically driven hydraulic pump, and a control switch. The hydraulic pump shall be located on the exterior of the frame rail on the driver's side of the chassis that can be easily accessible when the cab is tilted. A mechanical locking system consisting of an air operated actuator and a heavy radiused wall 3" x 3" aluminum extrusion will be provided to ensure the cab remains in the raised position in the event of a hydraulic failure. Additionally, each of the hydraulic lift cylinders shall incorporate a check valve, and velocity fuses that will activate should a sudden drop in pressure be detected. The cab tilt controls shall be interlocked to the parking brake to ensure the cab will not move, unless the parking brake is set. The cab tilt controls will consist of a momentary raise/lower switch and a two-position cab safety lock switch.</p> <p>The cab tilt assembly will be equipped with a cab tilt override that will (with activation of an override switch) will allow the cab to be tilted fully. By default, the cab tilt will be set a pre-determined angle (to be determined by the Fire Department at Pre-Construction).</p> <p><u>MANUAL CAB LIFT</u></p> <p>There shall be a manually operated hydraulic pump for tilting the cab in case the main pump should fail. Access to the pump shall be located under the left corner of the front bumper.</p> <p><u>CAB DOORS</u></p> <p>The cab doorframes shall be constructed from 6061 T6 aluminum extrusions fitted with a 5052 H32 aluminum sheet metal skin and shall be equipped with dual weather seals. The cab doors shall be equipped with heavy-duty door latching hardware, which complies with FMVSS 206. The door latch mechanism shall utilize control cable linkage for positive operation. A rubber coated nylon web doorstop shall be provided. Doors shall be barrier height.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p>All openings in the cab shall be grommeted or equipped with rubber boots to seal the cab from extraneous noise and moisture.</p> <p>The cab doors shall be designed to satisfy the following minimum opening and step area dimensions:</p> <p><u>POWER WINDOWS</u></p> <p>All four cab entry doors shall have power windows. Each door shall be individually operated, and the driver's position shall have master control over all windows. All four windows shall roll down completely.</p> <p><u>SIDE WINDOWS</u></p> <p>Fixed position side window shall be provided on each side of the cab between the forward cab area and the crew cab area. The widows shall be approximately 20.5" high x 16.50" wide to provide maximum visibility. The side windows shall be held in place by an extruded rubber molding with a chrome plated decorative locking bead.</p> <p><u>WINDOW TINTING</u></p> <p>The crew cab windows and doors, except for the driver's and officer's doors, and the windshield, shall be tinted with deep "limo" tint. The tint shall be incorporated into the window glass with eight percent (8%) light transmittance. Film tinting shall not be acceptable.</p> <p><u>MIRRORS</u></p> <p>Two (2) Velvac Stainless Steel West Coast style main and convex mirrors shall be installed on each side of the vehicle. The main mirror shall be 4-way remote adjustable with heat, 7" x 16" 2nd surface chromed flat glass. The convex shall be 6" x 8" 2nd surface chromed 400 mm radius glass. The mirror assembly shall be supported by a "C" loop bracket constructed of polished stainless-steel tube utilizing two-point mounting reducing vibration of mirror glass during normal vehicle operation. The lower section of the holder shall include a spring-loaded single detent position 20 degrees forward with easy return to operating position without refocusing.</p> <p><u>MIRROR, BLIND SPOT</u></p> <p>One (1) Velvac 8" diameter exterior blind spot mirror assembly shall be provided and mounted on the brow of the cab, officer's side.</p> <p><u>GRILLE</u></p> <p>The front of the cab shall be equipped with a polished stainless-steel grille with sufficient area to allow proper airflow into the cooling system and engine compartment. Plastic chrome plated grilles shall not be acceptable.</p> <p><u>EXTREME DUTY BUMPER</u></p> <p>A 10" high painted steel channel bumper shall be provided at the front of the apparatus. The bumper shall be constructed from heavy wall structural steel channel and shall be beveled to</p>		

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<p>45 deg. at each end. The bumper shall be securely mounted to a reinforcement plate constructed of 1/4" x 10" x 70" carbon steel. The frame rail extension shall be a reinforced four-sided boxed frame rail for superior safety protection. Steel channel bumpers constructed from formed steel or bolted directly to the frame ends are not desired and WILL NOT be accepted.</p> <ul style="list-style-type: none"> • The bumper shall be painted job color. • The bumper extension shall be approximately 18". • Bumper will be constructed to match South Fire District Truck 34 <p><u>GRAVEL SHIELD</u></p> <p>A gravel shield shall be provided, constructed of .188" aluminum diamond plate.</p> <p><u>BUMPER SIDES</u></p> <p>The sides of the bumper shall also be painted steel in lieu of diamond plate. Each side shall feature a recessed painted steel pocket for the marker light and any auxiliary lighting option selected. The pocket shall be a welded integral part of the bumper skin.</p> <p><u>STORAGE WELL COMPARTMENT</u></p> <p>There shall be a hose well compartment located in the center of the front bumper. The compartment shall run 3/4 the length of the bumper and measure approximately 60" long x 14" wide x 6" deep at the ends and 12" deep in the center. The compartment shall be constructed of .188" smooth aluminum plate.</p> <p>- It shall accommodate 100 of 1-3/4" double jacketed fire hose and a nozzle.</p> <p><u>DIAMOND PLATE BUMPER LID</u></p> <p>There shall be a .188" diamond plate cover with latches provided for the front bumper trough.</p> <p><u>PROTECTIVE BUMPER COATING</u></p> <p>A texture coating shall be provided along the top edge of the front steel bumper. The color of the coating shall be determined at pre-construction conference.</p> <p><u>AIR HORNS</u></p> <p>Two (2) Grover 1510 round, chrome plated, air horns shall be provided.</p> <p><u>AIR HORNS WIRED TO STEERING WHEEL</u></p> <p>The air horns shall be wired through the steering wheel button. A selector switch shall be provided on the instrument panel to switch between functions.</p> <p><u>AIR HORN HALYARDS</u></p> <p>The cab shall have two (2) halyards for the air horns each for the officer and driver.</p>		

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	Yes	No
<p><u>ELECTRONIC SIREN</u></p> <p>One (1) Whelen electronic siren shall be installed at the cab instrument panel complete with noise canceling microphone.</p> <p><u>SIREN SPEAKER</u></p> <p>One (1) Cast Products SA4201-5-A 100-watt weatherproof siren speaker shall be provided and wired to the electronic siren.</p> <p><u>SPEAKER MOUNTING</u></p> <p>The electronic siren speaker(s) shall be installed in the bumper</p> <p><u>FEDERAL Q2B SIREN</u></p> <p>The vehicle shall be equipped with a Federal Q2B- siren. The siren shall be securely mounted with pedestal to top of bumper and activated by means of a solenoid and shall include a brake.</p> <p><u>FOOT SWITCH, DRIVER'S SIDE</u></p> <p>A foot switch for the mechanical siren shall be provided on the driver's side mounted on an angle raised off of the floor.</p> <p><u>FOOT SWITCH, OFFICER'S SIDE</u></p> <p>A foot switch for the mechanical siren shall be provided on the officer's side mounted on an angle raised off of the floor.</p> <p><u>CAB EXTERIOR LIGHTING</u></p> <p>Exterior lighting and reflectors shall meet or exceed Federal Motor Vehicle Safety Standards and National Fire Protection Association requirements.</p> <p><u>HEADLIGHTS</u></p> <p>The front low and high beam headlights shall be LED, rectangular shaped, quad style.</p> <p><u>ALTERNATING HEAD LAMP</u></p> <p>The headlights shall have an alternating flash feature for emergency response use.</p> <p><u>FRONT TURN SIGNALS</u></p> <p>There shall be two (2) Whelen 400 Series LED rectangular amber turn signal lights mounted one each side in the front of the headlight housing and one mounted on each side of the warning light housing.</p>		

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<p><u>CORNERING LIGHTS</u></p> <p>Two (2) Whelen Model 600 LED cornering lights shall be mounted on the sides of the bumper, one each side. The lights shall come on steady, with their coordinating turn signal.</p> <p><u>EXTERIOR CAB HANDRAILS</u></p> <p>Handrails will match South Fire District Truck 34.</p> <p><u>INTERIOR CAB HANDRAILS</u></p> <p>There shall be two (2) rubber coated grab handles provided and mounted on the interior of the cab, one each side, on the windshield post for ingress assistance. The handrail on the driver's side shall be approximately 11" long and the handrail on the officer's side shall be approximately 18" long.</p> <p><u>CAB DOOR HANDRAILS</u></p> <p>There shall be two (2) 1.25" diameter knurled stainless steel handrails shall be provided and mounted, one on the inside of each rear crew door, just above the windowsill. The handrails shall be approximately 22" long.</p> <p><u>DRIVER'S SIDE EXTERIOR CAB COMPARTMENT</u></p> <p>There shall be a cabinet constructed of .125 aluminum plate recessed in the cab behind driver's side rear crew door. The compartment shall be approximately 89" high x 17" wide x 22.25" deep.</p> <p>The compartment shall have a hinged door that is hinged at the front. The doors shall have an Austin Hardware slam catch single-point "D"-ring door closure and held open with gas struts. The compartment light shall be operated by an individual switch and illuminated with (1) LED light (determined at pre-build).</p> <p>INTERIOR COMPARTMENT OPENING: The compartment shall come complete with a single interior access opening with satin finish roll-up door to cover that opening.</p> <p>ADJUSTABLE SHELF: There shall be one (1) adjustable shelf provided and installed in the compartment. The shelf shall be fabricated of .188 aluminum plate and have two 1.5" x 1.5" x .188" aluminum angles welded to the underside of the shelf for support.</p> <p>TRANSVERSE: The upper section of the exterior cab compartments shall be transverse through to a crew seat compartment or EMS compartment.</p> <p><u>OFFICER'S SIDE CAB COMPARTMENT</u></p> <p>There shall be a cabinet constructed of .125 aluminum plate recessed in the cab behind officer's side rear crew door. The compartment shall be approximately 89" high x 17" wide x 20.25" deep (lower section 12.75" deep with front suction)</p> <p>The compartment shall have a hinged door that is hinged at the front. The doors shall have an Austin hardware slam catch single-point "D"-ring door closure and held open with gas</p>		

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	Yes	No
<p>struts. The compartment light shall be operated by an individual switch and illuminated with (1) LED light (determined at pre-build).</p> <p>INTERIOR COMPARTMENT OPENING: The compartment shall come complete with a single interior access opening with satin finished roll-up door to cover that opening.</p> <p>ADJUSTABLE SHELF: There shall be one (1) adjustable shelf provided and installed in the compartment. The shelf shall be fabricated of .188 aluminum plate and have two 1.5" x 1.5" x .188" aluminum angles welded to the underside of the shelf for support.</p> <p><u>DOOR JAMB PROTECTORS</u></p> <p>The front and rear cab door jambs on the Nader bolt side, and the exterior compartment door jambs on the Nader bold side shall be covered with a 14-gauge brushed stainless steel scuff plate.</p> <p><u>SCUFF PLATES</u></p> <p>The outside rear edges of the cab shall be covered with a 14-gauge polished stainless steel scuff plate. This plate shall have a minimum of one inch wrap around each side and run the full height of the cab, from the bottom of the drip edge to the bottom of the cab.</p> <p><u>SCUFF PLATES – BACK OF CAB</u></p> <p>The rear outside back walls of the cab shall be covered with polished stainless steel to serve as scuff protection for the mounted tele-lights. This plate shall run from the outside edge of the cab inboard towards the frame rail about 12" and will run the full height of the cab, from the cab roof to the bottom of the cab.</p> <p><u>HOOKS (INSTALLED IN CAB)</u></p> <p>A total of five (5) rubber coated hooks shall be mounted in the cab in locations to be determined by the South Fire District at final Inspection.</p> <p><u>CAB INTERIOR</u></p> <p>The metal surfaces of the cab interior shall be coated and sealed with MultiSpec gray speckle, urethane modified, mar resistant paint. The textured coating shall provide paramount durability and wear resistance against foreign objects and normal wear and tear.</p> <p>The front and rear headliners, as well as the rear cab wall, shall be finished in gray-black Durawear covered padded panels.</p> <p><u>INTERIOR DOOR PANELS</u></p> <p>The interior of the cab entry doors shall have a brushed aluminum, contoured to the door, from the door windowsill down to match South Fire District Truck 34.</p>		

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<p><u>REFLECTIVE MATERIAL, CHEVRON STRIPING, INTERIOR CAB DOORS, ORAFOL REFLEXITE</u></p> <p>The apparatus shall have reflective Orafol Reflexite Chevron striping affixed to the inside of each cab door. The striping shall be plainly visible to oncoming traffic when the doors are in the open position to match South Fire District Truct 34.</p> <p><u>CAB FLOOR COVERING</u></p> <p>The cab interior floor shall be covered with a 5/16" thick, gray rubberized material to provide a rugged but cosmetically pleasing stepping surface throughout the cab. The floor covering shall provide superior durability and resistance against foreign objects as well as normal wear and tear.</p> <p><u>ENGINE ENCLOSURE</u></p> <p>An integral, formed aluminum and composite engine enclosure shall be provided. The engine enclosure shall be contoured and blended in an aesthetically pleasing manner with the interior dash and flooring of the cab. The enclosure shall be kept as low as possible, to maximize space and increase crew comfort.</p> <p>The enclosure shall be constructed from minimum 5052 H2 aluminum plate providing high strength, low weight, and superior heat and sound deadening qualities.</p> <p><u>ENGINE ENCLOSURE COVERING</u></p> <p>The engine enclosure shall be painted to match interior. The rubberized cab floor covering shall extend up the lower exterior sides of the engine enclosure to aid in sound deadening and heat resistance.</p> <p><u>CENTER CONSOLE</u></p> <p>There shall be a storage console installed on the engine enclosure between the driver and officer. The console shall be constructed from smooth aluminum and shall be coated with the same finish as the engine enclosure. The console shall measure approximately 23" long X 11.375" wide X 8.125" high. The console shall have a 13" long storage area in the center that shall be divided into five (5) separate areas with four (4) fixed vertical dividers. The dividers shall be spaced 2.125" apart for map book storage. A Velcro strap shall be installed front to rear to secure the map books. Each outboard area of the console shall have one (1) stainless steel cup holder and one (1) approximately 5.5" long X 4.75" wide X 3.5" high open storage area. (TO BE FINALIZED AT PREBUILD)</p> <p><u>ENGINE HOOD LIGHTS</u></p> <p>2 LED work lights shall be installed in the engine enclosure with an individual switch located on the base of the light.</p> <p><u>GLOVE BOX</u></p> <p>A glove box shall be provided and located directly in front of the officer position.</p>		

<div> <div>SOUTH FIRE DISTRICT</div> <div>CUSTOM FIRE RESCUE / PUMPER</div> </div>	Bidder Complies	
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<div> <div>EMS GLOVE BOX HOLDERS</div> <div> <p>A pair of glove box holders shall be provided in the upper cab crew door area, constructed of 3/16" smooth aluminum. Each glove box holder shall be capable of holding (4) glove boxes. To be finalized at prebuild.</p> </div> </div> <div> <div>TOOL MOUNTING PLATE</div> <div> <p>There shall be a 3/16" smooth aluminum plate installed on the engine enclosure between the driver and the officer for use in mounting of equipment. The mounting plate shall feature beveled edges on the front and sides for a finished appearance. The plate shall be coated with the same finish as the engine enclosure and shall be secured to the engine cover with screws for easy replacement. The tool mounting plate shall be mounted under the center console with map storage.</p> </div> </div> <div> <div>CHASSIS WIRING</div> <div> <p>All chassis wiring will be POINT TO POINT and shall have XL high temperature crosslink insulation. All wiring shall be color-coded, and the function and number stamped at 3" intervals on each wire. All wiring shall be covered with high temperature rated split loom for easy access to wires when trouble shooting. All electrical connectors and main connectors throughout the chassis shall be treated to prevent corrosion. All wiring will be clamped with insulated clamps. The multiple use of light duty zip ties is not acceptable</p> </div> </div> <div> <div>MASTER ELECTRICAL PANEL</div> <div> <p>The main chassis breaker panel shall be wired through the master disconnect solenoid and controlled by the three-position ignition rocker switch. The breaker panel shall be located in front of the officer on the interior firewall and shall be protected by a removable aluminum cover. The cover shall have an aluminum notebook holder on the exterior face accessible to the officer. The cover shall be painted with a durable finish to match the interior of the cab and shall be secured with two (2) thumb screws.</p> <p>The breaker panel shall include up to 22 ground switched relays with circuit breaker protection. An integrated electrical sub-panel shall be provided and interfaced to the body and chassis through an engineered wire harness system.</p> <p>Twelve (12) 20-ampere relays and one (1) 70-ampere relay shall be provided for cab light bar and other electrical items. If the option for a mechanical siren has been selected two (2) additional relays shall be provided.</p> <p>Up to two (2) additional relay boards with circuit breaker protection shall be provided for additional loads as required. Each board shall contain four (4) relays. The relay boards shall be configured to trip with input from switch of positive-negative or load manager by moving the connector on the board (no tools required).</p> <p>All relay boards shall be equipped with a power-on indicator light (red), input indicator light (green) and power output indicator light (red).</p> <p>Up to twenty-three (23) additional automatic reset circuit breakers for non-switched loads that are remotely switched (ie: heater fans, hood lights, etc.) shall be provided. All relays and circuit breakers on the relay boards shall be pull-out/push-in replaceable.</p> </div> </div>		

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<p>All circuit breakers on the relay boards shall be 20 ampere automatic reset which can be doubled or tripled for 40- or 60-ampere capacities.</p> <p>The system shall utilize Deutch DRC weather resistant connectors at the breaker panel, toe board, and main dash connections.</p> <p>All internal wire end terminals, including locking connectors, shall be mechanically affixed to the wire ends by matching terminal crimping presses to assure the highest quality terminations.</p> <p>All internal splices shall be ultrasonically welded connections and all internal wiring shall be high temperature GXL type wire that is protected by wiring duct wherever possible.</p> <p>Any switch controlling a relay in the breaker panel shall be capable of being set to function only when the parking brake is set. All relays shall be tagged with the function that the relay is controlling.</p> <p><u>INSTRUMENT PANEL</u></p> <p>The main dash shroud, which covers the area directly in front of the driver from the doorpost to the engine hood, shall be constructed of aluminum. The dash shall be a one- piece hinged panel that tilts outward for easy access to service the internal components. The gauge panel shall be constructed with a .125" aluminum panel, covered with a scratch resistant reverse printed and laminated poly carbonite.</p> <p><u>MASTER BATTERY & IGNITION SWITCH</u></p> <p>Controls to match South Fire District Truck 34.</p> <p><u>DIESEL PARTICULATE FILTER CONTROLS</u></p> <p>There shall be two (2) controls for the diesel particulate filter. One control shall be for regeneration and one control shall be to inhibit engine regeneration. These shall be located below the steering wheel in the kick panel.</p> <p><u>INSTRUMENTATION & CONTROLS</u></p> <p>Instrumentation on dash panel in front of the driver:</p> <ul style="list-style-type: none"> • Tachometer/hour meter with high exhaust system regeneration temperature, and instrument malfunction indicators • Speedometer/odometer with built in turn signal, high beam, and re-settable trip odometer • Voltmeter • Diesel fuel gauge • DEF (diesel exhaust fluid) gauge • Engine oil pressure • Transmission temperature • Engine temperature • Primary air pressure • Secondary air pressure 		

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<p>Indicators and warning lights in front of the driver:</p> <ul style="list-style-type: none"> • Parking brake engaged • Low air with buzzer • Antilock brake warning • Check transmission • Transmission temperature • Upper power indicator • Seat belt • Engine temperature • Low oil indicator • Low voltage indicator • Air filter restriction light • Low coolant indicator • High idle indicator • Power on indicator • Check engine • Stop engine • Check engine MIL lamp • DPF indicator • High exhaust temperature • Wait to start <p>Other indicator and warning lights (if applicable):</p> <ul style="list-style-type: none"> • Differential locked • PTO (s) engaged • Auto-slip response • Retarder engaged • Retarder temperature • ESC indicator <p>Controls located on main dash panel in front of the driver:</p> <ul style="list-style-type: none"> • Master power disconnect with ignition switch • Engine start switch • Headlight switch • Windshield wiper/washer switch • Differential lock switch (if applicable) • Dimmer switch for backlighting <p>Controls included in steering column:</p> <ul style="list-style-type: none"> • Horn button • Turn signal switch • Hi-beam/low-beam switch • 4-way flasher switch • Tilt telescopic steering wheel controls <p><u>CENTER CONTROL CONSOLE</u></p> <p>There shall be an ergonomically designed center control console. The console shall be constructed of 1/8" smooth aluminum and shall be mounted on the engine hood between the</p>		

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<p>driver and officer. The console shall have a durable coating to match the color of the engine hood covering and shall feature surfaces on each side that are contoured to face the driver and the officer for easy viewing and accessibility. The switches and other customer specified electrical items shall be mounted in removable 1/8" smooth aluminum panels with a black wrinkle finish. The console shall have an aluminum lift-up lid with quick release latch. The lid shall be held in the open position with a gas strut to allow for easy access and serviceability.</p> <p>Controls located in the console conveniently accessible to the driver:</p> <ul style="list-style-type: none"> • Transmission shifter • Pump shift control with OK TO PUMP and PUMP ENGAGED lights • Remote mirror control • Illuminated rocker switches to control high idle, Jacob's brake, siren/horn, siren brake, master emergency, and other customer specified components • 12V power point (if applicable) <p>Controls located in the console conveniently accessible to the driver and the officer (center):</p> <ul style="list-style-type: none"> • Parking brake control with a guard to prevent accidental engagement <p>Controls located in the console conveniently accessible to the officer:</p> <ul style="list-style-type: none"> • Illuminated rocker switches to control customer specified components that are easily reachable to the officer and do not allow for compromise of the driver's view, and eliminate the need for foot switches • Surface to recess siren head, radio head, or other desired items as space permits • 12V power point (if applicable) <p>Driving compartment warning labels shall include:</p> <ul style="list-style-type: none"> • HEIGHT OF VEHICLE • OCCUPANTS MUST BE SEATED AND BELTED WHEN APPARATUS IS IN MOTION • DO NOT USE AUXILIARY BRAKING SYSTEMS ON WET OR SLIPPERY ROADS • EXIT WARNINGS <p>Additional labels included:</p> <ul style="list-style-type: none"> • COMPUTER CODE SWITCH ABS CODE SWITCH • FLUID DATA TAG CHASSIS DATA TAG <p><u>OVERHEAD CONTROL CONSOLE</u></p> <p>An ergonomically designed overhead console shall be provided above the driver and officer, running the full width of the cab. The overhead console shall be constructed from 1/8" aluminum plate and shall be painted with a durable finish to match the inside of the cab. There shall be seven (7) removable 1/8" smooth aluminum plates with a black wrinkle finish to house switches and other electrical items. Directly above the driver there shall be two (2) panels with no cutouts, unless otherwise specified by the customer. There shall be a panel located to the right of the driver that shall be designated for defroster, heat, and air conditioning controls (if specified).</p> <p>The center overhead panel shall be designated for up to seven (7) door ajar indicators. Upon releasing the apparatus parking brake, one or more of these lights shall automatically illuminate (flash) when any of the following conditions occur that may cause damage if the</p>		

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<p>apparatus is moved: cab or compartment door is open; ladder or equipment rack is not stowed; stabilizer system deployed; any other device has not been properly stowed.</p> <p>There shall be a panel to the left of the officer as well as two (2) directly above the officer. These panels shall have no cutouts, unless otherwise specified by the customer.</p> <p><u>CONSOLE SWITCH LOCATIONS</u></p> <p>To be determined at prebuild.</p> <p><u>ENGINE WARNING SYSTEM</u></p> <p>An engine warning system shall be provided to monitor engine conditions such as low oil pressure, high engine temperature and low coolant level. Warning indication shall include a STOP ENGINE (red) light with audible buzzer activation and a CHECK ENGINE (amber) light.</p> <p>Note: Some engine configurations may also include a fluid warning light.</p> <p>There shall be a master information light bar with twenty-four (24) lights located across the center of the dash panel that covers up to twenty-four (24) functions. These are defined under <i>Indicators and Warning Lights</i> above.</p> <p><u>PUMP SHIFT MODULE</u></p> <p>A pump shift module with indicating lights shall be located within easy reach of the driver. A gear lockup shall be provided to hold the transmission in direct drive for pump operation.</p> <p><u>DOOR AJAR LIGHT</u></p> <p>A Whelen TIR3 LED light shall be installed in the cab near the driver. The light shall illuminate when the parking brake is released, and any cab or body door is open or any other item on the apparatus is not properly stowed that may cause damage.</p> <p><u>DOOR AJAR ALARM</u></p> <p>A door ajar alarm shall be installed in the interior of the cab.</p> <p><u>MAPBOOK SLOT</u></p> <p>A map book slot shall be installed on exterior of the breaker panel located on the officer's side of the cab.</p> <p><u>PROGRAMMABLE LOAD MANAGER</u></p> <p>Load manager shall have the ability to sequence loads on and off. The Super Node II has twenty-four (24) inputs and twenty-four (24) outputs. Eighteen (18) are positive polarity outputs and six (6) are ground polarity outputs. It shall also be able to establish eight (8) priority levels to shedding loads when the vehicle is stationary, starting at 12.8 volts lowest priority load to be shed, then respectively at 12.7, 12.5, 12.3, 12.1, 11.9, 11.5 and never shed volts DC. An output is shed (turned OFF) when the system voltage drops below the</p>		

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<p>designated priority level's shed voltage for thirty (30) seconds. If the voltage has dropped below multiple priority level shed voltages, then each higher priority level will shed before the lower priority levels. An output is unshed (turned back ON) when the system voltage rises above the designated priority level's unshed voltage for ten (10) seconds. If the voltage has risen above multiple priority level unshed voltages, then each lower priority level will unshed before the upper priority levels.</p> <p><u>AUTOMATIC HIGH IDLE ACTIVATION</u></p> <p>The Utility Module's high idle request (input memory space 2) is activated when the system voltage drops below the high idle threshold (12.8 volts standard or 25.6 volts if 24-volt load management is enabled) for 8 seconds or longer AND load management has been enabled (Utility Module output memory space 1 is active). The high idle request will remain active as long as the voltage remains below the voltage threshold and for 3 minutes after the system voltage rises above the voltage threshold. High idle can be canceled by activating the Utility Module's high idle cancel (output memory space 0).</p> <p><u>HIGH IDLE</u></p> <p>The engine shall have a "high idle" switch on the dash that shall maintain an engine RPM of 1,000. The switch shall be installed at the cab instrument panel for activation/deactivation. The "high idle" mode shall become operational only when the parking brake is on, and the truck transmission is in neutral.</p> <p><u>AUXILIARY POWER POINTS</u></p> <p>Four (4) 12-volt 20-ampere auxiliary lighter socket type plug-ins, shall be provided in the cab.</p> <ul style="list-style-type: none"> • One (1) on the officer's side of the dashboard. • One (1) on the driver's side of the dashboard. • Two (2) on the rear engine doghouse, one (1) each side. <p><u>USB POWER POINTS</u></p> <p>Four (4) 12-volt dual port USB power points shall be provided in the cab.</p> <ul style="list-style-type: none"> • One (1) on the officer's side of the dashboard. • One (1) on the driver's side of the dashboard. • Two (2) on the rear engine doghouse, one (1) each side. <p><u>CAB ACCESSORY FUSE PANEL</u></p> <p>A fuse panel shall be located underneath the rear facing seat on the officer's side. The fuse panel shall consist of six (6) battery hot and six (6) ignition switch circuits. Each circuit shall be capable of 10-ampere 12- volt power and total output of 50-amps. The fuse panel shall be capable of powering accessories such as hand-held spotlights, radio chargers, hand lantern chargers and other miscellaneous 12-volt electrical components.</p> <p><u>POWER & GROUND STUDS, OVERHEAD COMMAND CONSOLE</u></p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p>There shall be a set three (3) threaded power studs provided in the cab's overhead Command Console for future installation of two-way radios.</p> <p>The studs shall be wired as follows:</p> <ul style="list-style-type: none"> • One (1) 12-volt 60-amp, direct to the battery • One (1) 12-volt 30-amp controlled by the ignition switch • One (1) 12-volt 125-amp ground <p><u>POWER & GROUND STUDS, UNDER OFFICER'S SEAT</u></p> <p>There shall be a minimum of four (4) threaded power studs provided under the officer's seat to accommodate the future installation of two-way radios.</p> <p>The studs shall be wired as follows:</p> <ul style="list-style-type: none"> • One (1) 12-volt 40-amp controlled by the battery switch • One (1) 12-volt 60-amp controlled by the ignition switch • One (1) 12-volt 60-amp, direct to the battery • One (1) 12-volt 100-amp ground <p><u>VEHICLE DATA RECORDER</u></p> <p>An Akron / Weldon vehicle data recorder as required by the 2009 edition of NFPA 1901 shall be installed. Vehicle data shall be sampled at the rate of 1 second per 48 hours, and 1 minute per 100 engine hours.</p> <p>Free software is available to allow the South Fire District to collect the data as needed.</p> <p><u>OUTDOOR AIR AND SURFACE TEMPERATURE MONITOR</u></p> <p>A M.S Foster & Associates Road Watch outdoor air and surface temperature monitor shall be provided and installed on the dashboard in a position to be determined.</p> <p><u>HOOKS (CAB INTERIOR)</u></p> <p>A total of five (5) rubber coated hooks shall be mounted in the cab locations to be determined by the South Fire District at Pre-Construction.</p> <p><u>LIGHTING CAB INTERIOR</u></p> <p>Interior lighting shall be provided inside the front of the cab for passenger safety. Two (2) ceiling mounted combination red/clear LED dome lights with a push button on/off switch in the light lens. One light shall be located over each the officer's and driver's position. The lights shall also activate from the open door switch located in each cab doorjamb.</p> <p><u>LIGHTING CREW CAB INTERIOR</u></p> <p>Interior lighting shall be provided inside the crew cab for passenger safety. Three (3) ceiling mounted combination red/clear LED dome lights with a push button on/off switch in the light lens shall be provided. The lights shall also activate from the open door switch located in each cab doorjamb.</p>		

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	Yes	No
<p><u>DOOR LIGHTS</u></p> <p>One (1) Whelen 500 series TIR6 model 50*03Z*R LED light shall be installed in a chrome plated bezel inside each of the lower cab doors. The lights shall be wired to flash when the ignition is on and the cab door is open.</p> <p><u>HEATER/DEFROSTER/AIR CONDITIONER</u></p> <p>There shall be a minimum 65,000 cool BTU and 65,000 heat BTU single unit.</p> <p>The condenser shall be roof mounted and have 65,000 BTU rating. The unit shall include three (3) fan motors. Airflow of the condenser shall be a minimum 2250 CFM. (This roof-mounted condenser shall work at full rated capacity at an idle with no engine heat problems.) A metallic diffuser shall be installed in front of the AC unit.</p> <p><u>HEATER/DEFROSTER/AIR CONDITIONING CONTROLS</u></p> <p>The heater/defroster/air conditioning shall be located in the overhead console in the center of the apparatus cab within reach of the driver and officer. The controls shall be illuminated for easy locating in dark conditions. The controls shall be located in such a way that the driver will not be forced to turn away from the road to make climate control adjustments. Control of all heater/defroster/air conditioning functions for the entire apparatus cab shall be achieved through these controls.</p> <p><u>FLOORBOARD HEATING DUCT</u></p> <p>There shall be ductwork to the floor of the cab, facing forward to provide heat for the front and rear of cab floor area.</p> <p><u>CLEAN CAB</u></p> <p>The interior finishes and materials shall be of the latest design and industry standards as to provide for an ease of cleaning and decontamination. To reduce and or prohibit the absorption of hazardous chemicals "clean cab concept".</p> <p><u>H.O. BOSTROM ZIP CLEAN TANKER 550 CAB SEATING</u></p> <p>Seating shall be H.O Bostrom Durawear Plus seating with Zip Clean Cushions.</p> <p><u>REPLACEMENT SEAT COVERS</u></p> <p>Replacement covers shall be provided for each seat on the apparatus allowing for the apparatus to remain in service while cleaning.</p> <p><u>DRIVER'S SEAT</u></p> <p>One (1) H.O. BOSTROM ZIP CLEAN Sierra Defender A350 seat with air suspension shall be provided for the driver. The seat shall be equipped with a red 3-point shoulder harness with lap belt. The seat shall have fore/aft adjustment and shall be upholstered with heavy duty Durawear material.</p>		

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	Yes	No
<p><u>OFFICER'S SEAT</u></p> <p>One (1) H.O. BOSTROM ZIP CLEAN TANKER 550 Air-50RX SCBA air-ride seat shall be installed behind the Officer. The seat back shall have a SCBA cavity and auto-pivot-and-return padded headrest. The seat shall be equipped with a red 3-point shoulder harness with a lap belt and dual retractors built into the seat assembly with RiteHite™ Seat belt customized fit Adjustment.</p> <p><u>UNDER SEAT STORAGE COMPARTMENT</u></p> <p>There shall be a storage area under the officer's seat, accessible from the front through a hinged door with a compression lever latch. The door shall be painted with a durable finish to match the inside of the cab and shall be vertically hinged near the engine enclosure.</p> <p>The storage area shall be approximately 19.5" wide x 14.375" high x 21.75" deep. The lower rear portion of the compartment shall be tapered to accommodate the wheel well and wiring chase. The opening shall be approximately 15.5" wide x 10.5" high.</p> <p><u>CREW SEAT – DRIVER'S SIDE, REAR FACING</u></p> <p>One (1) H.O. BOSTROM ZIP CLEAN TANKER 550 fixed base seat shall be installed behind the driver. The seat back shall have a SCBA cavity and auto-pivot-and-return padded headrest. The seat shall be equipped with a red 3-point shoulder harness with lap belt and an automatic retractor built into the seat assembly. The seat shall be upholstered with heavy duty Durawear material.</p> <p><u>CREW SEAT – OFFICER'S SIDE, REAR FACING</u></p> <p>One (1) H.O. BOSTROM ZIP CLEAN TANKER 550 fixed base seat shall be installed behind the officer. The seat back shall have a SCBA cavity and auto-pivot-and-return padded headrest. The seat shall be equipped with a red 3-point shoulder harness with lap belt and an automatic retractor built into the seat assembly. The seat shall be upholstered with heavy duty Durawear material.</p> <p><u>EMS CABINET, FORWARD FACING - DRIVER SIDE</u></p> <p>The upper part of the exterior driver' side cab compartment shall be accessible from inside the crew area and service as an EMS style compartment. The cabinet shall come complete with two adjustable shelves. Strip lighting shall be provided in the cabinet. The cabinet shall be contained with a roll-up door.</p> <p><u>EMS CABINET, FORWARD FACING – OFFICER SIDE</u></p> <p>The upper part of the exterior officer's side cab compartment shall be accessible from inside the crew area and service as an EMS style compartment. The cabinet shall come complete with two adjustable shelves. Strip lighting shall be provided in the cabinet. The cabinet shall be contained with a roll-up door.</p>		

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<p><u>CREW SEAT – FORWARD FACING – CENTER POSITION</u></p> <p>One (1) H.O. BOSTROM ZIP CLEAN TANKER 500CT flip-up base seat shall be installed in the center forward-facing inboard position. The seat back shall have a SCBA cavity and auto-pivot-and-return padded headrest. The seat shall be equipped with a red 3-point shoulder harness with lap belt and an automatic retractor built into the seat assembly. The seat shall be upholstered with heavy duty Durawear material.</p> <p><u>SEAT UPHOLSTERY COLOR</u></p> <p>The cab seat upholstery shall be black in color.</p> <p><u>SCBA BRACKETS</u></p> <p>Each SCBA seat in the cab shall feature an H.O. Bostrom Secure All self-contained breathing apparatus (SCBA) locking system. The seat back shall include a bracket which shall be capable of storing most U.S. and international SCBA brands and sizes while in transit or for storage. The bracket shall be easily adjustable for all SCBA brands and cylinder diameters; adjustment points shall utilize similar hardware and adjustments shall be made with one tool. The bracket shall be adjustable to compensate for different cylinder lengths without the use of tools. The adjustment shall be made by raising a lever and moving the top clamp vertically.</p> <p>The bracket system shall be free of straps and clamps that may interfere with auxiliary equipment on SCBA units. The center guide fork shall keep the tank in place for a safe and comfortable fit in seat cavity. Firefighters shall simply push the SCBA unit against the pivot arm to engage the patented auto-locking system. Once the lock is engaged, the top clamp shall surround the top of the SCBA tank for a secure fit in all directions. The locking system shall include a release handle integrated into the seat cushion for quick and easy release and to eliminate the need for straps or pull cords which might interfere with other SCBA equipment.</p> <p>Air Pack holders to have correct boots for FD Scott X3 air pack.</p> <p><u>SEAT BELT WARNING SYSTEM</u></p> <p>An Akron / Weldon seat belt warning system shall be provided and shall monitor each seating position. Each seat shall be supplied with a sensor that, in conjunction with the display module located on the dash, shall determine when the seat belt was fastened and if the seat is occupied. An icon shall represent that the seat is properly occupied. An audible and visual alarm shall be activated if the seat is occupied and/or the belt is not fastened in the proper sequence.</p> <p><u>IN-CAB OVERHEAD STORAGE AREA</u></p> <p>An overhead storage area shall be provided at the front of the raised roof portion inside of the cab above the rear-facing crew seats. The full-width storage area shall be approximately 84" wide x 16.5" high x 17" deep and shall have a Zolatone gray/black rubberized, textured finish to match the cab interior. The storage area shall be equipped with aluminum lift up doors.</p>		

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	Yes	No
<p><u>ANTENNA MOUNTING</u></p> <p>Three (3) dealer provided radio antennas shall be installed in the cab roof with the coax cable run to the radio mounting area. The radio location shall be determined at the pre-construction meeting.</p> <p><u>ELECTRICAL PROVISION</u></p> <p>Wiring shall be provided in the cab for the future installation of electrical chargers. The location shall be determined during the pre-construction conference.</p> <p><u>EMERGENCY WEATHER BAND NOTIFICATION SYSTEM</u></p> <p>A Jensen HD weather band notification system shall be included in the cab. It shall also have the ability to receive AM/FM transmissions. Four (4) speakers will be provided.</p> <p><u>COMMUNICATION SYSTEM</u></p> <p>A five (5) position David Clark intercom system shall be provided in the cab. The five (5) positions include: driver, officer and three (3) crew seats. The driver and officer positions shall be interfaced with radio.</p> <p><u>CAMERA SYSTEM</u></p> <p>Provided and mounted on the apparatus shall be a 360-degree camera system.</p> <p><u>RADIO MOUNTS</u></p> <p>Dealer provided Havis radio mounts (four total) shall be provided and mounted by the factory. Make and model of mount shall be confirmed by the South Fire District at Pre Construction.</p> <p><u>FIRE PUMP</u></p> <p>Fire pump shall be Hale qmax 150 and be midship mounted. The fire pump shall be of the double suction single stage centrifugal type, carefully designed in accordance with good modern practice.</p> <p>The pump shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI.</p> <p>The pump body shall be horizontally split on a single plane, casing type with removable lower casing for easy removal of the entire impeller assembly including wear rings and bearings from beneath the pump without disturbing piping or the mounting of the pump in the chassis.</p> <p>All moving parts in contact with water shall be of high-quality bronze or stainless steel. Easily replaceable bronze labyrinth wear rings shall be provided. Discharge passage shall be designed to accomplish uniform pressure readings as the actual pump pressure. The rated capacity of the fire pump shall be 1500 gallons per minute in accordance with NFPA #1901.</p> <p>The pump shaft shall be rigidly supported by three bearings for a minimum deflection. One (1) high lead bronze sleeve bearing shall be located immediately adjacent to the impeller (on side opposite the drive unit). The sleeve bearing shall be lubricated by a force fed, automatic</p>		

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<p>lubrication system, pressure balanced to exclude foreign material. The remaining bearings shall be heavy-duty type, deep groove ball bearings and shall be splash lubricated.</p> <p><u>PUMP TRANSFER CASE – K SERIES</u></p> <p>The drive unit shall be designed of ample capacity for lubricating reserve and to maintain the proper operating temperature. Pump drive unit shall be of sufficient size to withstand up to 18,500 lbs. ft. torque of the engine in both road and pump operating conditions.</p> <p>The gearbox drive shafts shall be heat treated chrome nickel steel input and output shafts shall be at least 2-3/4" in diameter, on both the input and output shafts. They shall withstand the full torque of the engine in both road and pump operating conditions.</p> <p>The engagement of the pump transmission shall be of such design so as to permit transfer of power from road to pump operation only after vehicle is completely stopped. The pump shift shall be air actuated from the cab and have both a green "Pump Engaged" light, and a green "O.K.-to-Pump" light. A third green light shall be provided on the pump operator's panel for "Throttle Ready."</p> <p>The pump drive unit shall be cast and completely manufactured and tested at the pump manufacturer's factory.</p> <p><u>MECHANICAL PUMP SEAL</u></p> <p>The pump seal shall be a maintenance free mechanical pump type seal.</p> <p><u>MANUAL PUMP SHIFT OVERRIDE</u></p> <p>A manual emergency override shift shall be provided on the pump panel and may be used by placing both the chassis transmission and the pump air shift control in "neutral" position.</p> <p><u>PUMP ANODE</u></p> <p>A Hale pump anode kit assembly # 529-0050-00-0 shall be provided and installed in the pump body. A minimum of three (3) anodes shall be installed – two (2) in the suction side and one (1) in the discharge side of the pump.</p> <p><u>PUMP TEST & CERTIFICATION</u></p> <p>The pump shall be tested and certified by Mistras Group, Inc., a third-party independent testing agency, in accordance with NFPA 1901. A three (3) hour pumping test from draft shall be conducted consisting of two (2) hours of continuous pumping at 100% of rated capacity at 150PSI net pump pressure, followed by ½ hour of continuous pumping at 70% of rated capacity at 200PSI net pump pressure, and ½ hour of continuous pumping at 50% of rated capacity at 250PSI net pump pressure. The testing shall also include a pressure control system test, priming system test, vacuum test, a gauge/flowmeter test, and a pumping engine overload test. If the apparatus is equipped with a water tank, the water tank-to-pump test shall also be included.</p>		

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	Yes	No
<p><u>AUXILIARY COOLER</u></p> <p>An auxiliary cooler shall be furnished to provide additional cooling to the engine under extreme pumping conditions. Water from the pump is to be piped to the coils of the heat exchanger allowing the engine fluid to be cooled as required.</p> <p><u>PUMP CONNECTIONS</u></p> <p>All suction and discharge lines (except pump manifolds) 1" and larger shall be heavy-duty stainless-steel pipe. Where vibration or chassis flexing may damage or loosen piping or where a coupling is necessary for servicing, a flexible connection shall be furnished. All lines shall be drained by a master drain valve, or a separate drain provided at the connection. All individual drain lines for discharges shall be extended with a 90-degree fitting in order to drain below the chassis frame. All water carrying gauge lines shall utilize nylon tubing.</p> <p><u>TANK TO PUMP</u></p> <p>The booster tank shall be connected to the intake side of the pump with a check valve. The 4" tank to pump line shall run from a bottom sump into the 4" valve. To prevent damage due to chassis flexing or vibration, a short 3" flexible rubber hose coupling shall be used to connect the tank to the intake valve.</p> <p><u>VALVE</u></p> <p>The valve shall be an Akron heavy-duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.</p> <p><u>VALVE ACTUATOR</u></p> <p>The valve shall be controlled by hand wheel or lever located at the operator's panel.</p> <p><u>TANK FILL</u></p> <p>A 2" tank fill line shall be provided, using a quarter turn full flow ball valve controlled from the pump operator's panel.</p> <p><u>VALVE</u></p> <p>The valve shall be an Akron Heavy-duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.</p>		

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	Yes	No
<p><u>VALVE ACTUATOR</u></p> <p>The valve shall be controlled by a hand wheel or lever located at the operator's panel.</p> <p><u>PRESSURE GOVERNOR</u></p> <p>Apparatus shall be equipped with a Class1 Pressure Governor that is connected to the Electronic Control Module (ECM) mounted on the engine. The Governor will operate as a pressure sensor (regulating) governor (PSG) utilizing the engine's data for optimal resolution and response. Programmable presets for RPM and Pressure settings shall be easily configurable using the menu structure. Engine RPM, system voltage, engine oil pressure and engine temperature with audible alarm output for all shall be provided. Vernier style throttle with be method of operation.</p> <p><u>INTAKE RELIEF</u></p> <p>There shall be a Task Force Tips A1831 intake relief valve installed on the intake side of the pump. The surplus water shall be discharged away from the pump operator and terminate with Male NPT pipe thread. System is field adjustable.</p> <p><u>6" PUMP INLET – DRIVER'S SIDE</u></p> <p>A 6" diameter suction port with 6" NST male threads shall be provided, on the left side of vehicle. The inlet shall extend through the side pump panels and come complete with tft aj1st-nx with 5-inch storz cap removable strainer and long handle chrome-plated cap.</p> <p><u>INTAKE VALVE</u></p> <p>A Hale Master Intake valve shall be installed on the above specified intake. It shall be manually actuated from the pump panel. The valve shall include a pressure relief valve to guard against incoming pressure surges.</p> <p><u>2.5" LEFT SIDE INLET – DRIVER'S SIDE</u></p> <p>A 2.5" gated inlet valve shall be provided on the left side pump panel. The valve shall be supplied with chrome plate female swivel, plug, chain, and removable strainer. The valve shall attach directly to the suction side of the pump with the valve body behind the pump panel.</p> <p><u>VALVE</u></p> <p>The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.</p>		

<div> <div>SOUTH FIRE DISTRICT</div> <div>CUSTOM FIRE RESCUE / PUMPER</div> </div>	Bidder Complies	
	Yes	No
<div> <div>VALVE ACTUATOR</div> <div>The valve shall be controlled by a swing type handle located at the operator's panel. The handle shall have a full 90-degree movement.</div> <div>THREAD TERMINATION</div> <div>The above shall terminate with National Standard Threads.</div> <div>6" PUMP INLET – OFFICER'S SIDE</div> <div>A 6" diameter suction port with 6" NST male threads shall be provided, on the right side of vehicle. The inlet shall extend through the side pump panels and come complete with tft aj1st-nx with 5-inch storz cap removable strainer and long handle chrome plated cap.</div> <div>INTAKE VALVE</div> <div>A Hale Master Intake valve shall be installed on the above specified intake. It shall be electrically actuated from the pump panel and include a manual override hand wheel on the pump panel. The valve shall include a pressure relief valve to guard against incoming pressure surges.</div> <div>2.5" RIGHT SIDE INLET – OFFICER'S SIDE</div> <div>A 2.5" gated inlet valve shall be provided on the right-side pump panel. The valve shall be supplied with chrome plate female swivel, plug, chain, and removable strainer. The valve shall attach directly to the suction side of the pump with the valve body behind the pump panel.</div> <div>VALVE</div> <div>The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.</div> <div>VALVE ACTUATOR</div> <div>The valve shall be controlled by a swing type handle located at the operator's panel. The handle shall have a full 90-degree movement.</div> <div>THREAD TERMINATION</div> <div>The above shall terminate with National Standard Threads.</div> </div>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER

**Bidder
Complies**

Yes No

FRONT SUCTION

A front suction, with chrome long handle cap, shall be provided. The inlet pipe shall be constructed of 6" nst stainless steel pipe and shall be piped straight through the front bumper. An air bleeder line shall be provided to eliminate trapped air. Tft aa1st-nx with cap will be provided.

INTAKE VALVE

A Hale Master Intake valve shall be installed on the above specified intake. It shall be electrically actuated from the pump panel and include a manual override hand wheel on the pump panel. The valve shall include a pressure relief valve to guard against incoming pressure surges.

DISCHARGE #1 – DRIVER SIDE (2.5")

The discharge in position #1 on the left side of the apparatus shall include the following features.

A 2.5" discharge shall be provided on the left side of the apparatus.

VALVE

The valve shall be an Akron Heavy-duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.

VALVE ACTUATOR

The valve shall be controlled by a swing type handle located at the operator's panel. The handle shall have a full 90-degree movement.

2.5" PRESSURE GAUGE

An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be 2.5" in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.

THREAD TERMINATION

The above shall terminate with National Standard Threads.

DISCHARGE ADAPTER

One (1)2.5" NST 30deg elbow with one (1) 2.5" NST female x 1.5" NST male chrome plated adapter with 1.5" NST chrome plated cap and chain shall be provided for the above discharge.

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p><u>DISCHARGE #2 – DRIVER SIDE (2.5")</u></p> <p>The discharge in position #2 on the left side of the apparatus shall include the following features. A 2.5" discharge shall be provided on the left side of the apparatus.</p> <p><u>VALVE</u></p> <p>The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.</p> <p><u>VALVE ACTUATOR</u></p> <p>The valve shall be controlled by a swing type handle located at the operator's panel. The handle shall have a full 90-degree movement.</p> <p><u>2.5" PRESSURE GAUGE</u></p> <p>An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be 2.5" in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.</p> <p><u>THREAD TERMINATION</u></p> <p>The above shall terminate with National Standard Threads.</p> <p><u>DISCHARGE ADAPTER</u></p> <p>One (1) 2.5" NST 30 deg elbow with one (1) 2.5" NST female x 1.5" NST male chrome plated adapter with 1.5" NST chrome plated cap and chain shall be provided for the above discharge.</p> <p><u>DISCHARGE #3 – OFFICER SIDE (4.0")</u></p> <p>The discharge in position #3 on the right side of the apparatus shall include the following features. A 4" discharge shall be provided on the right side of the apparatus.</p> <p><u>VALVE</u></p> <p>The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p><u>VALVE ACTUATOR</u></p> <p>The valve shall be controlled by an handwheel control with position indicator located at the operator's panel.</p> <p><u>THREAD TERMINATION</u></p> <p>The above shall terminate with National Standard Threads.</p> <p><u>DISCHARGE ADAPTER</u></p> <p>One (1) Task Force Tips #AH3ST-NP 4" NST female x 5" Storz 30-degree adapter with #A01ST 5" Storz cap and chain shall be provided for the above discharge.</p> <p><u>DISCHARGE #4 – OFFICER SIDE (2.5")</u></p> <p>The discharge in position #4 on the right side of the apparatus shall include the following features. A 2.5" discharge shall be provided on the right side of the apparatus.</p> <p><u>VALVE</u></p> <p>The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.</p> <p><u>VALVE ACTUATOR</u></p> <p>The valve shall be controlled by a swing type handle located at the operator's panel. The handle shall have a full 90-degree movement.</p> <p><u>2.5" PRESSURE GAUGE</u></p> <p>An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be 2.5" in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.</p> <p><u>THREAD TERMINATION</u></p> <p>The above shall terminate with National Standard Threads.</p> <p><u>DISCHARGE ADAPTER</u></p> <p>One (1) 2.5" NST 30deg elbow with one (1) 2.5" NST female x 1.5" NST male chrome plated adapter with 1.5" NST chrome plated cap and chain shall be provided for the above discharge.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p><u>2.5" DISCHARGE OFFICER SIDE BACK OF BODY</u></p> <p>There shall be a 2.5" gated discharge piped to the officer's side back of body. The discharge shall be installed with proper clearance for spanner wrenches or adapters. Plumbing shall be 3" piping and a full flow 2.5" ball valve with the control at the pump operator's panel.</p> <p><u>VALVE</u></p> <p>The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.</p> <p><u>2.5" PRESSURE GAUGE</u></p> <p>An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be 2.5" in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.</p> <p><u>VALVE ACTUATOR</u></p> <p>The valve shall be controlled by a hand wheel or level handle located at the operator's panel.</p> <p><u>THREAD TERMINATION</u></p> <p>The above shall terminate with National Standard Threads.</p> <p><u>2.5" DISCHARGE DRIVER SIDE BACK OF BODY</u></p> <p>There shall be a 2.5" gated discharge piped to the driver's side back of the body. The discharge shall be installed with proper clearance for spanner wrenches or adapters. Plumbing shall be 3" piping and a full flow 2.5" ball valve with the control at the pump operator's panel.</p> <p><u>VALVE</u></p> <p>The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.</p> <p><u>VALVE ACTUATOR</u></p> <p>The valve shall be controlled by a hand wheel or lever handle located at the operator's panel.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p><u>2.5" PRESSURE GAUGE</u></p> <p>An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be 2.5" in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.</p> <p><u>THREAD TERMINATION</u></p> <p>The above shall terminate with National Standard Threads.</p> <p><u>FRONT BUMPER DISCHARGE</u></p> <p>A 2-1/2" discharge with 3" plumbing shall be provided at the front bumper. The valve shall be remote controlled at the pump panel.</p> <p><u>VALVE</u></p> <p>The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six (6) bolts. The valve shall a 10-year warranty covered by Akron Brass.</p> <p><u>VALVE ACTUATOR</u></p> <p>The valve shall be controlled by a hand wheel or lever located at the operator's panel.</p> <p><u>2.5" PRESSURE GAUGE</u></p> <p>An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be 2.5" in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.</p> <p><u>THREAD TERMINATION</u></p> <p>The above shall terminate with National Standard Threads and include One (1) TFT AYNJ-NF Gated Wye.</p> <p><u>DELUGE RISER</u></p> <p>A 3" deluge riser shall be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping shall be rigidly braced. The riser shall be gated and controlled from the pump operator's panel.</p> <p><u>VALVE</u></p> <p>The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p>the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.</p> <p><u>VALVE ACTUATOR</u></p> <p>The valve shall be controlled by an handwheel control with position indicator located at the operator's panel.</p> <p><u>2.5" PRESSURE GAUGE</u></p> <p>An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be 2.5" in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.</p> <p><u>DECK GUN TERMINATION</u></p> <p>A four-bolt compound flange shall be provided on top of the deck gun piping.</p> <p><u>EXTEND-A-GUN</u></p> <p>A Task Force Tips Extend-A-Gun model XG18 shall be provided and installed. The unit shall allow the deck gun monitor to extend 18". It will be a manual stacked tip deluge gun with inline shutoff valve at gun.</p> <p><u>CROSSLAYS</u></p> <p>Three (3) crosslay hose beds shall be supplied as follows:</p> <p>One crosslay with 2.5" piping, 2.5" valve, and 2.5" swivel with the capacity of 300' of 2.5" double jacketed fire hose.</p> <p>Two (2) crosslays with 2" piping, 2" valve, and 1.5" swivel with the capacity of 250' of 1.75" double jacketed fire hose each. The valves shall be the "drop-out" style and controlled from the pump panel.</p> <p><u>VALVE</u></p> <p>The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six (6) bolts. The valve shall a 10-year warranty covered by Akron Brass.</p> <p><u>VALVE ACTUATOR</u></p> <p>The valve shall be controlled by a hand wheel or lever located at the operator's panel.</p>		

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	Yes	No
<p><u>2.5" PRESSURE GAUGE</u></p> <p>An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be 2.5" in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.</p> <p><u>THREAD TERMINATION</u></p> <p>The above shall terminate with National Standard Threads.</p> <p><u>CROSSLAY COVER</u></p> <p>A 3/16 aluminum gusseted diamond plate cover shall be installed over the crosslay hose beds. It shall include a chrome grab handle at each end for opening and closing the cover from either end without distortion. The cover shall be equipped with net flaps on the sides, capable of being securely fastened.</p> <p><u>BOOSTER REEL AND EQUIPMENT</u></p> <p>One (1) Hanney bright aluminum electric rewind booster reel with sealed joints, leak proof ball bearings, and an adjustable friction brake. The reel shall have a heavy frame to keep the drum, bearings, and rewind mechanism in alignment at all times. The reel shall have roller guides to prevent hose damage while it is being taken on and off the reel. The electric rewind shall be located for convenience and safety of operation. Positive rewind power shall be assured by the use of sprocket and chain in conjunction with a geared manual crank.</p> <p>The reel shall have a minimum ½ hp electric rewind motor.</p> <p>The reel shall be equipped with 200 ft. 1" best grade booster hose with Bar-Way couplings.</p> <p>An air blow out valve shall be provided.</p> <p>The reel shall be mounted in the upper dunnage area of the pump module, on the officer's side.</p> <p>A TFT booster nozzle shall be provided, along with its associated mount.</p> <p><u>VALVE</u></p> <p>The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.</p> <p><u>VALVE ACTUATOR</u></p> <p>The valve shall be controlled by hand wheel or lever handle located at the operator's panel.</p>		

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	Yes	No
<p><u>THREAD TERMINATION</u></p> <p>The above shall terminate with National Standard Threads.</p> <p><u>MASTER PUMP DRAIN</u></p> <p>A multiport master drain valve shall be provided and plumbed to multiple locations on the main pump body. The valve assembly shall be clearly marked as the Master Drain.</p> <p><u>DRAIN VALVES LIFT UP STYLE</u></p> <p>Vertical lift up style, quarter turn style drain valves shall be provided for each suction inlet, or discharge outlet as specified. Each drain shall be clearly marked, and color coded to match the corresponding suction or discharge.</p> <p><u>PUMP AND GAUGE PANELS, SIDE MOUNT</u></p> <p>The pump controls and gauges shall be located at the left side of the apparatus. The pump and gauge panels shall be flush mounted.</p> <p>Pump panels on both sides shall be easily removable. The gauge and control panels shall be two (2) separate panels for ease of maintenance. The upper gauge panel shall be hinged with a full-length stainless-steel hinge held closed with a 1/4-turn latch. There shall be one (1) hinged access door as large as possible located over the right-side pump panel. This door shall have a full-length stainless-steel hinge and a 1/4 turn latching mechanism.</p> <p>The control panel shall be laid out in a user-friendly manner. All valve controls shall have the corresponding discharge gauge located immediately adjacent to control handle to allow operator to view the discharge pressure without searching the panel.</p> <p><u>PANEL FINISH</u></p> <p>The panels shall be constructed of black vinyl covered aluminum for maximum protection against abrasion caused during normal use.</p> <p><u>ESCUTCHEON PLATES</u></p> <p>The pump panel shall be equipped with color-coded removable escutcheon plates around the suction and discharge valves.</p> <p><u>COLOR CODING</u></p> <p>Will match South Fire District Truck 34.</p> <p>Each discharge valve control, outlet, and corresponding line gauge shall be color-coded. The color-coding shall be (as applicable):</p> <p>#1 Discharge - Yellow #2 Discharge – White #3 Discharge – Navy Blue #4 Discharge - Black</p>		

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	Yes	No
<p> #5 Discharge - Green #1 Pre-Connect - Orange #2 Pre-Connect - Red #3 Pre-Connect - Brown #4 Pre-Connect - Magenta Front Bumper Line - Turquoise Large Diameter Discharge – Yellow with white border Left Hose Bed Pre-Connect - Tan Right Hose Bed Pre-Connect - Lavender Left Rear Discharge - Olive Right Rear Discharge – Light Blue Deck Gun – Silver Inlets – Burgundy Tank Fill - Lime Green Tank to Pump – Burgundy </p> <p><u>PUMP FINISH</u></p> <p>The fire pump shall be painted as specified by the South Fire District at the pre-construction meeting. The paint finish shall be applied before the installation of any wiring, gauge lines, valve linkages, or operator’s panel. The paint shall be the same material used for the finished body and cab.</p> <p><u>PLUMBING FINISH</u></p> <p>The plumbing shall be painted as specified by South Fire District at the pre-construction meeting. All fittings, pipe ends, and valve ends shall be properly taped off prior to applying paint. The paint finish shall be applied before the installation of any wiring, gauge lines, valve linkages, or operator’s panel. The paint shall be the same material used for the finished body and cab.</p> <p><u>PUMP PANEL LIGHTS, LED</u></p> <p>The driver’s side pump panel controls and gauges shall be illuminated by a minimum of three (3) Weldon 2631 LED lights.</p> <p><u>PUMP PANEL LIGHTS, LED</u></p> <p>The officer's side pump panel shall be illuminated by a minimum of three (3) Weldon model 2631 light strips.</p> <p><u>PUMP PANEL ILLUMINATION</u></p> <p>One pump panel illumination light shall be activated when the pump is engaged.</p> <p><u>PUMP PANEL GAUGES AND CONTROLS</u></p> <p>The following gauges and controls shall be provided at the pump panel:</p> <ul style="list-style-type: none"> • Two (2) certified laboratory test gauge outlets • Pump primer control 		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<ul style="list-style-type: none"> • Master drain control and additional drains as needed • Tank-fill and pump cooler valve controls • Tank to pump valve control • Pump capacity rating plate • All discharge controls • Two (2) master pump gauges • Gauges on all 1-1/2" and larger discharge lines <p><u>PRIMING SYSTEM</u></p> <p>The priming pump shall be a Trident Emergency Products compressed air powered, high efficiency, multi- stage, venturi based Air Prime System with Auto Prime Control. All wetted metallic parts of the priming system are to be of brass and stainless-steel construction. The priming system shall have a five-year warranty.</p> <p><u>(1) PRIMER BUTTON - MAIN SUCTION</u></p> <p>A single panel mounted control will activate the priming pump and open the priming valve to the pump.</p> <p><u>COMPRESSION FITTINGS ON AIR SYSTEM</u></p> <p>Compression style fittings shall be provided on air lines within the pump module.</p> <p><u>THERMAL RELIEF VALVE</u></p> <p>There shall be a Hale TRV-L Thermal Relief Valve supplied. The valve shall automatically dump a controlled amount of water to atmosphere when the pump water exceeds 120 degrees Fahrenheit. The valve shall re-set automatically. A light shall be provided at the pump panel, which will illuminate when the pump reaches 120 degrees Fahrenheit to warn the operator that the pump is automatically dumping.</p> <p><u>FUEL GAUGE</u></p> <p>A fuel gauge shall be provided at the pump operator's panel to monitor the apparatus fuel level.</p> <p><u>AIR HORN BUTTON</u></p> <p>A push button switch shall be provided on pump operators panel to activate the air horns.</p> <p><u>MASTER GAUGES</u></p> <p>Innovative Controls liquid filled pump pressure and vacuum gauges shall be provided. The gauges shall be 6" in diameter with white faces and black lettering. The gauges shall have a pressure range of 30"-0-400 psi. If the gauges are to be mounted above eye-level, they shall be mounted on a slight downward angle to improve visibility for pump operator.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER

**Bidder
Complies**

Yes No

WATER TANK LEVEL GAUGE

Fire Research TankVision® model WL2000 water tank volume indicator kit shall be installed. The kit shall include an electronic indicator module, a pressure sensor, and sensor cable. The indicator shall show the volume of water in the tank on nine (9) easy to see super bright LEDs. A wide view lens over the LEDs shall provide for a viewing angle of 180 degrees. The indicator case shall be waterproof and manufactured of aluminum.

The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostic capabilities, self-calibration, and a datalink to connect remote indicators. Low water warnings shall include flashing LEDs at 25%, down chasing LEDs when the tank is almost empty.

The indicator shall receive an input signal from an electronic pressure sensor. The sensor shall be mounted on the outside of the water tank near the bottom; no probe shall be place on the interior of the tank. Wiring shall be weather resistant and have automotive type plug-in connectors.

The gauge shall be located on the pump operator's panel.

WATER TANK VOLUME REMOTE INDICATORS

Two (2) Fire Research MaxVision model WLA280-A00 tank remote indicators shall be installed. The indicators shall show the volume of water in the tank on ninety-six (96) easy to see super bright tri-color LEDs. The indicator case shall be waterproof, manufactured of Polycarbonate material with an integrated lens.

The remote indicators shall receive input information over a datalink from the Fire Research TankVision primary indicator. The remote indicators shall indicate the level as a single color in red for 25% or less, amber color for up to 50% volume, blue color for up to 75% volume and green color for up to 100% volume. When the level reaches 25%, the red LEDs will begin flashing. When the level is empty, the red LEDs will scroll in a down-chasing motion and then flash three (3) times.

The locations of the remote indicators shall be determined by the South Fire District.

WATER TANK

The tank shall be constructed of PT3™ polypropylene material by United Plastic Fabricating (UPF). This material shall be a non-corrosive stress relieved thermoplastic and UV stabilized for maximum protection. Tank shell thickness may vary depending on the application and may range from ½ to 1" as required. Internal baffles are generally 3/8" in thickness.

The tank shall be of a specific configuration and shall be designed to be completely independent of the body and compartments. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include PolyProSeal™ technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise. The top of the booster tank shall be fitted with removable lifting assembly designed to facilitate tank removal. The transverse and longitudinal swash partitions shall be manufactured of a minimum of 3/8" PT3™

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p>polypropylene. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions shall interlock with one another and completely fused to each other as well as to the walls of the tank. All partitions and spacing shall comply with NFPA 1901. The walls shall be welded to the floor of the tank providing maximum strength as part of the tank's unique Full Floor Design™.</p> <p>The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of 1/2" PT3™ polypropylene and shall be a minimum dimension of 8" x 8" outer perimeter. The fill tower shall be blue in color indicating that it is a water only fill tower. The tower shall have a 1/4" thick removable polypropylene screen and a PT3™ polypropylene hinged cover. The capacity of the tank shall be engraved on the top of the fill tower lid. Inside the fill tower there shall be a combination vent/overflow pipe. The vent overflow shall be a minimum of schedule 40 polypropylene pipe with a minimum I.D. of 4" that is designed to run through the tank and shall be piped to discharge water behind the rear wheels as required in NFPA 1901 so as to not interfere with rear tire traction.</p> <p>The tank cover shall be constructed of 1/2" thick PT3™ polypropylene and UV stabilized, to incorporate a multi-piece locking design, which allows for individual removal and inspection if necessary. The tank cover(s) shall be flush or recessed 3/8" from the top of the tank and shall be fused to the tank walls and longitudinal partitions for maximum integrity. Each one of the covers shall have hold downs consisting of 2" minimum polypropylene dowels spaced a maximum of 40" apart. These dowels shall extend through the covers and will assist in keeping the covers rigid under fast filling conditions. A minimum of two (2) lifting dowels shall accommodate the necessary lifting hardware. There shall be one (1) sump constructed of a minimum of 1/2" PT3™ polypropylene and be located in the left front quarter of the tank, unless specified otherwise. On all tanks that require a front suction, a 3" schedule 40 polypropylene pipe shall be installed that will incorporate a dip tube from the front of the tank to the sump location. The sump shall have a minimum 3" N.P.T. threaded outlet on the bottom for a drain plug per NFPA. This shall be used as a combination clean-out and drain. All tanks shall have an anti-swirl plate located approximately 3" above the inside floor.</p> <p>There shall be two (2) standard tank outlets: one (1) for the tank-to-pump suction line, which shall be sized to provide adequate water flow to the pump; and one (1) for tank fill line, which shall be sized according to the NFPA minimum size chart for booster tanks. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank, and be capable of withstanding sustained fill rates of up to 1000 G.P.M. All auxiliary outlets and inlets must meet all NFPA guidelines in effect at the time of manufacture.</p> <p>The UPF Poly-Tank® III shall rest on the body cross members in conjunction with such additional cross members, spaced at a distance that would not allow for more than 530 square inches of unsupported area under the tank floor. In cases where overall height of the tank exceeds 40 inches, cross member spacing must be decreased to allow for not more than 400 square inches of unsupported area. The tank shall be isolated from the cross members through the use of hard rubber strips with a minimum thickness and width dimension of 1/4" x 1". The rubber must be installed so it will not become dislodged during normal operation of the vehicle. Additionally, the tank must be supported around the entire bottom outside perimeter and captured both in the front and rear as well as side to side to prevent tank from shifting during vehicle operation.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p>The tank shall be completely removable without disturbing or dismantling the apparatus structure.</p> <p>The tank shall be tested and certified as to capacity on a calibrated and certified tilting scale. Each tank shall be weighed empty and full to provide precise fluid capacity. The tank shall be delivered with a Certificate of Capacity delineating the weight empty and full and the resultant capacity based on weight. Engineering estimates for capacity calculations shall not be permitted for capacity certification. A center of gravity and weight calculation for both empty and full conditions shall be required with each tank.</p> <p>The tank shall have a limited lifetime warranty that provides warranty service for the life of the fire apparatus in which the tank is installed. Warranties are transferable if the apparatus ownership changes by requesting the transfer from UPF. In applications where the tank will be subject to severe conditions, the tank may have a warranty unique to the application that is clearly defined for each such application.</p> <p><u>WATER TANK</u></p> <p>The water tank shall have a capacity of no less than <u>800 U.S. gallons</u>. Ideally 1000 gallons would be preferable if overall length and height can be maintained.</p> <p><u>APPARATUS BODY-HEAVY DUTY RESCUE TYPE 100" WIDE</u></p> <p>The body shall be constructed of 3/16" #5052 aluminum sheet, #3003 bright aluminum diamond plate and structural aluminum extrusions. The body shall be custom built and engineered for proper load distribution on the chassis. An insulator material shall be used where aluminum and steel are in contact to prevent corrosion.</p> <p>The ceilings, sidewalls and floors of the body compartments shall be constructed of 3/16" 5052-H32 smooth aluminum plate with a tensile strength range of 32,000 to 44,000 psi. Continuous 5356 fill welding shall seal compartment panels.</p> <p>The body framework shall be constructed of custom-designed aluminum alloy 6063-T5 extrusions with a tensile strength of 35,000 psi.</p> <p>The compartment extrusions shall be slotted full-length on backside for uniform fitting of the aluminum plate work that forms the compartment interiors.</p> <p>The aluminum extrusion profiles shall incorporate 1" x 1-3/4" recessed continuous door seal at the bottom of the compartment. The extrusions shall be designed to allow unobstructed, sweep-out floors in all compartments.</p> <p>The compartment tops shall extend downward over the extrusions and form a drip molding. The material shall be .125 aluminum treadplate with approved aerated service for walking.</p> <p>The apparatus body shall be a separate module from the pump enclosure and shall not be fastened together in any manner.</p> <p>Each compartment shall be properly vented with louvers.</p>		

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	Yes	No
<p><u>REAR STEP COMPARTMENTATION</u></p> <p>A1 - There shall be a compartment provided at the rear step.</p> <p><u>COMPARTMENTATION LEFT SIDE-FULL DEPTH FULL HEIGHT</u></p> <p>L1 - There shall be a compartment ahead of the rear wheels</p> <p>L2 - There shall be a compartment above the rear wheels</p> <p>L3 - There shall be a compartment behind the rear wheels</p> <p><u>COMPARTMENTATION RIGHT SIDE</u></p> <p>R1 - There shall be a compartment ahead of the rear wheels. The upper portion of the compartment shall be half deep to accommodate ladder storage.</p> <p>R2 - There shall be a compartment above the rear wheels, half depth.</p> <p>R3 - There shall be a compartment behind the rear wheels The upper portion of the compartment shall be half deep to accommodate ladder storage.</p> <p><u>UPPER HATCH COMPARTMENTS</u></p> <p>There shall be a compartment located at the top of each body side with lift-up doors and pneumatic stays. Two (2) lift-up NFPA compliant serrated aggressive diamond plate doors shall be provided on each side, with chrome handles. The tops of the compartments shall be constructed of NFPA compliant embossed aggressive diamond plate.</p> <p><u>ROPE TIE-OFFS</u></p> <p>There shall be four (4) 9,000 # rated rope tie offs provided on the body. There shall be two (2) on each side of the upper hatch compartments, recess mounted in the upper corners. The rope tie offs shall consist of 10,000 # hoist rings powder coated black. The hoist rings shall attach through a 3/16th scuff plate, a 3/16th compartment wall, and a 3/8" aluminum plate. The 3/8" aluminum plate shall be fully welded to the upper hatch compartment structure. The hoist ring shall be able to swivel 360 degrees and pivot 180 degrees.</p> <p><u>COMPARTMENT INTERIOR - L1</u></p> <p>The L1 compartment on the left side of the apparatus shall include the following features:</p> <p><u>ADJUSTABLE SHELF</u></p> <p>There shall be two (2) adjustable shelves provided and installed in the compartment. The shelf shall be fabricated of .188" aluminum plate. Two (2) full length, full width drawers on floor (tool box style) of compartment.</p> <p><u>COMPARTMENT INTERIOR - L2</u></p> <p>The L2 compartment on the left side of the apparatus shall include the following features:</p>		

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	Yes	No
<p><u>ADJUSTABLE SHELF</u></p> <p>There shall be two (2) adjustable shelves provided and installed in the compartment. The shelf shall be fabricated of .188" aluminum plate.</p> <p><u>COMPARTMENT INTERIOR - L3</u></p> <p>The L3 compartment on the left side of the apparatus shall include the following features:</p> <p><u>ADJUSTABLE SHELF</u></p> <p>There shall be two (2) adjustable shelves provided and installed in the compartment. The shelf shall be fabricated of .188" aluminum plate.</p> <p><u>600# SLIDE-MASTER TRAY</u></p> <p>There shall be a Slide-Master pullout drawer provided and installed. The drawer shall have a distributed load capacity of 600 lbs. and be capable of extending 70% of its depth. The tray shall be fabricated of .188" aluminum plate and have a formed lip that measures 2".</p> <p><u>COMPARTMENT INTERIOR - R1</u></p> <p>The R1 compartment on the right side of the apparatus shall include the following features:</p> <p><u>ADJUSTABLE SHELF</u></p> <p>There shall be two (2) adjustable shelves provided and installed in the compartment. The shelf shall be fabricated of .188" aluminum plate.</p> <p><u>600# SLIDE-MASTER TRAY</u></p> <p>There shall be a Slide-Master pullout drawer provided and installed. The drawer shall have a distributed load capacity of 600 lbs. and be capable of extending 70% of its depth. The tray shall be fabricated of .188" aluminum plate and have a formed lip that measures 2".</p> <p><u>COMPARTMENT INTERIOR - R2</u></p> <p>The R2 compartment on the right side of the apparatus shall include the following features:</p> <p><u>ADJUSTABLE SHELVES</u></p> <p>There shall be two (2) adjustable shelves provided and installed in the compartment. The shelf shall be fabricated of .188" aluminum plate.</p> <p><u>COMPARTMENT INTERIOR - R3</u></p> <p>The R3 compartment on the right side of the apparatus shall include the following features:</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p><u>ADJUSTABLE SHELVES</u></p> <p>There shall be two (2) adjustable shelves provided and installed in the compartment. The shelf shall be fabricated of .188" aluminum plate.</p> <p><u>600# SLIDE-MASTER TRAY</u></p> <p>There shall be a Slide-Master pullout drawer provided and installed. The drawer shall have a distributed load capacity of 600 lbs. and be capable of extending 70% of its depth. The tray shall be fabricated of .188" aluminum plate and have a formed lip that measures 2".</p> <p><u>COMPARTMENT INTERIOR - A1</u></p> <p>The A1 compartment on the rear of the apparatus shall include the following features:</p> <p><u>ADJUSTABLE SHELF</u></p> <p>There shall be two (2) adjustable shelves provided and installed in the compartment. The shelf shall be fabricated of .188" aluminum plate.</p> <p><u>600# SLIDE-MASTER TRAY</u></p> <p>There shall be a Slide-Master pullout drawer provided and installed. The drawer shall have a distributed load capacity of 600 lbs. and be capable of extending 70% of its depth. The tray shall be fabricated of .188" aluminum plate and have a formed lip that measures 2".</p> <p><u>COMPARTMENT MATTING</u></p> <p>Turtle Tile interlock matting material shall be provided in all the above body compartments for all shelves, trays, and compartment flooring (where applicable).</p> <p><u>UNISTRUT</u></p> <p>Each compartment shall come equipped with 1.625" x .875" x .125" aluminum Unistrut channel. The Unistrut shall be securely recessed into the interior walls of the compartment.</p> <p><u>COMPARTMENT DOORS</u></p> <p>The compartment doors shall be box pan construction. The outer door skin shall be .190" 5052-H32 aluminum. The inner pan shall be .125" 5052-H32 aluminum securely welded to the outer skin. A hat section channel shall be installed in the center of the door to stabilize the door pan and to deaden the sound when closing the door. The doors shall have double latches. Access cover plates shall be provided to service latch mechanisms. The door edge shall be 7/16" thick providing ample strength for the attachment of the door hinge. The door hinge shall be polished stainless steel .075" thick with a 3/16" diameter pin and 1" long knuckles. The hinge shall be attached using 1/4" truss head stainless steel bolts spaced 5" apart. The door shall be of the double seal design incorporating an inner and outer "D" shaped extruded rubber automotive seal to provide a tight seal at each compartment.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p>Flush mounted chrome plated bent "D" ring door handles; single point positive type latches with adjustable catches (slam type door catches) shall be provided on all compartments. Gas strut cylinder arms shall be mounted on each swing out compartment door.</p> <p>Compartments shall have full-length stainless-steel hinges. The compartment to the right of the pump panel shall have a right hinged door, all other compartment doors shall be left hinged.</p> <p>A door open indicator light shall be provided in the cab.</p> <p><u>REAR COMPARTMENT A1 DOOR</u></p> <p>The rear compartment door shall be roll up door. Shaped extruded rubber automotive seal to provide a tight seal compartment. A door open indicator light shall be provided in the cab.</p> <p><u>COMPARTMENT LIGHTING</u></p> <p>Each compartment shall be equipped with two (2) RED AMDOR LED light strips which shall provide a consistent pattern to illuminate to entire compartment.</p> <p><u>COMPARTMENT LIGHTING (ADDITIONAL)</u></p> <p>An additional white AMDOR LED light strip shall be provided in specified compartment(s).</p> <ul style="list-style-type: none"> * 1 each side of raised roof storage * 1 each. cab exterior compartments <p><u>HOSE BED</u></p> <p>The hose bed shall be provided with aluminum slatted flooring radiused at the edges to prevent hose damage from sharp edges. Each hose bed floor section shall be removable for easy access to the water tank.</p> <p>The hose bed shall be large enough to store the following:</p> <p>Driver side to officer's side:</p> <ul style="list-style-type: none"> - 100' ft. of 3' supply hose-on bottom (pre connected) - 200' of 1-3/4" attack hose with gated wye - 1000' of rubber 5" LDH - 500' of 3" double cotton jacketed supply hose - 200' of 2-1/2" double cotton jackets supply hose (pre-connected) <p><u>HOSE BED DIVIDERS</u></p> <p>The hose bed shall be divided by three (3) 1/4" aluminum partitions that are fully adjustable by sliding in tracks located at the front and rear of the hose bed. The dividers shall be located as needed.</p> <p><u>HOSEBED LIGHTING</u></p> <p>The hosebed shall be illuminated by a white Tecniq LED light strip.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER

**Bidder
Complies**

Yes No

BODY HANDRAILS

Handrails shall be constructed of type 304 stainless steel 1.25-inch diameter tubing with bright finish and knurled gripping surface. Mounting flanges shall be constructed from 7 gauge, .180 thick, stainless sheet. Each grab rail shall have 90 degree returns to flanges. The ends of grab rail shall pass through the flanges and be welded to form one structural unit. The handrails shall be mounted using 1.25" SS Hex bolts, with a barrier rubber gasket at each flange. Sufficient space shall allow for a gloved hand to firmly grip the rail. Handrails to match South Fire District Truck 34.

The rails shall be located in the following areas:

(Note: These are in addition to those previously mentioned in the cab section):

There shall be one (1) vertical handrail at rear of the body one each side of the rear compartment.

There shall be two (2) handrails mounted horizontally, above the pump panel, one (1) on each side as large as possible.

HANDRAIL ABOVE PUMP PANEL

A tubular handrail shall be provided above the pump panel.

FRONT BODY STEPS

There shall be up to five (5) Innovative Control fold-down steps with integrated step lights mounted on each side of the front face of body to provide access to the top of the pump module and dunnage area.

The quantity and location of steps and handrails shall meet the Current NFPA 1901 pamphlet in effect at the time the apparatus is ordered.

REAR STEPS

The rear of the body shall be equipped with up to six (6) fixed steps. The bottom step shall measure 14" x 11" to provide a stable footing position. Each additional step above shall measure 14" x 8" for clearance while climbing. Thinly fabricated aluminum steps shall not be utilized.

The quantity and location of steps and handrails shall meet the Current NFPA 1901 pamphlet in effect at the time the apparatus is ordered.

REAR ACCESS LADDER

There shall be a ladder located at the driver's side rear of the apparatus to access the top of the vehicle body. The ladder shall be a swing-out and fold-down type. The ladder shall be constructed of 1/8" formed stainless steel and shall be 16.5" wide. Each step shall be 3.25" deep x 16" wide with a perforated non-skid stepping surface. The ladder shall be held in the closed and open positions with two (2) gas struts.

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<p><u>INTERMEDIATE REAR STEP</u></p> <p>There shall be one (1) full width treadplate rear step, 8" deep, provided at the rear of the apparatus above the rear step compartment and below the hose bed.</p> <p><u>SLIDE-OUT STEP</u></p> <p>A total of two (2) slide-out step with grip-strut insert shall be provided under the pump module (one each side). The steps shall only be as wide as the crosslays.</p> <p><u>RUB RAILS</u></p> <p>The body shall be equipped with plastic style rub rails at the sides. Rub rails shall be spaced away from the body by 1/2" polymer spacers.</p> <p><u>ALUMINUM TREADPLATE</u></p> <p>All load bearing aluminum treadplate running boards shall be .188 thick bright-annealed finish. They shall have a 400# load rating. Treadplate locations:</p> <p><u>REAR STEP CORNERS</u></p> <p>The rear step corners shall form a 45 degree angle.</p> <p><u>GRIP STRUT ON RUNNING BOARD</u></p> <p>A grip strut insert shall be provided on the running boards (both sides).</p> <p><u>GRIP STRUT ON REAR STEP</u></p> <p>A grip strut insert shall be provided in the rear step area.</p> <p><u>SCBA CYLINDER COMPARTMENTS</u></p> <p>There shall be six (6) spare breathing air cylinder compartments recessed in the rear fender wells. The compartments shall have brushed aluminum doors equipped with a weather resistant flush fitting thumb latch. The interior of the door shall incorporate a rubber seal to keep the compartment free of road debris and moisture. The interior compartment shall be constructed of a high- density polyethylene plastic.</p> <p><u>STAINLESS STEEL EDGE PROTECTION</u></p> <p>There shall be polished stainless steel edge protection on each of the corners of the body.</p> <p><u>GROUND LADDERS</u></p> <p>The apparatus shall be equipped with heavy duty, box type "I" beam rail, ground ladders. The ladders shall meet the requirements of NFPA 1931 to ensure proper design and that sufficient strength is available for the service intended. The ground ladders shall be constructed of aluminum with non-welded, field replaceable rung to rail connections to simplify field repairs and removable plated steel butt spurs for added strength. A full 1/2", non-rotting, poly rope shall be provided for easy ladder operation.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER	Bidder Complies	
	Yes	No
<ul style="list-style-type: none"> One (1) Alco-Lite PEL-28 28 ft. two-section aluminum extension ladder. One (1) Alco-Lite PRL-14 14 ft. aluminum roof ladder with roof hooks on both ends One (1) Alco-Lite FL-10' 10 ft. folding ladder. <p>The ladders shall have lifetime warranty against manufacturing defects.</p> <p><u>GROUND LADDER STORAGE</u></p> <p>There shall be a ground ladder storage compartment located behind the right-side upper compartments in an area accessible from the rear of the apparatus. The ladders shall be individually stored on beam in fiberglass angle slides at the bottom of the compartment.</p> <p>The ladder storage compartment shall hold one (1) 28' 2-section ladder and one (1) 14' roof ladder.</p> <p>The storage compartment shall be enclosed at the rear by a vertically hinged smooth aluminum door with chevron striping and 1/4-turn T-handle latch. The door shall be tied into the "Compartment Door Open" indicator in the cab by means of a plunger switch. An LED light strip light shall illuminate the interior of the compartment.</p> <p><u>RECEIVER (Sides)</u></p> <p>Two (2) 2" receivers shall be provided and mounted directly to the apparatus body, flush with the rear sides of the body. The receivers shall be 2" x 2" heavy wall tube and solidly re-enforced. The receivers shall be rated with a maximum capacity of 5,000 lbs. The receiver shall be designed for a 2-1 straight pull capacity (10,000 lbs.), centered above rear axle.</p> <p><u>RECEIVER (Rear)</u></p> <p>A 2" receiver shall be provided and mounted directly to the apparatus chassis, under the body sub frame. Receivers that mount to the body subframe shall not be acceptable. The receiver shall be 2" x 2" heavy wall tube and solidly re-enforced. The receiver shall be rated with a maximum capacity of 5,000 lbs. The receiver shall be designed for a 2-1 straight pull capacity (10,000 lbs.).</p> <p><u>RECEIVER WIRING</u></p> <p>Sufficient power shall be provided at all the above receivers for the intent of powering a winch.</p> <p><u>SUCTION HOSE STORAGE</u></p> <p>The suction hose shall be installed in an enclosed compartment inside the hatch compartment. The compartment shall be enclosed at the rear by a hinged aluminum door with two (2) quick-release latches finished with chevron striping.</p> <p><u>SUCTION HOSE</u></p> <p>Two (2) 10 ft. lengths of 6" nst lightweight (KOCHEK) fire department hard suction hose with lightweight long handle couplings and pin lug male couplings shall be provided.</p>		

SOUTH FIRE DISTRICT CUSTOM FIRE RESCUE / PUMPER

**Bidder
Complies**

Yes No

LICENSE PLATE BRACKET

A Cast Products LP0013 cast aluminum license plate bracket with LED light shall be provided at the rear of the apparatus.

BODY ELECTRIC SYSTEM

All body electrical wiring in the chassis will be XLP cross link-insulated type. Wiring is to be color-coded and include function codes every three (3) inches. Wiring harnesses will be routed in protective, heat resistant loom, securely and neatly installed. Two (2) power distribution centers will be provided in central locations for greater accessibility. The power distribution centers contain automatic thermal self-resetting breakers, power control relays, flashers, diode modules, daytime driving light module, and engine and transmission data links. All breakers and relays are utilized in circuits which amp loads are substantially lower than the respective component rating thus ensuring long component life. Power distribution centers will be composed of a system of interlocking plastic modules for ease in custom construction.

The power distribution centers are function oriented. The first is to control major truck function and the second controls overhead switching and interior operations. Each module is single function coded and labeled to aid in troubleshooting. The centers also have accessory breakers and relays for future installations. All harnesses and power distribution centers will be electrically tested prior to installation to ensure the highest system reliability.

All external harness interfaces will be of a triple seal type connection to ensure a proper connection. The cab/chassis and the chassis/body connection points will be mounted in accessible locations. Complete chassis wiring schematics will be supplied with the apparatus.

The wiring harness contained on the chassis shall be designed to utilize wires of stranded copper or copper alloy of a gauge rated to carry 125% of maximum current for which the circuit is protected without exceeding 10% voltage drop across the circuit. The wiring shall be uniquely identified by color code or circuit function code, labeled at a minimum of every three (3) inches. The identification of the wiring shall be referenced on a wiring diagram. All wires conform to SAEJ1127 (Battery Cable), SAEJ1128 (Low Tension Primary Cable), SAEJ1560 (Low Tension Thin Wall Primary Cable). All harnesses shall be covered with moisture resistant loom with a minimum rating of 300 Degrees Fahrenheit and a flammability rating of VW-1 as defined in UL62. The covering of jacketed cable has a minimum rating of 289-degree Fahrenheit.

All harnesses are securely installed in areas protected against heat, liquid contaminants, and damage. The harness connections and terminations use a method that provides a positive mechanical and electrical connection and are in accordance with the device manufacturer's instructions. No connections within the harness utilize wire nut, insulation displacement, or insulation piercing.

All circuits conform to SAE1292. All circuits are provided with low voltage over current protective devices. These devices are readily accessible and protected against heat in excess of component rating, mechanical damage, and water spray. Star washers are not used for ground connections. **Multiplex electrical systems are not acceptable and shall be cause for disqualification.**

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	Yes	No
<p><u>BACK-UP ALARM</u></p> <p>An Ecco model SA917 automatic self-adjusting electronic back-up alarm producing 87-112 db shall be installed at the rear between the frame rails. It shall operate whenever the transmission's reverse gear is selected.</p> <p><u>STOP/TAIL/TURN/REVERSE LIGHTS</u></p> <p>The rear stop/tail/turn/reverse lights shall be Whelen 600 series lights individually installed in chrome plated bezels each side on the rear of the apparatus body. The stop/taillights shall be LED model 60BTT located in the top position. The amber arrow turn signals shall be LED model 60A00TAR located below the stop/taillights. The reverse lights shall be LED model 60C00WCR (maximum intensity) located below the turn signals.</p> <p><u>LED ICC/MARKER LIGHTS</u></p> <p>LED type ICC/marker lights shall be provided to meet D.O.T. requirements.</p> <p><u>STEP LIGHTS</u></p> <p>The pump module running board area shall be illuminated by Whelen 2G 4" diameter LED lights mounted one (1) on each side on the front of the body in chrome flanges.</p> <p>LED strip lighting or individually mounted lights shall be provided at the rear of the body to illuminate all stepping surfaces based on the body style.</p> <p><u>GROUND LIGHTING</u></p> <p>The apparatus shall be equipped with lighting capable of illumination to meet NFPA requirements. Lighting shall be provided at areas under the driver and crew riding area exits and shall be automatically activated when the exit doors are opened. The ground lights shall be Truck-lite® LED model #44042C. Lighting required in other areas such as work areas, steps, and walkways shall be activated when the parking brake is applied, provided the ICC lights are on.</p> <p>An "on/off" switch for the ground lights shall be provided in the cab.</p> <p><u>OPTICAL WARNING SYSTEM</u></p> <p>The optical warning system shall be capable of two (2) separate signaling modes during emergency operations. One (1) mode shall signal to drivers and pedestrians that the apparatus is responding to an emergency and is calling for the right-of-way and the other mode shall signal that the apparatus is stopped and is blocking the right-of-way.</p> <p>A momentary rocker switch shall be provided near the driver and labeled Master Emergency to energize all the optical warning devices provided. All lights shall operate at not less than the minimum flash rate per minute as specified by NFPA.</p>		

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	Yes	No
<p><u>UPPER-LEVEL WARNING DEVICES</u></p> <p>The upper level shall be divided into zones A (front), B (officer's side), C (rear), and D (driver's side).</p> <p>Zone A (front) shall have one (1) 72" Whelen Rota-Beam light bar. The light bar shall have all clear outer lenses. The light bar shall be installed on the cab roof as far forward as possible with two (2) MK8H 5" cast aluminum risers.</p> <p><u>OPTICOM</u></p> <p>A Global Traffic Technologies 795H LED Opticom emitter shall be provided in the light bar. The Opticom shall be wired to a switch near the driver.</p> <p><u>Zone B (officer's side)</u> shall be covered by the module from the light bar and the following:</p> <ul style="list-style-type: none"> One (1) Whelen 600 LED amber colored warning light on the side of the upper extended cab. Two (2) side-facing Whelen 900 series LED warning lights on the body. One (1) in each upper body corner. One (1) Whelen Freedom IV 21" mini LED light bar, Model F4MINI, over the officer's cab door. To include five (5) LED modules - one (1) end red LED module, two (2) corner red LED modules, and two (2) forward-facing white LED modules. The light bar shall have all clear outer lenses. The light bar shall be installed on the cab roof each with two (2) MK8H 5" cast aluminum risers. <p><u>Zone C (rear)</u> shall have:</p> <ul style="list-style-type: none"> Two (2) Whelen 900 series red LED warning lights installed on the upper rear of the apparatus (one on each side). <p><u>Zone D (driver's side)</u> shall be covered by the module from the light bar and the following:</p> <ul style="list-style-type: none"> One (1) Whelen 600 LED amber colored warning light on the side of the upper extended cab. Two (2) side-facing Whelen 900 series LED warning lights on the body. One (1) in each upper body corner. One (1) Whelen Freedom IV 21" mini LED light bar, Model F4MINI, over the driver's cab door. To include five (5) LED modules - one (1) end red LED module, two (2) corner red LED modules, and two (2) forward-facing white LED modules. The light bar shall have all clear outer lenses. The light bar shall be installed on the cab roof each with two (2) MK8H 5" cast aluminum risers. <p><u>LOWER-LEVEL WARNING DEVICES</u></p> <p>The lower level shall be divided into zones A (front), B (officer's side), C (rear), and D (driver's side).</p>		

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	Yes	No
<p>Zone A (front) shall have a stainless-steel warning light housing each side.</p> <ul style="list-style-type: none"> One (1) Whelen 600 Super LED light (inboard position) and one (1) Whelen RotaBeam beacon (outboard position) mounted in the front of each housing. Two (2) Whelen M7 series LED warning lights mounted (one below each windshield). Red/White split LED colors with clear lens. <p>Zone B (officer's side) shall have:</p> <ul style="list-style-type: none"> One (1) Whelen 600 Series Super LED lights mounted one on the side of the headlight housing. One (1) Whelen 600 Series Super red LED light mounted above the front wheel well. One (1) Whelen ION T-Series TLI* Super LED warning light at the rear of the body in the rub rail. <p>Zone C (rear) shall have:</p> <ul style="list-style-type: none"> Two (2) 600 series rec LED warning lights mounted one each side of the rear of the apparatus. <p>Zone D (driver's side) shall have:</p> <ul style="list-style-type: none"> One (1) Whelen 600 Series Super LED lights mounted one on the side of the headlight housing. One (1) Whelen 600 Series Super red LED light mounted above the front wheel well. One (1) Whelen ION T-Series TLI* Super LED warning light at the rear of the body in the rub rail. <p><u>TRAFFIC ADVISOR</u></p> <p>A Whelen LED TAL65 Traffic Advisor with a TACTRL1 Control Head shall be provided. The low-profile Traffic Advisor is approximately 1-1/2" high x 2-1/2" deep x 36" long. The six (6) LED lamp group is in a cap style extruded aluminum housing with black powder painted finish and surface mounted to eliminate large body panel cutouts. The high intensity LED's are rated for over 100,000 hours of operation and have extremely low current consumption. The Control Head has a four-function rotary switch for selection of: center to left, center to right, center to left and right, or flash patterns. The dip switch on the rear panel selects the choice of eight (8) different programmable flash patterns. The Control Head features a visual LED status display. To be mounted on highest point of rear of apparatus spanning hose bed enclosed in diamond plate.</p> <p><u>BROW MOUNTED LED SCENE LIGHT</u></p> <p>One (1) FireTech 72" 3-piece FT-B-72-ML-3PKIT-* brow mounted LED scene lights shall be provided. The lamp head shall operate at 12 volts DC, draw 23.8 amps, and generate over</p>		

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	Yes	No
<p>30,000 lumens of light. The light shall be mounted at the front brow of the cab and shall be controlled from a switch in the cab. All custom mounting brackets shall be supplied by OEM.</p> <p><u>SURFACE MOUNTED LED SCENE LIGHT</u></p> <p>A total of four (4) Whelen PCPSM2* surface mounted LED scene lights shall be provided. The lamp head shall operate at 12 volts DC, draw 12 amps, and generate 16,000 lumens of light. The light shall be mounted in the following locations and shall be controlled from switches in the cab.</p> <ul style="list-style-type: none"> • One (1) mounted on the upper body (driver's side) in the middle. • One (1) mounted on the upper body (officer's side) in the middle. • Two (2) mounted in the area of the raised roof on the side of the cab (one each side). <p><u>SCENE LIGHTS</u></p> <p>A pair of Whelen 900 series LED scene lights shall be installed on the rear of the body, below the warning lights. These lights shall also activate when the transmission is placed into reverse to add additional lighting when backing up.</p> <p><u>ADDITIONAL 3-WAY SWITCH</u></p> <p>Four (4) additional 3-way switches shall be provided on the driver's side pump panel. They shall control the following:</p> <ul style="list-style-type: none"> • Officer's side cab and body scene lights • Driver's side cab and body scene lights • Rear body scene lights • Air horn activation <p><u>WHELEN LIFE SERIES LED LIGHTING</u></p> <p>Two (2) Whelen LiFE (TM) portable scene light with charger shall be provided and mounted in a body compartment as directed by the fire department. Location will be determined at the pre-construction meeting.</p> <p><u>LIGHT TOWER</u></p> <p>Command light kl series model kl415a-w2 Whelen pioneer plus pfp2 to be mounted in dunnage area.</p> <p><u>CORROSION REDUCTION POLICY</u></p> <p>The manufacturer shall have in place a formal corrosion reduction program and assembly procedures designed for reducing and eliminating the possibility of corrosion. It is understood that fire apparatus will operate in harsh environments. At the time of the bid the apparatus manufacturer shall show proof of a corrosion policy.</p>		

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**Bidder
Complies**

Yes No

Frame Rails

The chassis frame rails shall be preferably hot dipped galvanized

Electro Plating

Steel and iron brackets such as the pump module bracket shall be Zinc plated to protect against corrosion. Plating shall be in accordance with ASTM B663. The apparatus manufacturer shall list all components with plating.

Fasteners

In any area that a stainless-steel screw or bolt head is to come in contact with aluminum or steel, painted or non-painted, the fastener shall have the underside of the head pre-coated with nylon. The nylon coating shall act as a barrier between the fastener head and the metal or painted surface. Screw or bolt taped into the metal shall be pre-coated with a Threadlocker type material pre-applied on the threads. When bolting together stainless steel the manufacturer shall use a pan-head bolt with nylon coating under the head, a stainless washer with a rubber backing, and a Stover flange nut to secure the bolt. When mounting aluminum components such as a step to the apparatus body. The manufacturer shall use stainless washers with rubber backing. All mounted components shall have a barrier material between the two surfaces. All rivet type fasteners shall be of the same material being secured.

Whenever possible, pre-drill and tap all holes for mounting components such as lights, steps and handrails prior to the paint process to reduce the corrosion opportunity. If a hole must be drilled into a previously painted surface, re-establish the paint barrier around the hole and use a flange type nutsert with a gasket under the flange. Where possible, minimize the number of stainless trim screws in aluminum. Structural tape and or adhesive shall be used where possible for mounting trim to the body or cab. If a pre-treated screw or bolt is not available, hand apply Dynatex Boltlocker or Threadlocker on the threads of the screw, bolt or nutsert. This will help seal threads from moisture and help prevent the fasteners from loosening.

If lubricant is used when tapping the hole, clean out the lubricant and the shavings before applying blue Threadlocker into the hole.

Barrier Tape

Barrier tape shall be used on the backsides of all lights, trim pieces, or other components when bolting them to the apparatus; also when attaching stainless steel over an aluminum surface or when attaching aluminum treadplate to the stainless steel. All instances of dissimilar metals contacting each other require the addition of barrier tape between the metals where contact is made. Before applying the tape, be sure the metal surface is clean from oil or dirt by cleaning the surface with a 50/50 mix of alcohol and water or similar solvent.

Gaskets

Gaskets shall be used under all snaps, loops, and fasteners for such items as for hose bed covers. Reestablish paint seal around the mounting hole edges after drilling. Mounting with Threadlocker coating shall be used. Flat washers with rubber backing shall be used behind all lights that have stainless screws.

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**Bidder
Complies**

Yes No

Hinged Doors

Barrier tape shall be applied to the painted surface of the body and on the painted hinge side of the door. On the hinge side, mount tape out toward the edge to space over the barrel of the hinge, being sure to not touch the door. Make sure the hinge fits into the extrusion frame with no corner weld beads interfering with the door fit. Do not put the hinge in a bind or cause the stainless-steel hinge to touch the aluminum. Install the doors using a truss head bolt with the nylon coating under the head and threadlocker on the threads.

Painting Steel

The manufacturer shall wipe any oil residue dry, remove any rust and remove weld slag or smoke. Clean the surface with solvent before painting. Prime with epoxy primer followed by a urethane primer, and then spray a topcoat over the primer for the finish coat. After bolts are tightened to the proper torque, touch up the bolt area and ends of the bolts with primer or cold galvanizing coating.

Mounting Emergency Lights and Options

All emergency lights, accessory mountings, Kussmaul covers, and 110 outlet boxes mounted to the body should be mounted with pre-coated Threadlocker and nylon under the head screws or bolts to minimize corrosion between dissimilar metals.

Electrical Grounding

Grounding straps shall be installed consisting of a minimum 2-gauge strap bolted to the chassis frame. A ground cable from the cab to the right-side frame rail from the alternator to the right-side frame rail from the pump module frame to the right-side truck frame. From the pump mount to the truck frame rail. From the body module to the right-side truck frame. Proper grounding will help eliminate ground loop problems throughout the truck, reducing the possibility for electrolysis and corrosion to occur. Provide clean connection points on all ground connections, and spray or brush on electrical sealer as necessary.

When installing foam system pump wiring the power must come from a dedicated breaker to a power solenoid, and then to the power terminal provided by FoamLogix or FoamPro. Pay particular attention to the grounding detail for wire size and good grounding practice, including removing the paint at the point of ground attachment to the chassis. Keep the length of ground wire as short as practically possible.

SALT SPRAY TESTING

Salt spray test shall be used to confirm the relative resistance to corrosion of coated and uncoated metallic specimens, when exposed to a salt spray climate at an elevated temperature. Test specimens shall be placed in an enclosed chamber and exposed to a continuous indirect spray of neutral (pH 6.5 to 7.2) salt water solution, which falls-out on to the specimens at a rate of 1.0 to 2.0 ml/80cm²/hour, in a chamber temperature of +35C. This climate shall be maintained under constant steady state conditions.

PAINTING

All exposed metal surfaces not chrome plated, polished stainless steel or bright aluminum tread plate shall be thoroughly cleaned and prepared for painting. ANY Area that needs leveling with plastic filler MUST be etched and primed with an epoxy primer PRIOR to application of filler All irregularities in painted surfaces shall be rubbed down and all seams shall be caulked before the application of the finish coat. **NO EXCEPTIONS.**

<div> <div>SOUTH FIRE DISTRICT</div> <div>CUSTOM FIRE RESCUE / PUMPER</div> </div>	Bidder Complies	
	Yes	No
<p>All removable items such as brackets, compartment doors, door hinges, trim, etc. shall be removed and painted separately to insure finish paint behind all mounted items. Body assemblies that cannot be finish painted after assembly shall be finish painted before assembly. Both aluminum and steel surfaces to be painted shall be epoxy primed with a two (2)-component primer, followed by a urethane primer for leveling which is compatible with the finish coat. The apparatus shall be finish painted with a polyurethane base/clear system. NO EXCEPTIONS.</p> <p>A barrier gasket/washer of "High Density Closed Cell Urethane Foam" shall be used behind all lights, handrails, door hardware and any miscellaneous items such as stainless-steel snaps, hooks, washers, and acorn nuts. The gaskets/washers shall be coated with pressure sensitive acrylic adhesive. All screws used to penetrate painted surfaces shall be pre-treated/coated under the head with nylon and the threads shall have pre-coat #80. This procedure shall be strictly adhered to for corrosion prevention and damage to the finish painted surfaces.</p> <p>The following paint process shall be utilized:</p> <p>Surface Preparation:</p> <ol style="list-style-type: none"> 1. Wash surface thoroughly with mild detergent. 2. Clean and de-grease with Prep-Sol 3812S. 3. Sand and feather edge using 400 grit or finer on a dual action sander. 4. Remove sanding dust with a cleaner compatible with polyurethane base coat/clear coat final finish. <p>Substrate treatment:</p> <ol style="list-style-type: none"> 1. Use a metal conditioner followed with a conversion coating product. <p>Priming:</p> <ol style="list-style-type: none"> 1. Use a self-etching pretreatment. 2. Use an epoxy primer applied to achieve a 1.5 mil dft minimum. 3. Use 2-part urethane primer to level surface compatible with polyurethane base coat. <p>Color Coat:</p> <ol style="list-style-type: none"> 1. Apply polyurethane base coat 1-2 mil dft minimum. <p>Clear coat:</p> <ol style="list-style-type: none"> 1. Apply polyurethane clear coat 2 mil dft minimum. <p><u>PAINT TWO TONE</u></p> <p>The cab shall be two (2) colors. The placement of the paint break shall be determined at the pre-construction meeting.</p> <ul style="list-style-type: none"> • The upper color shall be white. • The lower color shall be red. <p>The South Fire District shall provide the make and paint code of an existing truck to match the fleet.</p>		

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<p><u>PAINTED FRAME</u></p> <p>The frame rails shall be painted glossy black.</p> <p><u>AIR CONDITIONING CONDENSER</u></p> <p>The air conditioning condenser shall be painted to match the cab roof.</p> <p><u>UNDERCOATING</u></p> <p>Ziebart, or equal, undercoating shall be applied to visible surfaces on the underside of the truck body and chassis to help reduce noise in the cab caused by tires, stones, sand, and water spray. This thick, super-tough coating, being highly abrasion-resistant does not wear off. It also protects underbody components from moisture, mud, and salt.</p> <p><u>ZIEBART WARRANTY</u></p> <p>The application will come with Ziebart's ten (10) year rust protection limited warranty.</p> <p><u>GRAPHICS AND STRIPING</u></p> <p>Graphics and striping shall match the existing South Fire Districts fleet. A lettering and graphics approval layout shall be provided to the department prior to installation. American flag painted on cab.</p> <p><u>CHEVRON STRIPING, REAR BODY OUTBOARD, ORAFOL REFLEXITE</u></p> <p>The apparatus shall have 6" red and yellow reflective Orafol Reflexite Chevron style striping affixed to the outboard rear body panels. The striping will be set in a manner to have the effect of an inverted "V" shape. The stripe will travel low to high from the outside to the inside.</p> <p><u>MISCELLANEOUS EQUIPMENT FURNISHED</u></p> <ul style="list-style-type: none"> ➤ 1 pt. touch-up paint ➤ A bag of stainless-steel nuts and bolts, as used in the construction of the apparatus. <p><u>WHEEL CHOCKS</u></p> <p>Two (2) Ziamatic #SAC-44 folding wheel chocks with SQCH-44H holders shall be provided. The wheel chocks shall be mounted as determined at the pre-construction conference.</p> <p><u>PIKE POLE & FOLDING LADDER COMPARTMENT</u></p> <p>A compartment shall be provided behind the right side upper compartments above the ladder storage compartment. The compartment shall have three (3) tubes to accommodate 2 6ft ny hooks and 1 8ft pike pole in an enclosed chute for the 10' folding ladder.</p> <p>A smooth aluminum door with chevron striping and 1/4-turn latch shall enclose the ladders at the rear.</p>		

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<p><u>HOOKS</u></p> <ul style="list-style-type: none"> Two (2) Fire Hooks Unlimited 6-foot all-purpose hooks shall be provided. One (1) Fire Hooks Unlimited 8-foot all-purpose hook shall be provided. <p><u>OPERATION AND SERVICE MANUALS</u></p> <p>Complete "Operation and Service" manuals shall be supplied with the completed apparatus, one (1) printed copy and one (1) CD. Service manual instructions shall include service, maintenance, and troubleshooting for major and minor components of the truck. The apparatus manufacturer shall supply part numbers for major components (i.e. Engine, Axles, Transmission, Pump, etc.). A table of contents, hydraulic, air brake, and overall apparatus wiring schematics shall be included.</p> <p>A video demonstration USB/DVD on the operation of the truck shall be supplied with the manuals.</p> <p><u>WARRANTIES</u></p> <p>The following warranties shall be supplied:</p> <ol style="list-style-type: none"> The apparatus shall be warranted to be free from mechanical defects in workmanship for a period of two (2) years or 30,000 miles, whichever comes first. The apparatus shall be covered for parts and labor costs associated with repairs for a period two (2) years or 30,000 miles, whichever comes first. Life-time warranty on the frame and crossmembers. <u>NO EXCEPTIONS.</u> Ten (10) year (non-prorated) warranty on paint. Twenty (20) year body structural warranty. Ten (10) year cab structural warranty. Ten (10) year warranty on plumbing. Manufacturers warranties for all major components. Ten (10) year warranty on electrical wiring <p>Detailed warranty documents shall be included for complete coverage on each of these warranties.</p> <p><u>MANUFACTURING & LOCATIONS</u></p> <p>The apparatus will be manufactured in facilities wholly owned and operated by the company. A complete stock of service parts, and service shall be provided on 24 hours around the clock basis. The company shall maintain parts and service for a minimum period of twenty (20) years on each apparatus model manufactured.</p>		

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<p><u>CONTINGENCY ACCOUNT</u></p> <p>The following items will be contained in a contingency account for use later in the build.</p> <ul style="list-style-type: none">• \$2,000.00 for radio equipment (antennas, antenna bases, radio faces etc.).• \$50,000.00 for misc. purchases of equipment for the new apparatus.• \$5000 for tool mounting. <p><u>OPTIONAL EQUIPMENT</u></p> <p>Provide a price for the following items:</p> <p>1. PORTABLE WINCH</p> <p>A Ramsey 8000-lb Quick Mount 12V DC portable winch with hitch adaptor shall be provided for attachment to vehicle winch receivers. The winch shall include 95-ft of 0.3125" wire rope, 12-ft tether with remote, 3-stage planetary gear-train and a 12V/5.5 electric motor.</p> <p>The Ramsey Hitch Adaptor shall be capable of connecting to a 2" Class III Receiver. When mounted on the apparatus, the max capacity shall be 5,000-lbs.</p> <p>PRICE: _____</p>		