

Vehicle Specifications

2000 GPM Pumper Specifications



Summerville Fire Department

Prepared by: Roger Wnek

INVITATION TO BID

Sealed bids will be received by the Town of Summerville Purchasing Agent until 10:00 a.m. on Friday, December 28, 2018 at which time the bids will be publicly opened and read. Opening will be held in the 2nd floor training room located at Town Hall Annex, 200 S. Main Street, Summerville, SC 29483.

Bids will be for the purpose of furnishing the Town of Summerville with two (2) new 2000 GPM Pumper Engine Package. A copy of the instructions to bidders is posted on the Town's website www.summervillesc.gov, or you may e-mail mbeltz@summervillesc.gov to request the package.

The Town of Summerville reserves the right to reject any and all bids, to waive any informality and to award the contract, as it appears to be in the best interest of the Town of Summerville. The right is also reserved to hold any and all bids for a period not exceeding sixty (60) days from the opening thereof.

Questions concerning the equipment specifications may be directed to:

*Roger Wnek, Maintenance Coordinator, Summerville Fire Department
(843) 864-4544

*Daniel Corbin, Maintenance Director, Town of Summerville
(843) 851-4117

All bids must be submitted to:

Michelle Beltz
The Town of Summerville
200 South Main Street
Summerville, SC 29483

With the package marked as "2000 GPM Pumper Specifications"

INTENT OF SPECIFICATIONS

It shall be the intent of these specifications to cover the furnishing and delivery of a complete fire apparatus. These detailed specifications cover the requirements as to the type of construction, finish, equipment and tests to which the fire apparatus shall conform. Minor details of construction and materials, which are not otherwise specified, are left to the discretion of the contractor.

Images and illustrative material in this specification are as accurate as known at the time of publication, but are subject to change without notice. Images and illustrative material are for reference only, and may include optional equipment and accessories and may not include all standard equipment.

INSTRUCTIONS TO BIDDERS

The purchaser's standards for bidding automotive fire apparatus must be strictly adhered to, and all bid forms and questions must be complete and submitted with the bid. Omissions and variations shall result in immediate rejection of the bid.

Bids shall only be considered from companies that have an established reputation in the field of fire apparatus construction and have been in business for a minimum of 20 years. Furthermore, in order to insure fair, ethical, and legal competition, neither the original equipment manufacturer (O.E.M.) nor parent company of the O.E.M. shall have ever been fined or convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market (no exception).

If a bidder represents more than one fire apparatus company or brands of apparatus, they must only bid the top of the line that meets specification.

Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified.

Any apparatus manufacturer or their parent company who has had a performance bond called in the last 10 years, shall not be eligible to bid. Any bids from these manufactures shall be immediately rejected. (no exception)

Each bid shall be accompanied by a set of manufacturer's set of specifications consisting of a detailed description of the apparatus, construction methods, and equipment proposed to which the apparatus furnished under contract shall conform. These specifications shall indicate size, type, model and make of all component's parts and equipment, providing proof of compliance with each and every item in the departments advertised specifications. A letter only, even though written on company letterhead, shall not be sufficient. An exception to this requirement shall not be acceptable. The bidder shall provide five (5) copies of the proposed apparatus specifications, and the same amount of copies of the proposed apparatus overall drawing.

In accordance with the current edition of NFPA 1901 standards, the proposal shall specify whether the fire department or apparatus dealership shall provide required loose equipment.

The purchaser will utilize this advertised specification to compare all submitted bid proposals. To facilitate comparison, all bid proposal specifications shall be submitted in the same sequence as the advertised

specification. Any bidder who fails to submit a set of bid proposal specifications, or who photo copies and submits these specifications as their own construction details will be considered non-responsive. This shall render such proposal ineligible for award.

The purchaser's specification shall, in all cases, govern the construction of the apparatus, unless a properly documented exception or deviation was approved. Any bid indicating that the manufacturer's proposal shall supersede the purchaser's specification will be considered a complete substitute and immediately rejected.

Each bidder **WILL** supply a component pricing list for the unit being bided along with a breakdown of loose equipment pricing for the proposed apparatus.

THE PURCHASER HAS THE RIGHT TO REJECT ANY BIDS WHICH DOES NOT MEET THESE SPECIFICATIONS AND IS THE SOLE DECIDER TO DEEM WHICH BID IS IN THE BEST INTEREST OF THE PURCHASER.

EXCEPTIONS

These specifications are based upon design and performance criteria which have been developed by the fire department as a result of extensive research and careful analysis. Subsequently these specifications reflect the only type of fire apparatus that is acceptable at this time and all specifications herein contained are considered as minimum. Therefore, exceptions to the specifications may not be accepted.

Bidders shall indicate in the "yes/no" column if their bid complies on each item (paragraph) specified.

If a product brand name is specified and is commercially available to all bidders, an exception to such items is not acceptable and such bid may be rejected.

Exceptions shall be allowed if they are equal to or superior to that specified and provided, they are listed and fully explained on a separate page. All deviations, no matter how slight, shall be clearly explained on a separate sheet, in the bid sequence, citing the page and paragraph number(s) of the specifications, how the proposal deviation is different, how the deviation meets or exceeds the specifications and why it is necessary, and entitled "EXCEPTIONS TO SPECIFICATIONS". The buyer reserves the right to require a bidder to provide proof in each case that a substituted item is equal to that specified. The buyer shall be the sole judge in determination of acceptable substitutes.

Proposals that are found to have deviations without listing them or bids taking total exceptions to these advertised specifications will be rejected. (no exceptions)

Bids, not including all exceptions, are a material breach and shall result in the bid being immediately rejected. (no exceptions)

GENERAL DESIGN AND CONSTRUCTION

The cab, chassis, pump module and body are to be entirely designed, assembled and painted by the prime

vehicle manufacturer, which minimizes third party involvement on engineering, design, service and warranty issues.

All bidders shall provide a list of the company, manufacturing location and engineering source for each individual major component, including but not limited to the welded cab assembly, the pump house module assembly, the chassis assembly, body and electrical system. Apparatus using any subcontracted cab, chassis, pump module, electrical system or body will not be acceptable.

The apparatus shall be designed with due consideration to distribution of load between the front and rear axles. Weight balance and distribution shall be in accordance with the recommendations of the National Fire Protection Association.

The bidder shall make accurate statements as to the apparatus weight and dimensions.

COMPLY_____ EXCEPTION_____

QUALITY AND WORKMANSHIP

All steel welding shall follow American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding shall follow American Welding Society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding shall follow American Welding Society B2.1-2000 requirements for structural welding of sheet metal. Flux core arc welding to use alloy rods, type 7000, American Welding Society Standards A5.20-E70T1. Employees classified as welders are tested and certified to meet the American Welding Society codes upon hire and every three (3) years thereafter. The manufacturer shall be required to have an American Welding Society certified welding inspector in plant during working hours to monitor weld quality.

The manufacturer shall also be certified to operate a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International organization for Standardization (ISO) specify the quality systems that shall be established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance shall be included with the bid.

To demonstrate the quality of the product and service, each bidder shall provide a list of at least ten (10) fire departments/municipalities in the region that have bought a second time from the representing dealer. An exception to this requirement shall not be acceptable.

COMPLY_____ EXCEPTION_____

DELIVERY

Apparatus, to insure proper break in of all components while still under warranty, shall be delivered under its own power - rail or truck freight shall not be acceptable. A qualified delivery representative shall deliver the

apparatus and remain for a sufficient length of time to instruct personnel in proper operation, care and maintenance of the equipment delivered.

COMPLY_____ EXCEPTION_____

MANUALS AND SERVICE INFORMATION

The manufacturer shall supply at time of delivery, **two (2) complete operation, service, and parts manuals covering the complete apparatus as delivered.** A permanent plate shall be mounted in the driver's compartment which specifies the quantity and type of fluid required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.

COMPLY_____ EXCEPTION_____

SAFETY VIDEO

Since video is much more effective than written documentation and can be replayed for new personnel and as a refresher for existing personnel, an apparatus safety video, in DVD format shall be provided at time of delivery. This video shall address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus. Safety procedures for the following shall be included on the video: vehicle pre-trip inspection, chassis operation, pump operation and maintenance.

COMPLY_____ EXCEPTION_____

PERFORMANCE TESTS AND REQUIREMENTS

A road test shall be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts and rear axle shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. Vehicle shall adhere to the following parameters:

- The apparatus, when fully equipped and loaded, shall have not less than 25 percent nor more than 50 percent of the weight on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle.
- The apparatus shall be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine.
- The service brakes shall be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway. The air brake system shall conform to Federal Motor Vehicle Safety Standards (FMVSS) 121.

- The apparatus, fully loaded, shall be capable of obtaining a speed of 50 mph on a level concrete highway with the engine not exceeding the governed rpm (full load).

COMPLY_____ EXCEPTION_____

FAILURE TO MEET TEST

In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the bidder within 30 days of the date of the first trial. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the bidder of such changes, shall also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser or its use by the purchaser during the above-specified period with the permission of the bidder shall not constitute acceptance.

SERVICE AND WARRANTY SUPPORT (DEALERSHIP)

TO INSURE FULL SERVICE AFTER DELIVERY, THE SELLING BIDDER/DEALERSHIP MUST BE CAPABLE OF PROVIDING SERVICE WHEN REQUIRED.

The bidder/dealership shall show that the company is in position to render prompt service and to furnish replacement parts.

Each bidder/dealership must be able to display that they are actively in the fire apparatus service business by operating a factory authorized service center and parts repository capable of satisfying the warranty service requirements and parts requirements of the vehicle(s) being purchased.

The bidder/dealership must state the location of this authorized service center. This service center must have a staff of factory-trained mechanics, well versed in all aspects of service for all major components of the apparatus. The service center must be within one hundred (100) miles of the Fire Department.

COMPLY_____ EXCEPTION_____

SERVICE AND WARRANTY SUPPORT (MANUFACTURER)

To provide an additional layer of service support, the successful manufacturer must also own a service center to service the southern United States.

The manufacturer shall stock 1 million parts equating to \$5,000,000 of inventory dedicated to service and replacement parts to ensure quick response and minimize down time. Furthermore, the manufacturer shall house the inventory in a dedicated facility, with a dedicated shipping area that ensures service parts are given priority. The bidder shall provide detailed documentation of service and replacement part resources.

Parts identification shall be provided to both the dealer and the Fire Department through an online web-based application for the specific truck reflected in this specification. Access will be granted using the specific VIN number of the vehicle. The online web application will provide the ability to view complete bills of materials, digital photographs, parts drawings, assembly drawings and access to all current operation, maintenance and service publications.

The manufacturer must also maintain a 24 hour/7 day a week, toll free emergency hot line.

The manufacturer shall employ a staff of adequate size (a minimum of 30 personnel) specifically dedicated to providing customer support and parts for the fielded fleet of vehicles it has produced.

The manufacturer must be capable of providing both in-house and on-site service for the apparatus.

The manufacturer shall offer regional factory hands-on repair and maintenance training classes.

The manufacturer shall employ a minimum of four certified EVT technicians on staff, not only providing technical expertise in the repair of fire apparatus, but also demonstrating the commitment to service after the sale.

COMPLY_____ EXCEPTION_____

LIABILITY

The successful bidder shall defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract. To ensure this will occur, the bidder shall carry the following minimum insurance.

COMPLY_____ EXCEPTION_____

COMMERCIAL GENERAL LIABILITY INSURANCE

The successful bidder shall, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence: \$1,000,000

Products/Completed Operations Aggregate: \$1,000,000

Personal and Advertising Injury: \$1,000,000

General Aggregate: \$5,000,000

Coverage shall be written on a Commercial General Liability form. The policy shall be written on an occurrence form and shall include Contractual Liability coverage for bodily injury and property damage subject to the terms

and conditions of the policy. The policy shall include Owner as an additional insured when required by written contract.

COMPLY_____ EXCEPTION_____

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

The successful bidder shall, during the performance of the contract keep in force at least the following minimum limits of commercial automobile liability insurance:

Each Accident Combined Single Limit: \$1,000,000

Coverage shall be written on a Commercial Automobile liability form.

COMPLY_____ EXCEPTION_____

UMBRELLA/EXCESS LIABILITY INSURANCE

The successful bidder shall, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Aggregate: \$25,000,000

Each Occurrence: \$25,000,000

The umbrella policy shall be written on an occurrence basis and at a minimum provide excess to the Bidder's General Liability, Automobile Liability and Employer's Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage shall be provided by a carrier(s) rated A- or better by A.M. Bests.

All policies shall provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance shall provide the following cancellation clause: Should any of the above described policies be cancelled before the expiration date thereof, notice shall be delivered in accordance with the policy provisions. Bidder agrees to furnish owner with a current Certificate of Insurance with the coverage listed above along with its bid. The certificate shall show the purchaser as certificate holder.

COMPLY_____ EXCEPTION_____

SINGLE SOURCE MANUFACTURER

Bids shall only be accepted from a single source apparatus manufacturer. The definition of single source is a manufacturer that designs and manufactures their products using an integrated approach, including the chassis, cab weldment, cab, pump house (including the sheet metal enclosure, valve controls, piping and operator’s panel) and body being designed, fabricated, and assembled on the bidder's premises. The electrical system (hardwire or multiplex) shall be both designed and integrated by the same apparatus manufacturer. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) must be from a single source manufacturer and not split between manufacturers (i.e. body, pump house, cab weldment and chassis). The bidder shall provide evidence that they comply with this requirement.

The bidder shall state the location of the factory where the apparatus is to be built.

COMPLY_____ EXCEPTION_____

NFPA COMPLIANCY

Apparatus proposed by the bidder shall meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in the current edition at time of contract execution. Fire Department's specifications that differ from NFPA specifications shall be indicated in the proposal as "non-NFPA."

COMPLY_____ EXCEPTION_____

PUMP TEST

The rated water pump shall be tested, approved and certified by an ISO certified independent third-party testing agency at the manufacturer's expense. The test results, along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horsepower curve, and the manufacturer's record of pump construction details shall be forwarded to the Fire Department.

COMPLY_____ EXCEPTION_____

GENERATOR TEST

If the unit has a generator, the generator shall be tested, approved and certified by an ISO certified independent third-party testing agency at the manufacturer's expense. The test results shall be provided to the Fire Department at the time of delivery.

COMPLY_____ EXCEPTION_____

BID BOND

All bidders shall provide a bid bond as security for the bid in the form of a 10% bid bond to accompany their bid. This bid bond shall be issued by a Surety Company who is listed on the U.S. Treasury Department’s list of acceptable sureties as published in Department Circular 570. The bid bond shall be issued by an authorized representative of the Surety Company and shall be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond shall include language, which assures that the bidder/principal shall give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.

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

If the successful bidder does not manufacture the chassis, the bidder shall supply a warranty bond, in addition to their performance bond, along with their signed contract. This warranty bond shall guarantee all terms and conditions of the Basic One (1) Year Limited Warranty and names both the bidder and chassis manufacturer as co-principals. This warranty bond shall be issued for the contract amount and shall remain in force for a term which is consistent with the term of the Basic One (1) Year Limited Warranty.

Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle shall apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle shall not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision shall prevail.

COMPLY _____ EXCEPTION _____

PERFORMANCE BOND, NOT REQUESTED

A performance bond shall not be included. If requested at a later date, one shall be provided to you for an additional cost and the following shall apply:

The successful bidder shall furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond shall be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required.

Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Bumper to Bumper warranty period included within this

proposal. Owner agrees that the penal amount of this bond shall be simultaneously amended to 25 percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type shall not exceed three (3) years from the date of such satisfactory acceptance and delivery, or the actual Bumper to Bumper warranty period, whichever is shorter.

COMPLY_____ EXCEPTION_____

APPROVAL DRAWING

A drawing of the proposed apparatus shall be provided for approval before construction begins. The sales representative shall also have a copy of the same drawing. The finalized and approved drawing shall become part of the contract documents. **This drawing shall indicate the chassis make and model, location of the lights, siren, horns, compartments, pump panel layout, major components, etc.**

A "revised" approval drawing of the apparatus shall be prepared and submitted by the manufacturer to the purchaser showing any changes made to the approval drawing.

COMPLY_____ EXCEPTION_____

ELECTRICAL WIRING DIAGRAMS

Two (2) electrical wiring diagrams, prepared for the model of chassis and body, shall be provided.

COMPLY_____ EXCEPTION_____

CONSTRUCTION PROGRESS PHOTOS

Weekly photographs of the apparatus or the major components as they are being constructed shall be provided. The photos shall commence at the beginning of the manufacturing process and shall continue until just prior to the final inspection. There shall be approximately six (6) weekly reports illustrating the progress of the apparatus through the course of each week. Special attention shall be given to show the unique features and aspects of the apparatus as construction progresses.

COMPLY_____ EXCEPTION_____

SOUTH CAROLINA DEALER LICENSE

Each bidder must provide with bid a valid and current copy of their South Carolina Dealer License as issued by

the South Carolina Department of Motor Vehicles. This license requirement is to assure the bidder is legally authorized to engage in the Sale of motor vehicles within the State of South Carolina.

COMPLY_____ EXCEPTION_____

SERVICE FACILITY

Each bidder must provide with bid proof of dealer owned and operated Service Facility with factory trained service personnel. Service personnel shall be factory trained to handle parts and warranty repair for their respective manufacturer. In addition, the Service Facility must have the capability to dispatch factory trained service technicians with dealer operated mobile service units to Department location for field service repairs. State the distance of from your closest service facility to 300 W. 2nd North Street_____. State the distance and time it would take a service truck to get to 300 W. 2nd North Street_____.

COMPLY_____ EXCEPTION_____

DEALER GARAGE LIABILITY

Bidder must provide at time of bid proof of dealer garage liability insurance with minimum coverage of \$1,000,000.00.

COMPLY_____ EXCEPTION_____

PRE-CONSTRUCTION TRIP

All bidders shall provide a Pre-Construction trip to the manufacturing facility for (5) Five Fire Department personnel. Travel expenses, meals, lodging shall be included.

COMPLY_____ EXCEPTION_____

FINAL INSPECTION

All bidder shall provide a Final Inspection trip to the manufacturing facility for (5) Five Fire Department personnel. Travel expenses, meals, lodging shall be included.

COMPLY_____ EXCEPTION_____

ORIENTATION TRAINING

There shall be one (1) class held at the Fire Department by a factory certified trainer. The class shall consist of basic orientation of the apparatus and shall last approximately 3 hours. The class shall cover basic operations of cab, chassis, pump, aerial and body components that are included on the new apparatus.

COMPLY_____ EXCEPTION_____

CHASSIS

Chassis provided shall be a new, tilt-type custom fire apparatus. The chassis shall be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis shall be designed and manufactured for heavy-duty service, with adequate strength and capacity for the intended load to be sustained and the type of service required.

COMPLY_____ EXCEPTION_____

PRINCIPAL APPARATUS DIMENSIONS & G.V.W.R.

- OVERALL LENGTH: No greater than 33ft. 0in.
- OVERALL HEIGHT: No greater than 10'-5"
- WHEELBASE: No great than 190"

State the axle and total weight ratings of the completed apparatus: _____

- MINIMUM FRONT G.A.W.R.: _____
- MINIMUM REAR G.A.W.R.: _____
- MINIMUM TRAILER G.A.W.R.: _____

The bidder will include the principal dimensions, front G.A.W.R., rear G.A.W.R., and total G.V.W.R. of the proposed apparatus. Additionally, the bidder will provide a weight distribution of the fully loaded, completed vehicle; this will include a filled water tank, specified hose load, miscellaneous equipment allowance in accordance with NFPA-1901 requirements, and an equivalent personnel load of 250 lbs. per seating position.

COMPLY_____ EXCEPTION_____

VEHICLE ELECTRICAL CAB, CHASSIS, BODY

The cab, chassis, pump module, and fire engine body will be point to point wiring, **NO EXCEPTIONS.**

FRAME

The chassis frame shall be built with two (2) steel channels bolted to four (4) cross members or more, depending on other options of the apparatus. The side rails shall be heat-treated. Any cross members within the area of the pump must be spaced out so that there will be enough room to service and remove a pump gearbox.

COMPLY_____ EXCEPTION_____

FRAME REINFORCEMENT

A full-length mainframe "C" liner shall be provided.

The liner shall be an internal "C" design, heat-treated steel. Each reinforcement member shall have a yield strength of 120,000 psi and resisting bending moment (rbm) of 938,762 in-lb.

COMPLY_____ EXCEPTION_____

FRONT AXLE

The front axle shall be a reverse "I" beam type with inclined king pins. It shall be a Meritor™ axle, Model FL-941, with a rated capacity of 18,000 lb.

COMPLY_____ EXCEPTION_____

FRONT SUSPENSION

The front springs shall be a three (3)-leaf, taper leaf design, with a ground rating of 18,000 lb.

The two (2) top leaves shall wrap the forward spring hanger pin. The top leaf shall also wrap the rear spring hanger pin. Both the front and rear eyes shall be Berlin style wraps that shall place the eyes in the horizontal plane within the main leaf. This shall reduce bending stress from acceleration and braking.

A steel encased rubber bushing shall be used in the spring eye. The steel encased rubber bushing shall be maintenance free and require no lubrication.

COMPLY_____ EXCEPTION_____

SHOCK ABSORBERS

Heavy-duty telescoping shock absorbers shall be provided on the front axle.

COMPLY_____ EXCEPTION_____

FRONT OIL SEALS

Oil seals with viewing window shall be provided on the front axle.

COMPLY_____ EXCEPTION_____

FRONT TIRES

Front tires shall be Goodyear 315/80R22.50 radials, 18 ply G291 tread **Duraseal** technology, rated for 18,180 lbs. maximum axle load and 75 mph maximum speed.

The tires shall be mounted on Alcoa 22.50" x 9.00" polished aluminum disc wheels with a ten (10)-stud, 11.25" bolt circle.

COMPLY_____ EXCEPTION_____

REAR AXLE

The rear axle shall be a Meritor™, Model RS-25-160, with a capacity of 27,000 lb.

COMPLY_____ EXCEPTION_____

TOP SPEED OF VEHICLE

A rear axle ratio shall be furnished to allow the vehicle to reach a top speed of 68 MPH.

COMPLY_____ EXCEPTION_____

REAR SUSPENSION

The rear suspension shall be 12-leaf pack with a ground rating of 27,000 lbs. The spring hangers shall be castings.

The two (2) top leaves shall wrap the forward spring hanger pin, and the rear of the spring shall be a slipper style end that shall ride in a rear slipper hanger. To reduce bending stress due to acceleration and braking, the front eye shall be a berlin eye that shall place the front spring pin in the horizontal plane within the main leaf.

A steel encased rubber bushing shall be used in the spring eye. The steel encased rubber bushing shall be maintenance free and require no lubrication.

COMPLY_____ EXCEPTION_____

REAR OIL SEALS

Oil seals shall be provided on the rear axle.

COMPLY_____ EXCEPTION_____

REAR TIRES

Rear tires shall be four (4) Goodyear 12R22.50 radials, 16 ply all season, load range H, all position, G751 MSA tread **Duraseal** technology, rated for 27,120 lbs. maximum axle load and 75 mph maximum speed.

The tires shall be mounted on Alcoa 22.50" x 8.25" polished aluminum disc wheels with a ten (10)-stud 11.25" bolt circle.

COMPLY_____ EXCEPTION_____

TIRE BALANCE

All tires shall be balanced with Counteract balancing beads. The beads shall be inserted into the tire and eliminate the need for wheel weights.

COMPLY_____ EXCEPTION_____

TIRE PRESSURE MANAGEMENT

There shall be a VECSAFE LED tire alert pressure management system provided that shall monitor each tire's pressure. A chrome plated brass sensor shall be provided on the valve stem of each tire for a total of six (6) tires.

The sensor shall calibrate to the tire pressure when installed on the valve stem for pressures between 20 and 120 psi. The sensor shall activate an integral battery-operated LED when the pressure of that tire drops eight (8) psi.

Removing the cap from the sensor shall indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED shall immediately start blinking.

COMPLY_____ EXCEPTION_____

HUB COVERS (FRONT)

Stainless steel hub covers shall be provided on the front axle. An oil level viewing window shall be provided.

COMPLY_____ EXCEPTION_____

HUB COVERS (REAR)

A pair of stainless-steel high-hat hub covers shall be provided on rear axle hubs.

COMPLY_____ EXCEPTION_____

CHROME LUG NUT COVERS

Chrome lug nut covers shall be supplied on front and rear wheels.

COMPLY_____ EXCEPTION_____

MUD FLAPS

Mud flaps shall be installed behind the front and rear wheels of the apparatus.

COMPLY_____ EXCEPTION_____

WHEEL CHOCKS, WHEEL CHOCK BRACKETS

Two (2) Zico Model SAC-44 wheel “chocks” with SQCH-44-V holders shall be furnished and installed. State the location of where the wheel chock holders will be mounted:

COMPLY_____ EXCEPTION_____

ANTI-LOCK BRAKE SYSTEM

The vehicle shall be equipped with a Wabco 4S4M, anti-lock braking system. The ABS shall provide a four (4) channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology shall control the anti-lock braking system. Each wheel shall be monitored by the system. When any particular wheel begins to lockup, a signal shall be sent to the control unit. This control unit then shall reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system shall eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.

COMPLY_____ EXCEPTION_____

BRAKES

The service brake system shall be full air type by Meritor™.

Front brakes shall be EX225 Disc Plus, disc type with automatic pad wear adjustment and 17.00" ventilated rotors for improved stopping distance.

The rear brakes shall be Meritor™, Disc Plus, Model EX225 disc operated with automatic slack adjusters and a 17.00" ventilated rotor for improved stopping distance.

COMPLY_____ EXCEPTION_____

AIR COMPRESSOR, BRAKE SYSTEM

The air compressor shall be a Cummins/Wabco with 18.7 cubic feet per minute output.

COMPLY_____ EXCEPTION_____

BRAKE SYSTEM

The brake system shall include:

- Bendix brake treadle valve with vinyl covered foot surface.
- Heated automatic moisture ejector on air dryer.
- Total air system minimum capacity of 4,272 cubic inches.
- Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi.
- Spring set parking brake system.
- Parking brake operated by a push-pull style control valve.

- A parking "brake on" indicator light on instrument panel
- Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, shall be provided with an automatic spring brake application at 40 psi
- A pressure protection valve to prevent all air operated accessories from drawing air from the air system **when the system pressure drops below 90 psi (550 kPa)**
- The air tank shall be primed and painted.
- To reduce the effects of corrosion, the air tank shall be mounted with stainless steel brackets. (no exception).
- Wabco System Saver 1200 IWT, air dryer with internal wet tank and spin-on coalescing filter cartridge
- 100-Watt Heater from preventing air lines from freezing in cold weather.

COMPLY_____ EXCEPTION_____

BRAKE LINES

Color-coded nylon brake lines shall be provided. The lines shall be wrapped in a heat protective loom where necessary in the chassis.

COMPLY_____ EXCEPTION_____

MANUAL MOISTURE EJECTOR(S)

One (1) manual moisture ejector shall be installed in the brake system.

The moisture ejector shall be remote mounted on the driver side of vehicle, as close to the edge of vehicle as possible.

A loop shall be provided at the moisture ejector, to allow for ease of pulling the drain.

Each moisture ejector shall have a label directly under the ejector, stating air tank drain.

Nylon tubing, .38" diameter, shall be routed from the air tank to the moisture ejector. The nylon tubing shall be covered with protective split loom.

The moisture ejector(s) shall be provided. Manual drains shall be installed on all reservoirs of the air brake system. All drains shall be extended to the driver side to the front of the apparatus body with stainless steel cables and located below the rub rail area. Please reference the picture for air tank drain location.



COMPLY_____ EXCEPTION_____

ENGINE

The chassis shall be powered by an electronically controlled engine as described below:

- Make: Cummins

- Model: ISL9
- Power: 450 hp. at 2100 rpm
- Torque: 1250 lb.-ft. at 1400 rpm
- Governed Speed: 2200 rpm
- Emissions Level: EPA 2013
- Fuel: Diesel
- Cylinders: Six (6)
- Displacement: 543 cubic inches (8.9L)
- Starter: Delco 39MT
- Fuel Filters: Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter.

Coolant Filter: Spin-on style with shut off valves on the supply and return line.

The engine shall include On-board diagnostics (OBD), which provides self-diagnostic and reporting. The system shall give the owner or repair technician access to state of health information for various vehicle sub systems. The system shall monitor vehicle systems, engine and after treatment. The system shall illuminate a malfunction indicator light on the dash console if a problem is detected.

Based upon availability from Cummins at the time of booking, either an EPA 2015 or an EPA 2016 compliant engine shall be provided.

COMPLY_____ EXCEPTION_____

HIGH IDLE

A high idle switch shall be provided, inside the cab, on the instrument panel, that shall automatically maintain a preset engine rpm. A switch shall be installed, at the cab instrument panel, for activation/deactivation.

The high idle shall be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light shall be provided, adjacent to the switch. The light shall illuminate when the above conditions are met. The light shall be labeled "OK to Engage High Idle."

COMPLY_____ EXCEPTION_____

ENGINE BRAKE

A Jacobs engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver.

The driver shall be able to turn the engine brake system on/off and have a high, medium and low setting.

The engine brake shall activate when the system is on and the throttle is released.

The high setting of the brake application shall activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine.

The engine brake shall be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated.

The ABS system shall automatically disengage the auxiliary braking device, when required.

COMPLY_____ EXCEPTION_____

CLUTCH FAN

A fan clutch shall be provided. The fan clutch shall be automatic when the pump transmission is in "Road" position, and constantly engaged when in "Pump" position.

COMPLY_____ EXCEPTION_____

ENGINE AIR INTAKE

The engine air intake shall be located above the engine cooling package. It shall draw fresh air from the front of the apparatus through the radiator grille.

A stainless-steel metal screen shall be installed at the inlet of the air intake system that shall meet NFPA 1901 requirements.

The air cleaner and stainless-steel screen shall be easily accessible by tilting the cab.

COMPLY_____ EXCEPTION_____

EXHAUST SYSTEM

The exhaust system shall be stainless steel from the turbo to the inlet of the selective catalytic reduction (SCR) device, and shall be 4.00" in diameter. The exhaust system shall include a diesel particulate filter (DPF) and an SCR device to meet current EPA standards. An insulation wrap shall be provided on all exhaust pipe between the turbo and SCR to minimize the transfer of heat to the cab. The exhaust shall terminate horizontally ahead of the passenger side rear wheels. A tailpipe diffuser shall be provided to reduce the temperature of the exhaust as it exits. Heat deflector shields shall be provided to isolate chassis and body components from the heat of the tailpipe diffuser.

COMPLY_____ EXCEPTION_____

EXHAUST MODIFICATION

The exhaust pipe shall be brought out from under the body at a 90-degree angle from the truck. The tail pipe shall extend a minimum of 2.00" past the body, adaptable for the Plymovent system. The diameter of the pipe shall be 6.00". There shall be a clearance of 4.00" completely around the pipe once past the side of the body. A Plymovent Magnetic Grabber conical shaped adapter shall be provided on the tail pipe that shall prevent the nozzle from sliding too far on. **The end of the Plymovent adapter must be flush with the edge of the rear body rubrail.** Please refer to the pictures shown below to match current Summerville Fire Department apparatus:



COMPLY _____ EXCEPTION _____

RADIATOR

The radiator and the complete cooling system shall meet or exceed NFPA and engine manufacturer cooling system standards. The cooling system capacity shall exceed all cooling requirements specified by the engine manufacturer under all truck operating conditions.

For maximum corrosion resistance and cooling performance, the entire radiator core shall be constructed using long life aluminum alloy. The radiator core shall consist of aluminum fins, having a serpentine design, brazed to aluminum tubes. No solder joints or leaded material of any kind shall be acceptable in the core assembly.

The radiator core shall have a minimum front area of 1060 square inches.

Supply and return tanks shall be made of heavy-duty glass-reinforced nylon that shall be crimped onto the core assembly using header tabs and a compression gasket to complete the radiator core assembly. There shall be a full steel frame around the inserts to enhance cooling system durability and reliability.

The radiator shall be compatible with commercial antifreeze solutions. The radiator assembly shall be isolated from the chassis frame rails with rubber isolators to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven terrain.

The radiator shall include a deaeration/expansion tank. For visual coolant level inspection, the radiator shall have a built-in sight glass. The radiator shall be equipped with a 15 psi pressure relief cap.

A drain port shall be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.

Shields or baffles shall be provided to prevent recirculation of hot air to the inlet side of the radiator.

COMPLY_____ EXCEPTION_____

COOLANT LINES

Silicone hoses shall be used for all engine/heater coolant lines installed by the chassis manufacturer.

Hose clamps shall be stainless steel constant torque type to prevent coolant leakage. They shall react to temperature changes in the cooling system and expand or contract accordingly while maintaining a constant clamping pressure on the hose.

COMPLY_____ EXCEPTION_____

FUEL TANK

A 65-gallon fuel tank shall be provided and mounted at the rear of the chassis. The tank shall be constructed of 12-gauge, hot rolled steel. It shall be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank shall be mounted with stainless steel straps. (no exception).

A .75" drain plug shall be provided in a low point of the tank for drainage.

A fill inlet shall be located on the left-hand side of the body and be covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only."

A .50" diameter vent shall be provided running from top of tank to just below fuel fill inlet.

The tank shall meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume.

All fuel lines shall be provided as recommended by the engine manufacturer.

COMPLY_____ EXCEPTION_____

DIESEL EXHAUST FLUID TANK

A 5-gallon diesel exhaust fluid (DEF) tank shall be provided and a fill inlet shall be provided and marked "Diesel Exhaust Fluid Only". The DEF tank cap shall be blue in color to further prevent cross contamination.

The tank shall meet the engine manufacturer's requirement for 10 percent expansion space in the event of tank freezing.

The tank shall include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.

COMPLY_____ EXCEPTION_____

FUEL COOLER

An air to fuel cooler shall be installed in the engine fuel return line.

COMPLY_____ EXCEPTION_____

TRANSMISSION

An Allison 5th generation, model EVS 3000P, electronic torque converting automatic transmission shall be provided.

The transmission shall be equipped with prognostics to monitor oil life, filter life, and transmission health. A wrench icon on the shift selector's digital display shall indicate when service is due.

Two (2) PTO openings shall be located on left side and top of converter housing (positions 4 o'clock and 8 o'clock).

A transmission temperature gauge with red light and audible alarm shall be installed on the cab dash.

COMPLY _____ EXCEPTION _____

TRANSMISSION SHIFTER

A five (5)-speed push button shift module shall be mounted to right of driver on console. Shift position indicator shall be indirectly lit for after dark operation.

The transmission ratio shall be 1st - 3.49 to 1.00, 2nd - 1.86 to 1.00, 3rd - 1.41 to 1.00, 4th - 1.00 to 1.00, 5th - 0.75 to 1.00, R - 5.03 to 1.00.

COMPLY _____ EXCEPTION _____

TRANSMISSION COOLER

A transmission oil cooler shall be provided using engine coolant to control the transmission oil temperature.

COMPLY _____ EXCEPTION _____

DRIVELINE

Drivelines shall be a heavy-duty metal tube and be equipped with Spicer 1710 universal joints.

The shafts shall be dynamically balanced before installation.

A splined slip joint shall be provided in each driveshaft.

COMPLY _____ EXCEPTION _____

STEERING

Steering gear with integral heavy-duty power steering, shall be provided. For reduced system temperatures, the power steering shall incorporate an air to oil cooler and hydraulic pump with integral pressure and flow control. All power steering lines shall have wire braided lines with crimped fittings.

A tilt and telescopic steering column shall be provided to improve fit for a broader range of driver configurations.

COMPLY_____ EXCEPTION_____

STEERING WHEEL

The steering wheel shall be 18.00" in diameter, have tilting and telescoping capabilities, and a two (2)-spoke design.

COMPLY_____ EXCEPTION_____

LOGO AND CUSTOMER DESIGNATION ON HORN BUTTON

The steering wheel shall have an emblem containing the fire apparatus manufacturer's logo and customer name. The emblem shall have three (3) rows of text for the customer's department name. There shall be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row.

The first row of text shall be: Summerville

The second row of text shall be: Fire

The third row of text shall be: Department

BUMPER

A one (1)-piece, polished stainless-steel bumper shall be attached to a bolted modular extension frame. The bumper shall be extended no greater than 30.00" from front face of cab. The bumper should have openings on each end so that hoselines can be deployed without lifting the hose tray lid. These openings should either have an aluminum diamond plate door on each end, or a Vinyl flap, or a cargo netting will be sufficient to prevent the hose and nozzles from falling out of the hose tray compartment. The front face of the bumper will be covered with alternating strips of reflective striping. The striping will be 6" Scotch-Lite. The Scotch-Lite will be Ruby Red and Lemon Yellow in color.

COMPLY_____ EXCEPTION_____

GRAVEL PAN

A gravel pan, constructed of bright aluminum tread plate, shall be furnished between the bumper and cab face. The gravel pan shall be properly supported from the underside to prevent flexing and vibration of the aluminum tread plate.

COMPLY_____ EXCEPTION_____

HOSE TRAY

A hose tray, constructed of aluminum, shall have a capacity of two 200' of 1.88" firequip combat master flow hose lines with nozzles. Drain holes are also to be provided.

COMPLY_____ EXCEPTION_____

HOSE TRAY COVER

A bright aluminum tread plate cover shall be provided over both hoselines.

COMPLY_____ EXCEPTION_____

AIR HORN SYSTEM

Two (2) Grover Stuttertone air horns part number 10008372 will be provided. The airhorns will be located One (1) each side just outside of the frame rails. A pressure protection valve will be installed in-line to prevent loss of air in the air brake system.

COMPLY_____ EXCEPTION_____

AIR HORN CONTROL

Two (2) lanyard rope pull controls will be provided, one (1) within reach of the driver and one (1) within reach of the officer.

COMPLY_____ EXCEPTION_____

TOW HOOKS

Two (2) chromed steel tow hooks shall be installed under the bumper and attached to the front frame members. The tow hooks shall be designed and positioned to allow up to a 6,000 pound straight horizontal pull in line with the centerline of the vehicle. The tow hooks shall not be used for lifting of the apparatus.

COMPLY_____ EXCEPTION_____

CAB

The cab shall be designed specifically for the fire service and manufactured by the chassis builder.

The cab shall be built by the apparatus manufacturer in a facility located on the manufacturer's premises to also include weldment. (no exception).

The cab shall be a minimum of 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability. The crew cab section shall have a 10.00" raised roof. Overall height listed shall be calculated based on a truck configuration with the lowest suspension weight rating, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension shall increase the overall height listed.

The crew cab shall be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.

The cab shall be a full tilt cab style.

A three (3)-point cab mount system with rubber isolators shall improve ride quality by isolating chassis vibrations from the cab.

COMPLY_____ EXCEPTION_____

INTERIOR CAB INSULATION

The cab shall include insulation in the ceiling, insulation in the side walls, and insulation in the rear wall to maximize acoustic absorption and thermal insulation.

COMPLY_____ EXCEPTION_____

FENDER LINERS

Full circular inner fender liners in the wheel wells shall be provided.

COMPLY_____ EXCEPTION_____

WINDSHIELD

A windshield shall be provided.

COMPLY_____ EXCEPTION_____

WINDSHIELD WIPERS

Windshield wipers with washer shall be provided that meet FMVSS and SAE requirements. The washer reservoir shall be able to be filled without raising the cab.

COMPLY _____ EXCEPTION _____

ENGINE TUNNEL

Engine hood side walls shall be constructed of aluminum. The top shall be constructed of aluminum and shall be tapered at the top to allow for more driver and passenger elbow room.

The engine hood shall be insulated for protection from heat and sound. The noise insulation keeps the dBA level within the limits stated in the current NFPA 1901 standards.

State the height of the engine tunnel off the crew cab floor:

COMPLY _____ EXCEPTION _____

CAB REAR WALL EXTERIOR COVERING

The exterior surface of the rear wall of the cab shall be overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered.

COMPLY _____ EXCEPTION _____

CAB LIFT

A hydraulic cab lift system shall be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves.

Hydraulic pump shall have a manual override for backup in the event of electrical failure.

Lift controls shall be located on the right-side pump panel or front area of the body in a convenient location.

The cab shall be capable of tilting 45 degrees to accommodate engine maintenance and removal.

The cab shall be locked down by a two (2)-point normally closed spring-loaded hook type latch that fully engages after the cab has been lowered. The system shall be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring-loaded latch mechanisms shall return to the normally closed and locked position.

For increased safety, a redundant mechanical stay arm shall be provided that must be manually put in place on the right side between the chassis and cab frame when the cab is in the raised position. This device shall be manually stowed to its original position before the cab can be lowered.

COMPLY_____ EXCEPTION_____

CAB LIFT TO PARKING BRAKE INTERLOCK

The cab lift system shall be interlocked to the parking brake. The cab tilt mechanism shall be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism shall be disabled.

COMPLY_____ EXCEPTION_____

GRILLE

A single piece polished stainless-steel grille and framework shall be provided on the front center of the cab.

COMPLY_____ EXCEPTION_____

DOOR JAMB SCUFFPLATES

All cab door jambs shall be furnished with a polished stainless steel scuffplate, mounted on the striker side of the jamb.

COMPLY_____ EXCEPTION_____

MOLDING (ON SIDES OF CAB)

Chrome molding shall be provided on both sides of cab.

COMPLY_____ EXCEPTION_____

MIRRORS

A Retrac Model 613423 dual vision, motorized, west coast style mirror, with chrome finish, shall be mounted on each side of the front cab door with spring loaded retractable arms. The flat glass and convex glass shall be heated and adjustable with remote control within reach of the driver.

COMPLY_____ EXCEPTION_____

MIRROR, BLIND SPOT

One (1) Velvac 8" diameter exterior blind spot mirror assembly shall be provided and mounted on the brow of the cab, officer's side.

COMPLY_____ EXCEPTION_____

DOORS

The crew cab doors shall be located on the sides of the cab and shall be constructed in the same manner as the forward cab doors.

The forward cab and crew cab doors shall be constructed of extruded aluminum.

A customized, vertical, pull-down type door handle shall be provided on the exterior of each cab door. The exterior handle shall be designed specifically for the fire service to prevent accidental activation.

Each door shall also be provided with an interior flush, open style paddle handle that shall be readily operable from fore and aft positions, and be designed to prevent accidental activation.

The cab doors shall be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The locks shall be capable of activating when the doors are open or closed. The doors shall remain locked if locks are activated when the doors are opened, then closed.

A full length, heavy duty, stainless steel, piano-type hinge with a pin and leaf shall be provided on all cab doors. There shall be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit.

A chrome handrail shall be provided on the inside of each front cab door for ease of entry.

The cab steps at each cab door location shall be located inside the cab doors to protect the steps from weather elements.

COMPLY_____ EXCEPTION_____

DOOR PANELS

The inner cab door panels shall be constructed out of brushed stainless steel.

COMPLY_____ EXCEPTION_____

MANUAL CAB DOOR WINDOWS

All cab entry doors shall contain a conventional roll down window.

COMPLY_____ EXCEPTION_____

CAB STEPS

The forward cab and crew cab access steps shall be a full size two (2) step design to provide largest possible stepping surfaces for safe ingress and egress. The bottom steps shall be a bolt-in design to minimize repair costs should they need to be replaced. A slip-resistant handrail shall be provided adjacent to each cab door opening to assist during cab ingress and egress. The vertical surfaces of the step well shall be aluminum tread plate.

COMPLY_____ EXCEPTION_____

STEP LIGHTS

There shall be six (6) white LED step lights installed for cab and crew cab access steps.

- One (1) light for the driver's access steps.
- Two (2) lights for the driver's side crew cab access steps.
- Two (2) lights for the passenger's side crew cab access steps.
- One (1) light for the passenger's side access step.

The lights shall be activated when the battery switch is on and the adjacent door is opened.

COMPLY_____ EXCEPTION_____

FENDER CROWNS

Stainless steel fender crowns shall be installed at the cab wheel openings.

COMPLY_____ EXCEPTION_____

CREW CAB WINDOWS

Two (2) fixed windows shall be provided on the sides of the cab, to the rear of the front cab doors. The windows shall be sized to enhance light penetration into the cab interior.

COMPLY_____ EXCEPTION_____

WINDOW TINT

Crew cab windows shall be tinted with 8 percent light transmission tint (shall block 92 percent of visible light). The following windows are included:

- Crew cab side windows
- Crew cab door, roll-up windows
- Top fixed window in crew cab doors
- Rear opera windows (If applicable)
- All windows in raised roof (If applicable)

COMPLY_____ EXCEPTION_____

WINDOW PROTECTOR BARS, CREW CAB DOORS

A knurled window protector bar shall be installed on each crew cab door, 2.00" above the bottom of the window opening. The bar shall extend from the front of the crew cab door to the rear of the crew cab door, mounted as close to the door frame as possible.

COMPLY_____ EXCEPTION_____

EXTERIOR CAB COMPARTMENTS

There shall be a compartment recessed in each side of the cab behind the rear doors. The driver's side compartment shall accommodate a Scot X3 Pro airpack and a set of firefighter turnout gear. Measurements of the airpack with turnout gear is as follows: 40" tall x 15" wide x 22" deep. Please refer to the picture below:



The compartments shall have hinged doors that are hinged at the front. The doors shall have a catch single point "D"-ring door closure and held open with gas struts.

Each compartment shall be illuminated with (1) LED light.

There shall be two (2) aluminum tubes inside the compartment for storage of two (2) NY Roof Hooks, (1) ea. tube, transverse all the way across.

COMPLY_____ EXCEPTION_____

CAB INTERIOR

The cab interior shall be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service.

The officer side dash shall be a flat faced design to provide easy maintenance and shall be constructed out of painted aluminum.

The instrument cluster shall be surrounded with a high impact ABS plastic contoured to the same shape of the instrument cluster.

The engine tunnel shall be painted aluminum to match the cab interior.

Headliner shall be installed in both forward and rear cab sections. Material shall be installed on aluminum sheet and securely fastened to interior cab ceiling.

Forward portion of cab headliner shall permit easy access for service of electrical wiring or other maintenance needs.

All wiring shall be placed in metal raceways. Routing through holes in tubing shall not be accepted due to chaffing that installation shall cause.

State material and color of Headliner material: _____

COMPLY_____ EXCEPTION_____

CAB INTERIOR UPHOLSTERY

The cab interior upholstery shall be black.

COMPLY_____ EXCEPTION_____

INTERIOR PAINT (CAB)

The cab interior metal surfaces shall be painted black with white speckles.

COMPLY_____ EXCEPTION_____

CAB FLOOR

The cab and crew cab floor areas shall be covered with an acoustical floor mat consisting of a black rubber facing and closed cell foam.

The top surface of the material will have a series of raised pyramid shapes evenly spaced, offering superior grip surfaces. Additionally, the material has a .25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.

COMPLY_____ EXCEPTION_____

CAB DEFROSTER

To provide maximum defrost and heating performance, a 43,500 BTU/HR heater-defroster unit with 350 CFM of air flow shall be provided inside the cab. The defroster unit shall be strategically located under the center forward portion of the vacuum formed instrument panel. For easy access, a removable vacuum formed cover shall be installed over the defroster unit. The defroster shall include an integral aluminum frame air filter, high performance dual scroll blowers, and ducts designed to provide maximum defrosting capabilities for the one (1)-piece windshield. The defroster ventilation shall be built into the design of the cab dash instrument panel and shall be easily removable for maintenance. The defroster shall be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a two (2) ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system shall meet or exceed SAE J382 minimum defrosting system performance requirements.

COMPLY_____ EXCEPTION_____

CAB/CREW CAB HEATER

Two (2) 44,180 BTU/HR auxiliary heaters with 276 CFM each unit of air flow shall be provided inside the crew cab, one (1) in each outboard rear-facing seat riser. The heaters shall include high performance dual scroll blowers, one (1) for each unit. Outlets for the heaters shall be located below each rear-facing seat riser and below the fronts of the driver and passenger seats, for efficient airflow. An extruded aluminum plenum shall be incorporated in the cab structure that shall transfer heat to the forward cab seating positions.

The heater-defroster and crew cab heaters shall be controlled by a single integral electronic control panel. The heater control panel shall allow the driver to control heat flow to the front and rear simultaneously. The control panel shall include variable adjustment for temperature and fan control, and be conveniently located on the dash in clear view of the driver. The control panel shall include highly visible, progressive LED indicators for both fan speed and temperature.

COMPLY_____ EXCEPTION_____

AIR CONDITIONING

A high performance, customized air conditioning system shall be furnished inside the cab and crew cab.

The air conditioning system shall be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit within 30 minutes at **80 percent relative humidity**. The cooling performance test shall be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours.

A radiator mounted condenser with a 59,644 BTU/HR output that meets and exceed the performance specification shall be installed. Mounting the condenser below the cab or body would reduce the performance of the system and shall not be acceptable.

One (1) evaporator unit shall be installed in the center roof with two (2) cores, one (1) for the cab and one (1) for the crew cab. The evaporator unit shall have an adequate BTU rating to meet the performance specifications. Adjustable air outlets shall be strategically located on the evaporator cover per the following:

- Four (4) shall be directed towards the driver's location
- Four (4) shall be directed towards the officer's location
- Seven (7) shall be directed towards the crew cab area

The air conditioner refrigerant shall be R-134A and shall be installed by a certified technician.

The air conditioner shall be controlled by a single electronic control panel. For ease of operation, the control panel shall include variable adjustment for temperature and fan control and be conveniently located on the dash in clear view of the driver.

COMPLY_____ EXCEPTION_____

INTERIOR CAB INSULATION

The cab and crew cab walls shall be insulated with 1.50" insulation and the ceiling shall have 1.00" insulation to reduce heat transfer into the cab.

The insulation shall be covered with a vinyl liner or a metal panel painted to match the interior.

COMPLY_____ EXCEPTION_____

SUNVISORS

Two (2) smoked Lexan™ sunvisors shall be provided above the windshield with one (1) mounted on each side of the cab.

COMPLY_____ EXCEPTION_____

HD STEREO

A Jensen HD Stereo AM/FM/WB World Turner shall be provided with four speakers.

COMPLY_____ EXCEPTION_____

GRAB HANDLE

A black rubber covered grab handle shall be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handle shall be securely mounted to the post area between the door and windshield.

A long rubber grab handle shall be mounted on the dash board in front of the officer.

COMPLY_____ EXCEPTION_____

ENGINE COMPARTMENT LIGHT

An engine compartment light shall be installed under the engine hood, of which the switch is an integral part. Light shall have a .125" diameter weep hole in its lens to prevent moisture retention.

COMPLY_____ EXCEPTION_____

ACCESS TO ENGINE DIPSTICKS

For access to the engine oil and transmission fluid dipsticks, there shall be a door on the engine tunnel, inside the crew cab. The door shall be on the rear wall of the engine tunnel, on the vertical surface.

The engine oil dipstick shall allow for checking only. The transmission dipstick shall allow for both checking and filling. An additional tube shall be provided for filling the engine oil.

The door shall have a rubber seal for thermal and acoustic insulation. One (1) flush latch shall be provided on the access door.

COMPLY_____ EXCEPTION_____

ENGINE HOOD COVER

The exterior surface of the engine hood shall have a Turnout Tuff material cover. The sides of the engine tunnel shall also be covered. A flap shall be provided over the hinged access door leading to the fluid level dipsticks. The flap shall be secured with Velcro.

COMPLY_____ EXCEPTION_____

SEATING CAPACITY

The seating capacity in the cab shall be five (5).

COMPLY_____ EXCEPTION_____

DRIVER SEAT

The driver's seat will be a H.O. Bostrom Sierra 500 series EX8 high back bucket ABSTS LH seat. The seat shall have a tapered, ergonomic contoured, extended seat cushion with bolster support. The seat shall have an eight-inch fore and aft adjustment, a 2-inch height adjustment, front of seat tilt, rear of seat tilt and a reclining seat back. All seat movements shall be electrically controlled from a control panel on the forward lower edge of the seat. The seat shall be equipped with a red integrated 3-point shoulder harness with lap belt and an automatic Dual Retractor anti-binding guide built into the seat assembly with seat belt customized fit adjustment.

COMPLY_____ EXCEPTION_____

OFFICER SEAT

The officer's seat shall be a H.O. Bostrom Tanker 550, EX6, 6 way electric, ABTS RH with a red, Fully Integrated 3-Point Seat Belt shoulder harness with lap belt and an automatic Dual Retractor with anti-binding webbing guide built into the seat assembly with seat belt customized fir adjustment.

The seat shall have a tapered, ergonomic contoured, extended seat cushion with bolster support. The seat shall include a SCBA storage area with integral, contoured headrest and tapered side cushions with built in SCBA

strap hooks. A Power 6” fore/aft adjustment and Power 2” height adjustment shall be provided. The seat will include a SmartDock GenII bottle bracket.

The seat needs to accommodate a Scott X3 Pro airpack with a 45 minute 4.5 cylinder.

COMPLY_____ EXCEPTION_____

RADIO COMPARTMENT

A radio compartment shall be provided behind the officer seat and behind the rear facing outboard officer side seat.

The radio compartment should be able to be accessible for both radio installers and programmers.

The compartment shall be painted to match the cab interior.

This compartment will house the main radio of the truck. **Power, ground wires and antennae wires need to be run to this compartment to power up the radio at the factory. All power, ground wires and antennae wires shall be long enough to allow them to be pulled away from the mounting area for inspection and service work.**

COMPLY_____ EXCEPTION_____

CENTER OVERHEAD PANEL

An overhead console will be provided on the cab roof between the driver and officer to permit installation of cab stereo, intercom systems, arrow stick controls, etc. The overhead console will be painted to match the interior of the cab. The overhead console will not obstruct the driver's vision through the officer's side window.

****NOTE:** Mounted in the center overhead panel will be the Motorola APX 02 Control Head, Part number GA00804AB with Motorola Remote Mount, Part number G67BZ, Johnny Ray JR-500 swivel mount base, and Motorola Auxiliary Speaker 7.5-Watt, Part number B18CR. See attached picture for exact location and mounting.



COMPLY_____ EXCEPTION_____

VHF RADIO (ENGINE 304 ONLY)

For the unit that will be Engine 304 a VHF Radio will be supplied and installed. A Motorola CM300D radio with a quarter wave VHF antenna shall be supplied and installed. Radio programming can be done by Mobilecom at the dealership.

COMPLY_____ EXCEPTION_____

DAVID CLARK MODEL#3800 INTERCOM SYSTEM

A David Clark Model 3800 Intercom system shall be provided in the cab. The system shall be capable of interfacing with a two-way radio system (note: an authorized two-way radio installer shall be responsible for interfacing the intercom system with the two-way radio). The master station shall be located at the pre-construction conference.

COMPLY_____ EXCEPTION_____

DRIVERS AND OFFICERS HEADSETS FOR DAVID CLARK SYSTEM

Two (2) single-plug under helmet radio transmit headsets shall be furnished for the driver and officer seating locations in the cab. The driver headset shall be a H3441 and the officers shall be a H3442. The intercom headsets shall have adjustable volume, noise-canceling electric microphone, adjustable head strap, and a flex-style boom which rotates for left or right placement. The sets shall also have comfortable gel ear seals.

COMPLY_____ EXCEPTION_____

JUMPSEAT HEADSETS

Three (1) H3442 single-plug under helmet radio transmit headsets shall be furnished for the rear crew seating locations in the cab. The intercom headsets shall have adjustable volume, noise-canceling electric microphone, adjustable head strap, and a flex-style boom which rotates for left or right placement. The sets shall also have comfortable gel ear seals.

COMPLY _____ EXCEPTION _____

DRIVERS HEADSET FOR DAVID CLARK SYSTEM IN ENGINEER COMPARTMENT

One (1) single-plug under helmet radio transmit headset shall be furnished for the driver in the engineer compartment. The headset shall be a H3441. The intercom headset shall have adjustable volume, noise-canceling electric microphone, adjustable head strap, and a flex-style boom which rotates for left or right placement. The sets shall also have comfortable gel ear seals.

COMPLY _____ EXCEPTION _____

EMS COMPARTMENT REAR CENTER FORWARD FACING

A forward-facing EMS compartment shall be provided in the crew cab at the center rear wall of the cab. The EMS compartment shall be painted to match the interior of the cab. The cabinet dimensions shall be approximately 46" wide x 18" deep x 53" tall. The cabinet shall come complete with a robinson roll up door and two adjustable shelves. Strip lighting shall be provided in the cabinet. The cabinet shall be provided on the back wall of the cab, mounted on the crew seat riser, in place of the two forward facing crew seats.

COMPLY _____ EXCEPTION _____

COMPARTMENT LIGHT

There shall be two (2) white Amdor LED strip lights installed, one (1) each side of the compartment opening. The lights shall be controlled by an automatic door switch.

COMPLY _____ EXCEPTION _____

REAR FACING OUTBOARD SEATS

There shall be two (2) rear facing outboard seats, one on the driver side, and one on the passenger side. The seats shall have a H.O. Bostrom Tanker, ABSTS RH series fixed base SCBA seat. The seats shall have a tapered, ergonomic contoured, extended seat cushion with bolster support. The seats shall include a SCBA storage area with integral, contoured headrest and tapered side cushions with built in SCBA strap hooks. The

seats shall be equipped with a red integrated 3-point shoulder harness with lap belt and an automatic dual retractor with anti-binding webbing guide built into the seat assembly with seat belt customized fit adjustment. The seats will include a SmartDock GenII bottle bracket. The seats need to accommodate a Scott X3 Pro air pack with a 45-minute 4.5 cylinder.

COMPLY _____ EXCEPTION _____

FORWARD FACING PASSENGER SIDE OUTBOARD SEAT

There shall be one (1) forward facing passenger side outboard crew seat with a H.O. Bostrom Tanker, ABSTS LH series fixed base SCBA seat. The seat shall have a tapered, ergonomic contoured, extended seat cushion with bolster support. The seat shall include a SCBA storage area with integral, contoured headrest and tapered side cushions with built in SCBA strap hooks. The seat shall be equipped with a red integrated 3-point shoulder harness with lap belt and an automatic dual retractor with anti-binding webbing guide built into the seat assembly with seat belt customized fit adjustment. The seat will include a SmartDock GenII bottle bracket. The seat needs to accommodate a Scott X3 Pro air pack with a 45-minute 4.5 cylinder.

COMPLY _____ EXCEPTION _____

CREW SEAT COMPARTMENT FORWARD FACING

A compartment shall be provided under the forward-facing crew seats on the back wall of the cab. Two drop down doors shall be provided on the front face of the compartment.

COMPLY _____ EXCEPTION _____

CREW CAB IN-CAB OVERHEAD STORAGE AREA

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 compartment shall be the full-width of the cab. The Crew cab In-Cab storage compartment shall be painted to match the interior cab color (Black with white speckle). The Crew cab In-Cab storage compartment will have a removable nylon or cargo netting style closure to cover the storage area opening.

COMPLY _____ EXCEPTION _____

SEAT UPHOLSTERY

All seat upholstery shall be black. State material of Seat Upholstery: _____

COMPLY _____ EXCEPTION _____

SEAT BELT MONITORING SYSTEM

A seat belt monitoring system (SBMS) shall be provided. The SBMS shall be capable of monitoring up to ten (10) seat positions indicating the status of each seat position with a green or red LED indicator as follows:

- Seat Occupied & Buckled = Green
- Seat Occupied & Unbuckled = Red
- No Occupant & Buckled = Red
- No Occupant & Unbuckled = Not Illuminated

COMPLY _____ EXCEPTION _____

AUDIBLE ALARM

The Seat Belt Monitoring System shall include an audible alarm that shall be activated when a red illumination condition exists and the parking brake is released, or a red illumination condition exists and the transmission is not in park.

COMPLY _____ EXCEPTION _____

HELMET HOLDER

There shall be five (5) Zico UHH-1 helmet holder bracket(s) provided in the cab. The brackets shall provide quick access and secure storage of the helmet(s). The bracket location(s) shall be determined at time of final inspection.

COMPLY _____ EXCEPTION _____

CAB DOME LIGHTS

There shall be four (4) P1006, dual LED dome lights with grey bezels provided. Two (2) lights shall be mounted above the inside shoulder of the driver and officer and two (2) lights shall be installed and located, one (1) on each side of the crew cab.

The color of the LED's shall be red and white.

The white LED's shall be controlled by the door switches and the lens switch.

The color LED's shall be controlled by the lens switch.

In order to ensure exceptional illumination, each white LED dome light shall provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat.

COMPLY_____ EXCEPTION_____

MAP LIGHT

There shall be one (1) Federal Littlite® LED map light(s) provided in the cab and **located on the A post on the officer's side of the truck.** Each map light shall have an on/off switch with a 18.00" long flexible neck that exits the top of the chassis mount. The map light(s) wiring shall exit from the bottom of the chassis mount.

Each light shall be provided with red and white LEDs.

The light switch (es) shall be connected directly to the battery switched power.

COMPLY_____ EXCEPTION_____

SPARE CIRCUIT

There will be two (2) pair of wires, including a positive and a negative, installed in the cab of the apparatus.

The above wires will have the following features:

- The positive wire will be connected directly to the battery power.
- The negative wire will be connected to ground.
- Wires will be protected to 15 amps at 12 volts DC.
- Power and ground will terminate on the Officer's side.
- Termination will be with 15-amp, power point plug with rubber cover.

Wires will be sized to 125% of the protection.

The circuit(s) may be load managed when the parking brake is set.

Exact location to be determined at Pre-Construction Conference.

COMPLY_____ EXCEPTION_____

CUSTOMER RADIO WIRING

There shall be two (2) 12-volt combination wiring leads of which each shall include one (1) battery switched, one (1) ignition and one (1) negative for use with radio equipment.

Each lead shall be 18.00" long and be provided One (1) pair overhead terminating in the center overhead and One (1) pair in the Upper Left-Hand corner of the driver side first rear body compartment (as far outboard as possible- Leave 18" of wire). Both sets of wires should terminate in the radio box under the officer's seat. The leads shall be clearly marked in a coil and terminate with butt splices.

A breaker rated for 30 amps shall be provided for circuit protection of the battery switched lead with a minimum of 10-gauge wire.

A breaker rated for 7.5 amps shall be provided for circuit protection of the ignition lead.

The wires shall be colored coded as follows:

- red for battery switched
- yellow for ignition
- black for ground

COMPLY_____ EXCEPTION_____

RADIO ANTENNA MOUNT

There shall be one (1) standard 3/4", 18 thread antenna-mounting base(s) installed over the officer's side seat centered between the roof & lightbar on the cab roof with high efficiency, low loss, coaxial cable(s) routed to the radio box. A weatherproof cap shall be installed on the mount.

COMPLY_____ EXCEPTION_____

CAB INSTRUMENTATION

The cab instrument panel shall be a molded ABS panel and include gauges, telltale indicator lamps, control switches, alarms and a diagnostic panel. The function of the instrument panel controls and switches shall be identified by a label adjacent to each item. Actuation of the headlight switch shall illuminate the labels in low light conditions. Telltale indicator lamps shall not be illuminated unless necessary. The cab instruments and controls shall be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership.

COMPLY_____ EXCEPTION_____

GAUGES

The gauge panel shall include the following ten (10) black faced gauges with black bezels to monitor vehicle performance:

- Voltmeter gauge (volts):
 - Low volts (11.8 VDC)
 - Amber telltale light on indicator light display with steady tone alarm
 - High volts (15.5 VDC)
 - Amber telltale light on indicator light display with steady tone alarm
- Engine Tachometer (RPM)
- Speedometer MPH (Major Scale), KM/H (Minor Scale)
- Fuel level gauge (Empty - Full in fractions):
 - Low fuel (1/8 full)
 - Amber indicator light in gauge dial with steady tone alarm
- Engine Oil pressure Gauge (PSI):
 - Low oil pressure to activate engine warning lights and alarms
 - Red indicator light in gauge dial with steady tone alarm
- Front Air Pressure Gauges (PSI):
 - Low air pressure to activate warning lights and alarm
 - Red indicator light in gauge dial with steady tone alarm
- Rear Air Pressure Gauges (PSI):
 - Low air pressure to activate warning lights and alarm
 - Red indicator light in gauge dial with steady tone alarm
- Transmission Oil Temperature Gauge (Fahrenheit):
 - High transmission oil temperature activates warning lights and alarm
 - Amber indicator light in gauge dial with steady tone alarm
- Engine Coolant Temperature Gauge (Fahrenheit):
 - High engine temperature activates an engine warning light and alarms
 - Red indicator light in gauge dial with steady tone alarm

- Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions):
 - Low fluid (1/8 full)

To promote safety, the following telltale indicator lamps shall be located on the instrument panel in clear view of the driver. The indicator lamps shall be "dead-front" design that is only visible when active. The colored indicator lights shall have descriptive text or symbols.

The following amber telltale lamps shall be present:

- Low coolant
- Trac cntl (traction control) (where applicable)
- Check engine
- Check trans (check transmission)
- Air rest (air restriction)
- DPF (engine diesel particulate filter regeneration)
- HET (engine high exhaust temperature) (where applicable)
- ABS (antilock brake system)
- MIL (engine emissions system malfunction indicator lamp) (where applicable)
- Regen inhibit (engine emissions regeneration inhibit) (where applicable)
- Side roll fault (where applicable)
- Front air bag fault (where applicable)
- Aux brake overheat (auxiliary brake overheat) (where applicable)

The following red telltale lamps shall be present:

- Parking brake
- Stop engine

The following green telltale lamps shall be present:

- Left turn
- Right turn
- Battery on
- Ignition
- Aux brake (auxiliary brake engaged) (where applicable)

The following blue telltale lamps shall be present:

- High beam

COMPLY_____ EXCEPTION_____

ALARMS

Audible steady tone warning alarm: A steady audible tone alarm shall be provided whenever a warning condition is active.

COMPLY _____ EXCEPTION _____

INDICATOR LAMP AND ALARM PROVE-OUT

A system shall be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms shall perform prove-out for 3 to 5 seconds when the ignition switch is moved to the on position with the battery switch on.

COMPLY _____ EXCEPTION _____

CONTROL SWITCHES

For ease of use, the following controls shall be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches shall have backlit labels for low light applications.

Headlight/Parking light switch: A three (3)-position maintained rocker switch shall be provided. The first switch position shall deactivate all parking and headlights. The second switch position shall activate the parking lights. The third switch shall activate the headlights.

Panel back lighting intensity control switch: A three (3)-position momentary rocker switch shall be provided. Pressing the top half of the switch, "Panel Up" increases the panel back lighting intensity and pressing the bottom half of the switch, "Panel Down" decreases the panel back lighting intensity. Pressing the half or bottom half of the switch several times shall allow back lighting intensity to be gradually varied from minimum to maximum intensity level for ease of use.

Ignition switch: A three (3)-position maintained/momentary rocker switch shall be provided. The first switch position shall turn off and deactivate vehicle ignition. The second switch position shall activate vehicle ignition and shall perform prove-out on the telltale indicators and alarms for 3 to 5 seconds after the switch is turned on. A green indicator lamp is activated with vehicle ignition. The third momentary position shall temporarily silence all active cab alarms. An alarm "chirp" may continue as long as alarm condition exists. Switching ignition to off position shall terminate the alarm silence feature and reset function of cab alarm system.

Engine start switch: A two (2)-position momentary rocker switch shall be provided. The first switch position is the default switch position. The second switch position shall activate the vehicle's engine. The switch actuator is designed to prevent accidental activation. Both the Ignition switch and Engine start switch must be located to the left of the steering wheel.

Hazard switch shall be provided on the instrument panel or on the steering column.

Heater and defroster controls.

Turn signal arm: A self-canceling turn signal with high beam headlight controls.

Windshield wiper control shall have high, low, and intermittent modes.

Parking brake control: An air actuated push/pull park brake control will be provided so that **the driver and officer can reach. Locate in the center dash.**

Chassis horn control: Activation of the chassis horn control shall be provided through the center of the steering wheel.

High idle engagement switch: A maintained rocker switch with integral indicator lamp shall be provided. The switch shall activate and deactivate the high idle function. The "OK to Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch shall indicate when the high idle function is engaged.

"OK to Engage High Idle" indicator lamp: A green indicator light shall be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.

Emergency switching shall be controlled by multiple individual warning light switches for various groups or areas of emergency warning lights. An Emergency Master switch provided on the instrument panel that enables or disables all individual warning light switches is included.

An additional "Emergency Master" button shall be provided on the lower left-hand corner of the gauge panel to allow convenient control of the "Emergency Master" system from inside the driver's door when standing on the ground.

COMPLY_____ EXCEPTION_____

CUSTOM SWITCH PANELS

The design of cab instrumentation shall allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There shall be positions for up to four (4) switch panels in the lower instrument console and up to six (6) switch panels in the overhead visor console. All switches have backlit labels for low light conditions.

COMPLY_____ EXCEPTION_____

DIAGNOSTIC PANEL

A diagnostic panel shall be provided and accessible while standing on the ground. The panel shall be located inside the driver's side door left of the steering column. The diagnostic panel shall allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of

ownership. Diagnostic switches shall allow engine and ABS systems to provide blink codes should a problem exist.

The diagnostic panel shall include the following:

- ENGINE/TRANSMISSION/ABS J1939 Diagnostic Port
- ABS Diagnostic Switch and Indicator - The switch and amber indicator shall allow access to diagnostic mode and display of standard ABS system fault blink codes that may be generated by the ABS system
- ENG DIAG (Engine Diagnostic Indicator) - A red indicator shall be provided that shall illuminate in a "STOP ENGINE" condition. (A switch with shall allow access to diagnostic mode and display of standard engine diagnostic blink codes.) (where applicable)
- DPF REGEN (Diesel Particulate Filter Regeneration Switch) (where applicable) shall be provided to request regeneration of the engine emission system. An amber indicator shall be provided on top of the switch that shall illuminate in a "CHECK ENGINE" condition
- REGEN INHIBIT (Diesel Particulate Filter Regeneration Inhibit Switch) (where applicable) shall be provided that shall request that regeneration be temporarily prevented. A green indicator shall be provided on top of the Regen Inhibit switch that shall illuminate when the Regen Inhibit feature is active. Regen Inhibit shall be disabled upon cycling of the ignition switch to the off state.

COMPLY_____ EXCEPTION_____

AIR RESTRICTION INDICATOR

A high air restriction warning indicator light (electronic) shall be provided.

COMPLY_____ EXCEPTION_____

"DO NOT MOVE APPARATUS" INDICATOR

A flashing red indicator light, located in the driving compartment, shall be illuminated automatically per the current NFPA requirements. The light shall be labeled "Do Not Move Apparatus If Light Is On."

The same circuit that activates the Do Not Move Apparatus indicator shall activate a pulsing alarm when the parking brake is released.

COMPLY_____ EXCEPTION_____

WIPER CONTROL

Wiper control shall consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls.

COMPLY_____ EXCEPTION_____

VEHICLE DATA RECORDER

A vehicle data recorder (VDR) shall be provided. The VDR shall be capable of reading and storing vehicle information.

The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A CD provided with the apparatus shall include the programming to download the information from the VDR. A USB cable can be used to connect the VDR to a laptop to retrieve required information.

The vehicle data recorder shall be capable of recording the following data via hardwired and/or CAN inputs:

- Vehicle Speed - MPH
- Acceleration - MPH/sec
- Deceleration - MPH/sec
- Engine Speed - RPM
- Engine Throttle Position - % of Full Throttle
- ABS Event - On/Off
- Seat Occupied Status - Yes/No by Position (7-12 Seating Capacity)
- Seat Belt Buckled Status - Yes/No by Position (7-12 Seating Capacity)
- Master Optical Warning Device Switch - On/Off
- Time - 24 Hour Time
- Date - Year/Month/Day

COMPLY_____ EXCEPTION_____

ELECTRICAL POWER CONTROL SYSTEM

A compartment shall be provided in or under the cab to house the vehicle's electrical power and signal circuit protection and control components. The power and signal protection and control compartment shall contain circuit protection devices and power control devices. Power and signal protection and control components shall be protected against corrosion, excessive heat, excessive vibration, physical damage and water spray.

Serviceable components shall be readily accessible.

Circuit protection devices, which conform to SAE standard, shall be utilized to protect each circuit. All circuit protection devices shall be sized to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers shall be Type-I automatic reset (continuously resetting) and conform to SAE J553 or J258. When required, automotive type fuses conforming to SAE J554, J1284, J1888 or J2077 shall be utilized to protect electronic equipment.

Power control relays and solenoids shall have a direct current (dc) rating of 125 percent of the maximum current for which the circuit is protected.

Visual status indicators shall be supplied to identify control safety interlocks and vehicle status. In addition to visual status indicators, audible alarms designed to provide early warning of problems before they become critical shall be used.

COMPLY _____ EXCEPTION _____

VOLTAGE MONITOR SYSTEM

A voltage monitor system shall be provided to indicate the status of each battery system connected to the vehicle's electrical load. The monitor system shall provide visual and audio warning when the system voltage is above or below optimum levels.

COMPLY _____ EXCEPTION _____

POWER AND GROUND STUDS

Spare circuits shall be provided in the primary distribution center for two-way radio equipment.

The spare circuits shall consist of the following:

- One (1) 12-volt DC, 30-amp battery direct spare.
- One (1) 12-volt DC ground and un-fused switched battery stud located in or adjacent to the power distribution center.

COMPLY _____ EXCEPTION _____

EMI/RFI PROTECTION

The electrical system proposed shall include means to control undesired electromagnetic and radio frequency emissions. State of the art electrical system design and components shall be used to ensure radiated and conducted EMI (electromagnetic interference) and RFI (radio frequency interference) emissions are suppressed at their source.

The apparatus proposed shall have the ability to operate in the electromagnetic environment typically found in fire ground operations. The contractor shall be able to demonstrate the EMI and RFI testing has been done on similar apparatus and certifies that the vehicle proposed meets SAE J551 requirements.

EMI/RFI susceptibility shall be controlled by applying immune circuit designs, shielding, twisted pair wiring and filtering. The electrical system shall be designed for full compatibility with low level control signals and high-powered two-way radio communication systems. Harness and cable routing shall be given careful attention to minimize the potential for conducting and radiated EMI-RFI susceptibility.

COMPLY_____ EXCEPTION_____

ELECTRICAL

All 12-volt electrical equipment installed by the apparatus manufacturer shall conform to modern automotive practices. All wiring shall be high temperature crosslink type. Wiring shall be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers shall be provided which conform to SAE Standards. Wiring shall be color, function and number coded. Function and number codes shall be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors shall be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.

Electrical wiring and equipment shall be installed utilizing the following guidelines:

1. All holes made in the roof shall be caulked with silicon, rope caulk is not acceptable. Large fender washers, liberally caulked, shall be used when fastening equipment to the underside of the cab roof.
2. Any electrical component that is installed in an exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it. **If an electrical component is mounted in an area that does get exposed to moisture than a cover must be fabricated to cover the electrical component.** Exposed area shall be defined as any location outside of the cab or body.
3. Electrical components designed to be removed for maintenance shall not be fastened with nuts and bolts. Metal screws shall be used in mounting these devices. **Also, a coil of wire shall be provided behind the appliance to allow them to be pulled away from the mounting area for inspection and service work.**
4. Corrosion preventative compound shall be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections shall require this compound in the plug to prevent corrosion and for easy separation (of the plug).
5. All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.
6. All electrical terminals in exposed areas shall have silicon (1890) applied completely over the metal portion of the terminal.
7. **Any removable access panel for electrical wiring and components must have a label of the relays, breakers, and switches, and their functions attached to the backside of the removable panel for maintenance technicians.**

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, shall be furnished. Rear identification lights shall be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads shall be protected from damage by installing a false bulkhead inside the rear compartments.

An operational test shall be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.

The results of the tests shall be recorded and provided to the purchaser at time of delivery.

COMPLY_____ EXCEPTION_____

BATTERY SYSTEM

There shall be four (4) 12-volt Exide, Model 31S950X3W, batteries that include the following features shall be provided:

- 950 CCA, cold cranking amps
- 190-amp reserve capacity
- High cycle
- Group 31
- Rating of 3800 CCA at 0 degrees Fahrenheit
- 760 minutes of reserve capacity
- Threaded stainless steel studs

Each battery case shall be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover shall be manifold vented with a central venting location to allow a 45-degree tilt capacity.

The inside of each battery shall consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.

COMPLY_____ EXCEPTION_____

BATTERY SYSTEM

A single starting system shall be provided.

An ignition switch and starter button shall be located on the instrument panel.

COMPLY_____ EXCEPTION_____

MASTER BATTERY SWITCH

A master battery switch, to activate the battery system, shall be provided inside the cab within easy reach of the driver.

An indicator light shall be provided on the instrument panel to notify the driver of the status of the battery system.

Both the Ignition switch and Engine start switch must be located to the left of the steering wheel.

COMPLY_____ EXCEPTION_____

BATTERY COMPARTMENTS

Batteries shall be placed on non-corrosive mats and be stored in well ventilated compartments located under the cab.

Heavy-duty battery cables shall be used to provide maximum power to the electrical system. Cables shall be color coded.

Battery terminal connections shall be coated with anti-corrosion compound. Battery solenoid terminal connections shall be encapsulated with semi-permanent rubberized compound.

COMPLY_____ EXCEPTION_____

JUMPER STUDS

One (1) set of battery jumper studs with plastic color-coded covers shall be included on the battery compartments.

COMPLY_____ EXCEPTION_____

BATTERY CHARGER/ AIR COMPRESSOR

A Kussmaul Pump Plus 1200, Model # 52-21-1100 single output battery charger/air compressor system shall be provided. A display bar graph indicating the state of charge shall be included.

The automatic charger shall maintain one (1) set of batteries with a maximum output current of 40 amps.

The 12-volt air compressor shall be installed to maintain the air system pressure when the vehicle is not in use.

The battery charger shall be wired directly to the AC shoreline inlet.

Battery charger/compressor shall be located in the cab behind the driver's seat.

The battery charger indicator shall be located on the driver's seat riser.

COMPLY_____ EXCEPTION_____

SHORELINE INLETS

There shall be one (1) shoreline receptacle provided to operate the dedicated 120-volt circuits on the truck without the use of a generator.

The shoreline receptacle(s) shall be provided with a NEMA 5-20, 120-volt, 20-amp, straight blade Kussmaul Super auto eject plug with a red weatherproof cover. The cover is spring loaded to close, preventing water from entering when the shoreline is not connected.

The unit is completely sealed to prevent road dirt contamination.

A solenoid wired to the vehicle's starter is energized when the engine is started. This instantaneously drives the plug from the receptacle.

An internal switch arrangement shall be provided to disconnect the load prior to ejection to eliminate arcing of the connector contacts.

The shoreline shall be connected to Kussmaul Battery Charger and 110v outlet in the EMS compartment rear center forward facing.

A mating connector body shall be supplied with the loose equipment.

The shoreline receptacle shall be located on the driver side of cab, above wheel.

COMPLY_____ EXCEPTION_____

BATTERY TRAYS

Plastic battery trays with drain tubes shall be provided, for the batteries to sit in. The drain tubes shall extend below the chassis frame rails.

COMPLY_____ EXCEPTION_____

ALTERNATOR

A Leece-Neville, model 4962PA, alternator shall be provided. It shall have a rated output current of 320 amps, as measured by SAE method J56. The alternator shall feature an integral, self diagnostic regulator and rectifier. The alternator shall be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.

State the alternator amp output _____.

COMPLY_____ EXCEPTION_____

ELECTRONIC LOAD MANAGEMENT

An electronic load management (ELM) system that monitors the vehicles 12-volt electrical system and automatically reduces the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system.

The ELM shall monitor the vehicle's voltage while at the scene (parking brake applied). It shall sequentially shut down individual electrical loads when the system voltage drops below a preset value. Two (2) separate electrical loads shall be controlled by the load manager. The ELM shall sequentially re-energize electrical loads as the system voltage recovers.

COMPLY_____ EXCEPTION_____

HEADLIGHTS

There shall be four (4) FIRETECH model FT-4X6 LED, part number 9906263, rectangular shaped, quad style installed on the front of the cab on each side of the cab grille:

- The outside light on each side shall contain a LED low and high beam module.
- The inside light on each side shall contain a LED high beam module only.

COMPLY_____ EXCEPTION_____

DIRECTIONAL LIGHTS

There shall be two (2) Whelen, Model 60A00TAR, amber LED populated arrow directional lights provided on the front of the cab, above the headlights. Each light shall be housed in the same chrome common bezel as the front warning light.

COMPLY_____ EXCEPTION_____

CAB CLEARANCE/MARKER/ID LIGHTS

There shall be five (5) amber LED lights provided to indicate the presence and overall width of the vehicle in the following locations:

- Three (3) amber LED identification lights shall be installed in the center of the cab above the windshield.
- Two (2) amber LED clearance lights shall be installed, one (1) on each outboard side of the cab above the windshield.

COMPLY_____ EXCEPTION_____

FRONT CAB SIDE CLEARANCE/MARKER LIGHTS

There shall be two (2) Weldon, Model 9186-8580-29, amber LED lights installed front of the cab door, one (1) on each side of the cab.

The lights shall activate as clearance/marker lights with the headlight switch and directional lights with the corresponding directional circuit.

COMPLY _____ EXCEPTION _____

REAR ID/MARKER DOT LIGHTING

There shall be one (1) Truck-Lite, Model 15050R, three (3) LED light kit used as identification lights located at the rear of the apparatus per the following:

- As close as practical to the vertical centerline.
- Centers spaced not less than 6.00" or more than 12.00" apart.
- Red in color.
- All at the same height.

There shall be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following:

- To indicate the overall width of the vehicle.
- One (1) each side of the vertical centerline.
- As near the top as practical.
- Red in color.
- To be visible from the rear.

There shall be two (2) LED lights installed on the side of the apparatus as close to the rear as practical per the following:

- To indicate the overall length of the vehicle.
- One (1) each side of the vertical centerline.
- As near the top as practical.
- Red in color.
- To be visible from the side.

Per FMVSS 108 and CMVSS 108 requirements.

COMPLY _____ EXCEPTION _____

FRONT DIRECTIONAL

Front turn signals to be Whelen, SurfaceMax Model C6T, amber LED directional lights housed in chrome bezels. The turn signals shall be housed in the same common bezel as the front warning light and be located above the headlights.

In addition to the front facing directional, a Weldon, Model: 9186-8580-29, LED marker/turn indicator shall be provided on each side of the cab.

COMPLY_____ EXCEPTION_____

REAR FMVSS LIGHTING

There shall be the following stop/tail and directional lighting provided at the rear of the truck:

- Two (2) Whelen, SurfaceMax Model C6BTT*, red LED stop/tail lights with color lenses.
- Two (2) Whelen, SurfaceMax Model C6T, amber LED directional lights.

These lights shall be installed in a polished combination housing.

Four (4) red reflectors shall be provided.

Two (2) Whelen, SurfaceMax Model C6BU, LED backup lights shall be provided.

COMPLY_____ EXCEPTION_____

BACK-UP ALARM

A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse shall be provided. The device shall sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.

COMPLY _____ EXCEPTION _____

INTERMEDIATE LIGHT

There shall be two (2) Weldon, Model 9186-8580-29, amber, LED, turn signal, marker lights furnished, one (1) each side, horizontally in the rear fender panel. The light shall double as a turn signal and marker light. A stainless-steel trim shall be included with this installation.

COMPLY_____ EXCEPTION_____

CAB PERIMETER SCENE LIGHTS

There shall be four (4) Amdor LumaBar H2O, Model AY-9500-020, 20.00" white LED strip lights provided, one (1) for each cab door.

These lights shall be activated automatically when the battery switch is on and the exit doors are opened or by the same means as the body perimeter scene lights.

COMPLY _____ EXCEPTION _____

PERIMETER SCENE LIGHTS, BODY

There shall be a total of four (4) Amdor Luma Bar, H2O Model AY-9500-020 20" LED weatherproof strip lights with brackets provided on the apparatus. The lights shall be mounted in the following locations: two (2) lights shall be provided under the rear step area, and one (1) light shall be provided each side under the pump panel running boards.

The lights shall be activated by parking brake.

These lights shall meet NFPA requirements for perimeter scene lights.

COMPLY _____ EXCEPTION _____

STEP LIGHTS

Five (5) white LED step lights shall be provided. One (1) step light shall be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard, and One (1) step light shall be provided on the officer side rear of the cab 38 3/4" from the ground for illumination of the storage compartment on the pump.

These step lights shall be actuated with the pump panel light switch.

All other steps on the apparatus shall be illuminated per the current edition of NFPA 1901.

COMPLY _____ EXCEPTION _____

CAB SCENE LIGHTS

There shall be two (2) Whelen Model PCH2, 12-volt DC LED combination spot/floodlight(s) installed one each side of the cab above the crew cab windows. These lights will be recessed in a chrome flange Model PBH203. The painted parts of this light assembly are to be white. The lights shall be controlled by the following:

- A switch at the driver's side switch panel.

- A switch at the passenger's side switch panel.
- A switch at the pump operator's panel.

These light(s) may be load managed when the parking brake is applied.

COMPLY _____ EXCEPTION _____

PUMP HOUSING SCENE LIGHTS

There shall be two (2) Whelen Model PCP2P, 12-volt DC LED combination spot/floodlight(s) installed on the apparatus.

The painted parts of this light assembly to be white.

The lights shall be installed on extendable poles One (1) each side mounted over the pump panel.

The light(s) to be installed on through mount pull up pole(s).

The length of the outside pole to be 20.00".

The inside pole length to be 57.00" long or as long as practical to fit in the location selected.

The light pole(s) to be installed without handle holder(s).

The lights shall be controlled by the following:

- A switch at the driver's side switch panel.
- A switch at the passenger's side switch panel.
- A switch at the pump operator's panel.

These light(s) may be load managed when the parking brake is applied.

COMPLY _____ EXCEPTION _____

LED BROW LIGHT - ABOVE WINDSHIELD

One (1) HiViz LEDs "FireTech" Scene light model FT-B-72-ML-W will be provided. The light instrument will be low in profile with a mounting bracket allowing installation at the top edge of the windshield. The housing will be made of an extruded 6061 aluminum; 72" wide and less than 3" tall.

The scene light will have 57 LEDs divided amongst 3 independent circuits; circuit one featuring 9x 5w LEDs passing light through a 10-degree optic, circuit two featuring 18x 5w LEDs passing light through a 25-40 degree "flood" range, and circuit three featuring 30x 5w LEDs passing light through a 60-90 degree "scene" optic. Circuit four will consist of 5 amber colored diodes that act as SAE-J2042 compliant clearance marker and

identification lamps.

The circuitry will feature a PWM LED driver with an onboard electronic thermal manager. Additionally, the bar will meet CISPR25 EMI requirements. The light will operate on 12v DC, generate 28,101 lumens and draw 24 amps.

The light will be adjustable vertically up to 15 degrees. Mounting will be possible in any direction while still meeting NFPA 1901 compliance requirements. The housing color will be Red.

COMPLY_____ EXCEPTION_____

DECK LIGHTS

One (1) PFBP12C LED floodlight and one (1) PSBP12C LED spotlight with swivel mount shall be provided at the rear of the hose bed, one (1) each side. The lights shall include a switch for on/off activation.

COMPLY_____ EXCEPTION_____

REAR WORK/SCENE LIGHTS

Two (2) Firetech HiViz model number FT-WL-X-9 9 LED Work and Area lights will be mounted under the rear upper warning light stanchions to provide adequate scene lighting for the rear of a incident scene. These lights will shall be switched from inside the cab, on the driver side pump panel, and on the back of each light head.

COMPLY_____ EXCEPTION_____

WATER TANK

Booster tank shall have a capacity of 750 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated.

The tank shall be stepped in design to allow for a low hosebed.

Tank shall be baffled in accordance with NFPA Bulletin 1901 requirements.

Baffles shall have vent openings at both the top and bottom to permit movement of air and water between compartments.

A sump that is 8.00" long x 8.00" wide x 6.00" deep shall be provided at the bottom of the water tank.

Sump shall include a drain plug and the tank outlet.

Sufficient crossmembers shall be provided to properly support bottom of tank.

Mounting system shall be approved by the tank manufacturer.

Fill tower shall be constructed of .50" polypropylene and shall be a minimum of 8.00" wide x 14.00" long.

Fill tower shall be furnished with a .25" thick polypropylene screen and a hinged cover.

An overflow pipe, constructed of 4.00" schedule 40 polypropylene, shall be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.

The water tank shall be extended to the rear of the truck, over the rear compartment.

Four (4) sleeves shall be provided in the water tank for a 3.00" pipe to the rear.

COMPLY_____ EXCEPTION_____

WATER TANK RESTRAINT

A heavy-duty water tank restraint shall be provided.

COMPLY_____ EXCEPTION_____

HOSE BED

The hose bed shall be as low as practical.

The upper inside area of the beavertails shall be covered with brushed stainless steel to prevent damage to painted surface when hose is removed.

The hosebed floor shall be as low as possible from the ground when the truck is fully loaded.

Hose bed shall accommodate from Left to Right- Bed # 1: 200ft. of 1.88" hose, Bed# 2: 1200ft. of 5" hose, Bed# 3: 750ft. of 2.5" hose, Bed# 4: 200ft. of 1.88" hose, Bed #5: 200ft. of 2.50" hose w/400ft. of 1.88" hose, Bed #6: 250ft. of 2.50" hose.

State the hose bed body width _____

COMPLY_____ EXCEPTION_____

HOSEBED DIVIDERS

Five (5) adjustable hosebed dividers shall be furnished for separating hose.

Each divider shall have a cutout in the center of the dividers to assist in reloading hose.

Dividers shall be fully adjustable at the front and rear of the hose bed.

Dividers shall be held in place by tightening bolts, at each end.

Acorn nuts shall be installed on all bolts in the hose bed which have exposed threads.

COMPLY_____ EXCEPTION_____

HOSEBED HOSE RESTRAINT

A red hose bed cover shall be furnished with bungee cord and hook fasteners at the front and bungee cord and hook fasteners on the sides. There shall be 2.00" cam buckle fasteners at the bottom of the rear body sheet below the hosebed. A seatbelt type faster will also be acceptable. The flap at the rear shall be not weighted.

COMPLY_____ EXCEPTION_____

RUNNING BOARDS

Running boards shall be able to accommodate one 50ft. section of 5" supply hose rolled. Running board hose storage can be a floating style tray.

COMPLY_____ EXCEPTION_____

TAILBOARD

The tailboard area shall be a minimum of 16.00" deep to the rear of the side compartments.

COMPLY_____ EXCEPTION_____

REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL

The rear facing surfaces of the center rear wall shall be smooth aluminum.

The rear facing surfaces of the bulkheads, the surface to the rear of the side body compartments, shall be smooth and the same material as the body.

Any inboard facing surfaces below the height of the hosebed shall be bright aluminum tread plate.

COMPLY_____ EXCEPTION_____

TOW BAR

A tow bar shall be installed under the tailboard at center of truck.

Tow bar assembly shall be designed and positioned to allow up to a 30-degree upward angled pull of 17,000 lb., or a 20,000 lb. straight horizontal pull in line with the centerline of the vehicle.

COMPLY_____ EXCEPTION_____

COMPARTMENTATION

Side compartments shall be an integral assembly with the rear fenders.

Circular fender liners shall be provided for prevention of rust pockets and ease of maintenance.

Compartment flooring shall be of the sweep out design with the floor higher than the compartment door lip.

Drip protection shall be provided above the doors by means of bright aluminum extrusion, formed bright aluminum tread plate or polished stainless steel.

The top of the compartment shall be covered with bright aluminum tread plate rolled over the edges on the front, rear and outward side. These covers shall have the corners welded. **The rear of the covers on both the driver and passenger side shall be caulked (color: gray) the length of the body to protect from water leaking into the body compartment.**

Side compartment covers shall be separate from the compartment tops.

Front facing compartment walls shall be covered with bright aluminum tread plate.

All screws and bolts which protrude into a compartment shall have acorn nuts on the ends to prevent injury.

COMPLY_____ EXCEPTION_____

AGGRESSIVE WALKING SURFACE

All exterior surfaces designated as stepping, standing, and walking areas shall comply with the required average slip resistance of the current NFPA standards.

COMPLY_____ EXCEPTION_____

LOUVERS

Louvers shall be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they shall be formed into the metal and not added to the compartment as a separate plate.

COMPLY_____ EXCEPTION_____

COMPARTMENTATION, DRIVER'S SIDE

State the dimensions of your compartmentation:

L1 (Engineer Compartment):

L2 (Compartment over wheel well):

L3:

COMPLY_____ EXCEPTION_____

COMPARTMENTATION, PASSENGER'S SIDE

State the dimensions of your compartmentation:

R1:

R2:

COMPLY_____ EXCEPTION_____

SIDE COMPARTMENT ROLLUP DOORS

There shall be five (5) compartment doors installed on the side compartments, double faced, aluminum construction, satin aluminum and manufactured by R-O-M Corporation.

The slats shall be double wall box frame extrusion. The exterior surface shall be flat and the interior surface shall be concave to help loose equipment fall to the ground and prevent it from jamming the door.

Between each slat shall be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments.

A stainless-steel lift bar to be provided for opening the door and located at the bottom of each door with latches on the outer extrusion of the door frame. A ledge shall be supplied over the lift bar as additional area to aid in closing the door.

Each door shall have a 4.00" counter balance to assist in lifting.

A heavy-duty magnetic switch shall be used for the control of open compartment door warning lights.

Roll-up doors will be painted the job color red chosen at the pre-construction conference.

COMPLY_____ EXCEPTION_____

COMPARTMENTATION, REAR

A compartment above the rear tailboard shall be provided.

A louvered, removable access panel shall be furnished on the back wall of the compartment.

Two (2) partitions shall be bolted in place to separate driver and passenger side rear compartments from the rear tailboard compartment.

State the dimensions of the rear compartment:

COMPLY_____ EXCEPTION_____

REAR COMPARTMENT ROLL UP DOOR

The rear compartment door shall be a roll-up style door. The door shall be double faced aluminum construction, satin aluminum and manufactured by R-O-M Corporation.

The slats shall be a double wall box frame extrusion. The exterior surface shall be flat and the interior surface shall be concave to help loose equipment fall to the ground and prevent loose equipment from jamming the door.

Between each slat shall be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments.

A stainless-steel lift bar to be provided for opening the door and located at the bottom of each door with latches on the outer extrusion of the door frame. A ledge shall be supplied over the lift bar as additional area to aid in closing the door.

Each door shall have a 4.00" counter balance to assist in lifting.

A heavy-duty magnetic switch shall be used for control of open compartment door warning lights.

There shall be a roll-up door guard/drip pan fabricated and installed by the manufacturer to prevent the door being damaged by equipment being deployed and loaded into the compartment.

The Roll-up door will be painted the job color red chosen at the pre-construction conference.

COMPLY_____ EXCEPTION_____

COMPARTMENT LIGHTING

There shall be six (6) compartments with Amdor Model AY-9220 white 12-volt DC LED compartment light strips.

There shall be two (2) strip lights installed vertically in each compartment opening per the latest NFPA requirements.

The lights shall be activated when the battery switch is on and the respective compartment door is opened.

COMPLY_____ EXCEPTION_____

MOUNTING TRACKS

There shall be six (6) sets of tracks for mounting shelf(s) in all compartments. These tracks shall be installed vertically to support the adjustable shelf(s), and shall be full height of the compartment. The tracks shall be painted to match the compartment interior.

COMPLY_____ EXCEPTION_____

ADJUSTABLE SHELVES

There shall be five (5) shelves with a capacity of 500 pounds provided. The shelf construction shall consist of aluminum with 2.00" sides. Each shelf shall be adjustable.

The shelf locations will be as follows:

- One (1) in the driver side compartment forward of the rear wheel.
- One (1) in the driver side compartment above the wheel well.
- One (1) in the driver side compartment rear of the rear wheel.
- One (1) in the rear compartment.
- One (1) in the officer side compartment forward of the rear wheel.

The driver side compartment rear of the rear wheel shall look similar in design to accommodate the following tools and equipment:



COMPLY_____ EXCEPTION_____

PULL-OUT TRAY

There shall be Three (3) pull-out trays with **3.00"** sides and a capacity of 500 pounds provided. Capacity rating shall be in the extended position.

There shall be three (3) undermount-roller bearing type slides rated at 250lb each provided.

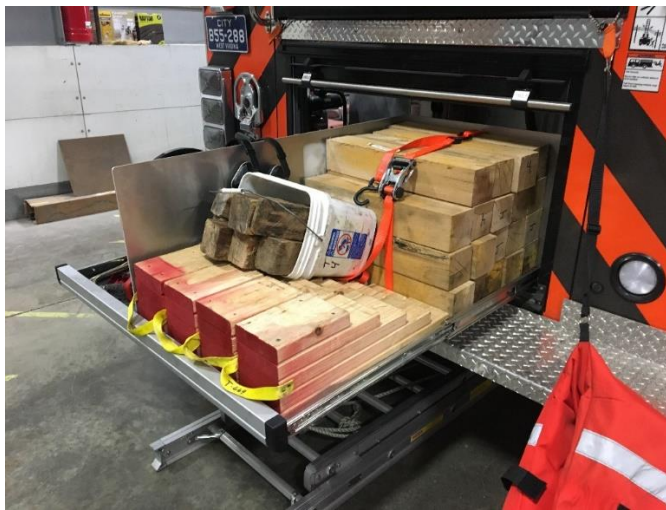
Automatic locks shall be provided for both the "in" and "out" positions. The trip mechanism for it shall be located at the front of the tray for ease of use with a gloved hand.

Tray locations shall be One (1) in the engineer compartment adjustable for adapters and fittings, One (1) in the floor of the rear compartment, and One (1) in the floor of the officer side compartment behind the rear wheels.

Heavy-duty steel angle iron assembly shall support the body under the compartment floor. It shall be attached to the chassis frame for load transfer and to reduce stress on body.

The rear compartment floor tray will look similar in design to the pictures provided to accommodate the following tools and equipment:





COMPLY _____ EXCEPTION _____

ALUMINUM PEGBOARD

Six (6) horizontally installed tracks, with aluminum pegboard shall be installed in the following areas:

- One (1) on the interior back wall of the crew cab area on the driver.
- One (1) on the interior side wall of the crew cab area on the officer side.
- One (1) in the driver side compartment ahead of the rear wheels on the side walls.
- One (1) in the driver side compartment above the rear wheels
- One (1) in the driver side compartment behind the rear wheels on the side walls.

State the color of the Aluminum Pegboard: _____

COMPLY _____ EXCEPTION _____

RUB RAIL

Bottom edge of the side and rear of the body compartments shall be trimmed with a bright aluminum extruded rub rail.

Trim shall be 2.12" high with 1.38" flanges turned outward for rigidity.

The rub rails shall not be an integral part of the body construction, which allows replacement in the event of damage.

COMPLY _____ EXCEPTION _____

BODY FENDER CROWNS

Stainless steel fender crowns shall be provided around the rear wheel openings.

A rubber welting shall be provided between the body and the crown to seal the seam and restrict moisture from entering.

A dielectric barrier shall be provided between the fender crown fasteners (screws) and the fender sheet metal to prevent corrosion.

COMPLY _____ EXCEPTION _____

HARD SUCTION HOSE STORAGE

Hard suction hose storage needs to be mounted on the top edge of the driver side body. Hose trays can be either fixed mounted or adjustable. Two (2) Kochek (Part No. 2P601) 10 ft. lengths of 6" suction hose shall be provided. A 6" Kochek (Part No. BS60) barrel strainer shall also be provided.

COMPLY _____ EXCEPTION _____

HANDRAILS

Handrails shall be provided in the following locations:

- One (1) handrail shall be provided on the officer side rear cab wall exterior not less than 18.00” long, shall be mounted up high to assist a firefighters loading preconnects.
- Four (4) handrails shall be provided, two above each side pump panel.
- One (1) vertical handrail shall be provided on the driver's side body, on the front bulkhead door frame.
- One (1) vertical handrail, not less than 29.00" long, shall be located on each rear beavertail.
- One (1) full width horizontal handrail shall be provided below the hose bed at the rear of the apparatus.

State the material of the handrails:

COMPLY_____ EXCEPTION_____

EXTINGUISHER/AIR BOTTLE/ STORAGE (TRIANGULAR)

A total of one (1) extinguisher/air bottle/storage compartments will be provided One (1) forward of the Driver's side rear wheels. The triangular shaped compartment will be sized to fit an 8.00" diameter extinguisher in the lower area and a 8.00" diameter extinguisher in the upper area. The compartment will be approximately 25.50" deep. A partition will be provided to separate the compartment. Also, inside the compartment, black rubber matting will be provided. The compartment will be furnished with a drain hole. A polished stainless steel, triangular shaped door with a chrome plated flush lift & turn latch will be provided to contain the air bottles. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.

COMPLY_____ EXCEPTION_____

AIR BOTTLE STORAGE (TRIPLE)

A quantity of one (1) air bottle compartment designed to hold (3) air bottles up to 7.25" in diameter x 26.00" deep will be provided on the passenger side rearward of the rear wheels. A polished stainless-steel door with a chrome plated flush lift & turn latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.

Inside the compartment, black rubber matting will be provided.

COMPLY_____ EXCEPTION_____

AIR BOTTLE COMPARTMENT STRAP

A strap will be provided in the air bottle compartment(s) to help contain the air bottles when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.

COMPLY _____ EXCEPTION _____

AIR BOTTLE STORAGE (SINGLE)

A quantity of one air bottle compartment, approximately 7.50" wide x 7.50" tall x 26.00" deep, will be provided on the driver side rearward of the rear wheels. The triangular door will cover the air bottle opening, the DEF tank access, and fuel fill. The compartment will be square with angled corners. A polished stainless-steel door with a chrome plated flush lift & turn latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.

Inside the compartment, black rubber matting will be provided.

COMPLY _____ EXCEPTION _____

AIR BOTTLE COMPARTMENT STRAP

A strap will be provided in the air bottle compartment to help contain the air bottle when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.

COMPLY _____ EXCEPTION _____

EXTINGUISHER STORAGE

A total of one (1) extinguisher compartments shall be provided. One (1) forward of the Passenger's Side rear Wheels. The extinguisher compartment shall be in the form of a square tube (8.25" minimum) and of adequate depth to accommodate different size extinguishers. Flooring shall be rubber lined and have a drain hole. A polished stainless steel, triangular shaped door with a chrome plated flush lift & turn latch shall be provided to contain the air bottles. A dielectric barrier shall be provided between the door hinge, hinge fasteners (screws) and the body sheet metal.

A stainless steel scuffplate shall be provided around each extinguisher compartment opening. The scuffplates shall not be visible when the air bottle compartment door is closed.

A stainless steel scuffplate shall be provided around each air bottle compartment opening. The scuffplates shall not be visible when the air bottle compartment door is closed.

COMPLY_____ EXCEPTION_____

EXTENSION LADDER

NFPA 1901, 2009 edition, section 5.7.1.2 requires an extension ladder.

There shall be one (1) extension ladder(s) provided and installed by the manufacturer. The ladder shall be a Duo-Safety series 900A, 24 foot 2-section extension ladder.

COMPLY_____ EXCEPTION_____

ROOF LADDER

NFPA 1901, 2009 edition, section 5.7.1.2 requires a minimum of one roof ladder.

There shall be one (1) roof ladder(s) provided and installed by the manufacturer. The ladder shall be a Duo-Safety series 775A, 14-foot roof ladder.

COMPLY_____ EXCEPTION_____

LADDER BRACKETS

The ladders shall be installed on the right side of the hose body in lined brackets and held in place by chrome plated, quarter-turn spring loaded clamps. The clamps shall be such that when the roof ladder is removed, the clamps can be moved a half turn to hold the extension ladder in place. The ladder brackets shall be adjustable up and down.

COMPLY_____ EXCEPTION_____

FOLDING LADDER

One (1) Duo Safety, 10-foot aluminum folding ladder with feet shall be provided and installed by the manufacturer.

The mounting tube shall be installed on the inside of the side sheet ladder mounting brackets. A stop shall be provided to keep the ladder from sliding forward in the bracket. The flooring of this ladder tunnel shall have

durasurf to help the folding ladder deploy and stow easily. A nylon strap shall be provided at the rear of the tube to retain the ladder.

COMPLY _____ EXCEPTION _____

PIKE POLE STORAGE

Aluminum tubing shall be used for the storage of three (3) NY Hooks and shall be installed behind the ground ladders on the inside of the side sheet ladder mounting brackets. If the head of a NY Hook can come in contact with a painted surface, a brushed stainless steel scuffplate shall be provided to begin where the NY Hooks deploy to the top edge of the bright aluminum tread plate compartment top. Each NY Hook tube will have a removable pin that is secured to each NY Hook tube to secure the NY Hooks while driving on the road. The NY Hook storage tubes shall be notched to accommodate the following from top to bottom:

- One (1) 8-foot NY Hook.
- One (1) 6-foot NY Hook.
- One (1) 6-foot NY Hook.

COMPLY _____ EXCEPTION _____

HIGH RISE HOSE PACK STORAGE

There shall be provision to store four (4) Fire Department supplied 50` lengths of 2" Mercedes textiles Krakenko Exo high rise hose packs on the officer side compartment top. Hose packs shall be stored end to end along the compartment top, and shall be secured in place with a series of heavy-duty seat belt type nylon buckle straps. The outer edge of the straps shall be mounted to the outer edge of the compartment top, and the inner edge of the straps shall be mounted along an aluminum treadplate surface that is outboard of the hose bed wall down low. All mounting hardware shall be stainless steel

STEPS

A folding step shall be provided on the front of each fender compartment. The step shall be bright finished, non-skid with a black coating. Each step shall incorporate an LED light to illuminate the stepping surface. The step can be used as a hand hold with two openings wide enough for a gloved hand.

COMPLY _____ EXCEPTION _____

FRONT BODY STEPS

Three (3) additional folding steps shall be located Two (2) on the Driver's side on the front bulkhead, One (1) step light shall be provided on the officer side rear of the cab 38 3/4" from the ground. Each step shall incorporate an LED light to illuminate the stepping surface. The step(s) can be used as a hand hold with two openings wide enough for a gloved hand.

COMPLY_____ EXCEPTION_____

REAR STEPS

Four (4) non-skid folding steps shall be provided at the rear. The folding steps shall have a black coating.

Each folding step shall incorporate an LED light to illuminate the stepping surface. The folding steps can be used as a hand hold with two openings wide enough for a gloved hand. All steps shall provide adequate surface for stepping.

An 8" deep x 46" wide non-skid aluminum treadplate step with mitered corners shall be installed above the rear panel compartment for ease of access to the hose bed area.

COMPLY_____ EXCEPTION_____

TRAFFIC ADVISOR

One (1) Whelen TAM65 36" LED traffic advisor shall be installed underneath the 8" deep x 46" treadplate step at the rear of the apparatus.





The advisor shall have six (6) amber TIR6 Super LED light heads. The TACTL5 control head shall be mounted in a location that both the driver and officer can reach the controls.

COMPLY_____ EXCEPTION_____

MIDSHIP FIRE PUMP HALE Q-MAX 2000GPM SINGLE STAGE

Fire pump shall be midship mounted. The fire pump shall be of the double suction single stage centrifugal type, carefully designed in accordance with good modern practice.

The pump shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI.

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.

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 2000 gallons per minute in accordance with NFPA# 1901.

The pump shaft shall be rigidly supported by three bearings for a minimum deflection. One 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 lubrication system, pressure balanced to exclude foreign material. The remaining bearings shall be heavy duty type, deep groove ball bearings in the gearbox and they shall be splash lubricated.

COMPLY_____ EXCEPTION_____

PUMP TRANSMISSION

The drive unit shall be cast and completely manufactured and tested at the pump manufacturer's factory. The pump drive unit shall be of sufficient size to withstand up to 16,000 foot/pound of torque from the engine in both road and pump operating conditions. The drive unit shall be designed with ample lubrication reserve to maintain the proper operating temperature.

The gearbox drive shafts shall be of heat-treated chrome nickel steel and at least 2.75 inches in diameter, on both the input and output drive shafts. They shall be designed to withstand the full torque of the engine in both road and pump operating conditions. All gears, both drive and pump, shall be of the highest quality, electric furnace, chrome nickel steel. Bores shall be ground to size and teeth integrated, crown-shaved and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability. An accurately cut spur design shall be provided to eliminate all possible end thrust.

The pump ratio shall be selected by the apparatus manufacturer to provide the maximum performance with the engine and transmission selected. Three (3) green warning lights shall be provided to indicate to the operator(s) when the pump has completed the shift from Road to pump position. Two (2) lights shall be located in the truck driving compartment and one (1) light on pump operator's panel, adjacent to the throttle control.

COMPLY _____ EXCEPTION _____

AIR PUMP SHIFT

Pump shift engagement shall be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control shall also be located on the driver's side pump panel.

Two (2) indicator lights shall be provided adjacent to the pump shift inside the cab. One (1) green light shall indicate the pump shift has been completed and be labeled "pump engaged". The second green light shall indicate when the pump has been engaged and the chassis transmission is in pump gear. This indicator light shall be labeled "OK to pump".

Another green indicator light shall be installed adjacent to the hand throttle on the pump panel and indicate either the pump is engaged and the road transmission is in pump gear, or the road transmission is in neutral and the pump is not engaged. This light shall be labeled "Warning: Do not open throttle unless light is on".

The pump shift control in the cab shall be illuminated to meet NFPA requirements.

COMPLY _____ EXCEPTION _____

TRANSMISSION LOCK-UP

The direct gear transmission lock-up for the fire pump operation shall engage automatically when the pump shift control, in the cab, is activated.

COMPLY_____ EXCEPTION_____

AUXILIARY COOLING SYSTEM

A supplementary heat exchange cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the engine water. Heat exchanger shall be cylindrical type and shall be a separate unit. It shall be installed in the pump or engine compartment with the control located on the pump operator's control panel. Exchanger shall be plumbed to the master drain valve.

COMPLY_____ EXCEPTION_____

INTAKE RELIEF VALVE

An Elkhart relief valve shall be installed on the suction side of the pump preset at 125 psig.

Relief valve shall have a working range of 75 psig to 250 psig.

Outlet shall terminate below the frame rails with a 2.50" National Standard hose thread adapter and shall have a "do not cap" warning tag.

Control shall be located behind an access door at a side pump panel.

COMPLY_____ EXCEPTION_____

TOTAL PRESSURE MASTER RELIEF VALVE

A Hale Total Pressure Master relief valve system shall provide both the discharge and suction protection (against excess inlet pressure) as required by NFPA pamphlet #1901 standards.

System shall monitor discharge and suction pressures through single panel mounted control valve. This shall eliminate the need for a separate spring-loaded suction relief valve.

COMPLY_____ EXCEPTION_____

PRIMING PUMP

The priming pump shall be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of NFPA 1901.

All wetted metallic parts of the priming system are to be of brass and stainless-steel construction.

One (1) priming control shall open the priming valve and start the pump primer.

COMPLY_____ EXCEPTION_____

RECIRCULATING LINE

A 3/8" line shall be run from the discharge side of the main pump to the water tank to help keep the pump cool when water is not being discharged. This line shall be designed to circulate water from the pump back to the tank when the recirculating valve is open. This water circulation shall help to maintain the pump water temperature at a safe level. The recirculation valve shall be located on the left pump operator's panel.

COMPLY_____ EXCEPTION_____

THERMAL RELIEF VALVE

A Hale TRV120-L thermal protection device shall be included on the pump that monitors pump water temperature and opens to relieve water to cool the pump when the temperature of the pump water exceeds 120 Degrees F (49 C).

The thermal protection device shall include a red warning light. The warning light with a test switch shall be mounted on the pump operator panel.

The discharge line shall be 3/8-inch diameter tubing plumbed to ground.

COMPLY_____ EXCEPTION_____

PUMP MANUALS

Two (2) pump manuals from the pump manufacturer shall be furnished in compact disc format with the apparatus. Manuals shall cover pump operation, maintenance, and parts.

COMPLY_____ EXCEPTION_____

PLUMBING, STAINLESS STEEL AND HOSE

All inlet and outlet lines shall be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hoses shall be equipped with brass or stainless-steel couplings. All stainless-steel hard plumbing shall be a minimum of a schedule 10 wall thickness.

Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping shall be equipped with victaulic or rubber couplings.

Plumbing manifold bodies shall be ductile cast iron or stainless steel.

All piping lines are to be drained through a master drain valve or shall be equipped with individual drain valves. All drain lines shall be extended with a hose to drain below the chassis frame.

All water carrying gauge lines shall be of flexible polypropylene tubing.

All piping, hose and fittings shall have a minimum of a 500 PSI hydrodynamic pressure rating.

COMPLY _____ EXCEPTION _____

MAIN PUMP INLETS

A 6.00" pump manifold inlet shall be provided on each side of the vehicle. The suction inlets shall include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.

COMPLY _____ EXCEPTION _____

MAIN PUMP INLET CAP

The main pump inlets shall have National Standard Threads with long handle chrome caps. The caps shall be the VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected. (no exception)

COMPLY _____ EXCEPTION _____

VALVES

All ball valves shall be Akron Brass in-line valves. The Akron valves shall be the 8000 series heavy-duty style with a stainless-steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve.

Valves shall have a ten (10) year warranty.

COMPLY_____ EXCEPTION_____

INLET (LEFT SIDE)

On the left side pump panel shall be one (1) 2.50" auxiliary suction, terminating in 2.50" National Standard Hose Thread. The auxiliary suction shall be provided with a strainer, chrome swivel and plug.

The location of the valve for the one (1) inlet shall be behind the pump panel.

COMPLY_____ EXCEPTION_____

ANODE, INLET

A pair of replaceable sacrificial .75" magnesium anodes shall be provided in the water pump to protect the pump from corrosion. One (1) shall be placed in the inlet side of the pump and the other in the discharge side of the pump.

COMPLY_____ EXCEPTION_____

INLET CONTROL

Control for the side auxiliary inlet(s) shall be located at the inlet valve.

COMPLY_____ EXCEPTION_____

INLET BLEEDER VALVE

A .75" bleeder valve shall be provided for each side gated inlet. The valves shall be located behind the panel with a swing style handle control extended to the outside of the panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders shall be routed below the chassis frame rails.

COMPLY_____ EXCEPTION_____

TANK TO PUMP

The booster tank shall be connected to the intake side of the pump with heavy duty piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line shall run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling shall be included in this line to prevent damage from vibration or chassis flexing.

A check valve shall be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.

COMPLY _____ EXCEPTION _____

TANK REFILL

A 2.00" combination tank refill and pump re-circulation line shall be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.

COMPLY _____ EXCEPTION _____

DISCHARGE OUTLETS (LEFT SIDE)

There shall be two (2) discharge outlets with a 2.50" valve on the left side of the apparatus, terminating with a male 2.50" National Standard hose thread adapter. The valve should be controlled by a swing type handle located at the operator's panel. The handle shall have a full 90-degree movement.

COMPLY _____ EXCEPTION _____

DISCHARGE OUTLETS (RIGHT SIDE)

There shall be two (2) discharge outlets 2.50" valve on the right side of the apparatus, terminating with a male 2.50" National Standard hose thread adapter. The valve should be controlled by a swing type handle located at the operator's panel. The handle shall have a full 90-degree movement.

COMPLY _____ EXCEPTION _____

DISCHARGE OUTLET, 4.00"

There shall be a 4.00" discharge outlet with a 4.00" Akron valve installed on the right side of the apparatus,

terminating with male a 4.00" National Standard hose thread adapter. This discharge outlet shall be actuated with a handwheel control at the pump operator's control panel. An indicator shall be provided to show when the valve is in the closed position.

COMPLY_____ EXCEPTION_____

CROSSLAYS FRONT BUMPER

Two (2) crosslay hose beds shall be supplied in the front bumper. The piping and valves shall be 2", the swivel shall be 1.5". The valves shall be the "drop-out" style, push/pull controlled from the pump panel. Each compartment shall hold 200 ft. of 1.88" firequip combat master flow hose. Both beds shall be of the same dimension.

COMPLY_____ EXCEPTION_____

2.5" DISCHARGE LEFT HOSE BED

There shall be a 2.5" gated discharge piped to the left front of the hose bed. The discharge shall be installed with proper clearance for spanner wrenches or adapters. Plumbing shall be 2.5" piping and a full flow 2.5" ball valve with the control at the pump operator's panel.

COMPLY_____ EXCEPTION_____

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.

COMPLY_____ EXCEPTION_____

VALVE ACTUATOR

The valve shall be controlled by an Innovative Controls push/pull handle located at the operator's panel.

COMPLY_____ EXCEPTION_____

2.5" PRESSURE GAUGE

A Hale Class 1 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.

COMPLY_____ EXCEPTION_____

THREAD TERMINATION

The above shall terminate with National Standard Threads.

COMPLY_____ EXCEPTION_____

2.5" DISCHARGE LEFT HOSE BED

There shall be a 2.5" gated discharge piped to the left front of the hose bed. The discharge shall be installed with proper clearance for spanner wrenches or adapters. Plumbing shall be 2.5" piping and a full flow 2.5" ball valve with the control at the pump operator's panel.

COMPLY_____ EXCEPTION_____

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 have a 10-year warranty covered by Akron Brass.

COMPLY_____ EXCEPTION_____

VALVE ACTUATOR

The valve shall be controlled by an Innovative Controls push/pull handle located at the operator’s panel.

COMPLY _____ EXCEPTION _____

2.5" PRESSURE GAUGE

A Hale Class 1 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.

COMPLY _____ EXCEPTION _____

THREAD TERMINATION

The above shall terminate with National Standard Threads.

COMPLY _____ EXCEPTION _____

2.5" DISCHARGE RIGHT HOSE BED

There shall be a 2.5" gated discharge piped to the right front of the hose bed. The discharge shall be installed with proper clearance for spanner wrenches or adapters. Plumbing shall be 2.5" piping and a full flow 2.5" ball valve with the control at the pump operator's panel.

COMPLY _____ EXCEPTION _____

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.

COMPLY _____ EXCEPTION _____

VALVE ACTUATOR

The valve shall be controlled by an Innovative Controls push/pull handle located at the operator’s panel.

COMPLY_____ EXCEPTION_____

2.5" PRESSURE GAUGE

A Hale Class 1 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.

COMPLY_____ EXCEPTION_____

THREAD TERMINATION

The above shall terminate with National Standard Threads.

COMPLY_____ EXCEPTION_____

2.5" DISCHARGE RIGHT HOSE BED

There shall be a 2.5" gated discharge piped to the right front of the hose bed. The discharge shall be installed with proper clearance for spanner wrenches or adapters. Plumbing shall be 2.5" piping and a full flow 2.5" ball valve with the control at the pump operator's panel.

COMPLY_____ EXCEPTION_____

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.

COMPLY_____ EXCEPTION_____

VALVE ACTUATOR

The valve shall be controlled by an Innovative Controls push/pull handle located at the operator's panel.

COMPLY _____ EXCEPTION _____

2.5" PRESSURE GAUGE

A Hale Class 1 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.

COMPLY _____ EXCEPTION _____

THREAD TERMINATION

The above shall terminate with National Standard Threads.

COMPLY _____ EXCEPTION _____

DISCHARGE CAPS

Chrome plated, rocker lug, caps with chains shall be furnished for all discharge outlets.

The caps shall be the VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected. (no exception)

COMPLY _____ EXCEPTION _____

OUTLET BLEEDER VALVE

A .75" bleeder valve shall be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application.

The valves shall be located behind the panel with a swing style handle control extended to the outside of the side pump panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders shall be located at the bottom of the pump panel. They shall be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders shall be routed below the chassis frame rails.

COMPLY_____ EXCEPTION_____

LEFT SIDE OUTLET ELBOWS

The 2.50" discharge outlets, located on the left side pump panel, shall be furnished with a 2.50"(F) National Standard hose thread x 2.50"(M) National Standard hose thread, chrome plated, 45-degree elbow.

The elbows will have an exclusive thread design to automatically relieve stored pressure in the line when disconnected. (no exception)

COMPLY_____ EXCEPTION_____

ELBOWS, RIGHT SIDE OUTLETS

The 2.50" discharge outlets, located on the right-side pump panel, shall be furnished with a 2.50"(F) National Standard hose thread x 2.50"(M) National Standard hose thread, chrome plated, 45-degree elbow.

The elbows will have an exclusive thread design to automatically relieve stored pressure in the line when disconnected. (no exception)

COMPLY_____ EXCEPTION_____

REAR OUTLET ELBOWS

The 2.50" discharge outlets, located at the rear of the apparatus, shall be furnished with a 2.50"(F) National Standard hose thread x 2.50"(M) National Standard hose thread, chrome plated, 45-degree elbow.

The elbows will have an exclusive thread design to automatically relieve stored pressure in the line when disconnected. (no exception)

COMPLY_____ EXCEPTION_____

ELBOW, 4.00" OUTLET

The 4.00" outlet(s) shall be furnished with one (1) 4.00"(F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap.

COMPLY_____ EXCEPTION_____

DISCHARGE OUTLET CONTROLS

The discharge outlets shall incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism shall indicate the position of the valve.

If a handwheel control valve is used, the control shall be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel.

COMPLY _____ EXCEPTION _____

DELUGE RISER

A 3.00" deluge riser shall be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping shall be installed securely so no movement develops when the line is charged. The riser shall be gated and controlled at the pump operator's panel with a handwheel control.

COMPLY _____ EXCEPTION _____

TELESCOPIC PIPING

The deluge riser piping shall include an 18.00" Task Force Model XG18 Extend-A-Gun extension.

This extension shall be telescopic to allow the deluge gun to be raised 18.00" increasing the range of operation.

A position sensor shall be provided on the telescopic piping that shall activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.

The deluge riser shall have male National Pipe Threads for mounting the monitor.

A fixed mounting base task force tips (tft) xff-apl - truck adapter, 3.00" npt female which will be screwed directly on a 3.00" npt (75mm) male thread **will be done at the factory by the apparatus manufacturer.**

COMPLY _____ EXCEPTION _____

CROSSLAY STORAGE AREA

There shall be a transverse storage compartment in place of the crosslays. The compartment shall be located above the pump module.

The compartment shall be fabricated out of smooth aluminum with a treadplate door. The door shall have a D-Ring latch.

The compartment shall be approximately 15" wide, 30" tall and 76" deep. The compartment shall include an LED light strip that is activated when the door is open. The compartment must be weather resistant. This compartment will have a wall that will separate the remainder of the pump dunnage area.

COMPLY _____ EXCEPTION _____

BOOSTER REEL AND EQUIPMENT

One (1) 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 of 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.

The reel shall be equipped with 200ft. of 1" Mercedes Textiles Boostlite Treated Yellow fabric jacket solid coil reel hose—21010100ATY with aluminum NH thread expansion type coupling set--5116NH21R.and an TFT Booster Line Nozzle, model number ME0VPGI-100 **“with mounts”**.

A manual drain valve shall be provided.

COMPLY _____ EXCEPTION _____

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.

COMPLY _____ EXCEPTION _____

VALVE ACTUATOR

The valve shall be controlled by an Innovative Controls push/pull handle located at the operator's panel.

COMPLY _____ EXCEPTION _____

THREAD TERMINATION

The above shall terminate with National Standard Threads.

COMPLY_____ EXCEPTION_____

FOAM SUPPLY SYSTEM FOR EXTERNAL EDUCTOR

There shall be an external foam connection provided on the side pump operator’s panel. It shall be connected to the on-board foam cell by a 1" plastic line and plumbed to an Elkhart foam supply kit with a quick disconnect on the pump panel. There shall be an air operated valve connected near the foam cell, with a switch located on the pump panel to turn off the flow of foam to the concentrate outlet. A check valve shall be installed directly after the valve, to prevent unintentional pressurizing of the foam cell. A 3/4"quarter turn valve shall be provided on the pump panel, plumbed from the discharge side of the pump to the foam line just behind the check valve. This will serve as a foam flush from the air operated valve to the foam concentrate outlet connection at the pump panel.

Provided with system will be a male quick connect on the supply line that will mate to the pump panel disconnect.

COMPLY_____ EXCEPTION_____

EXTERNAL EDUCTOR

An Akron 125gpm external eductor shall be provided.

COMPLY_____ EXCEPTION_____

FOAM TANK

There shall be a 30-gallon foam tank. The tank shall be part of the main booster tank. There shall be a 3" PVC fill tower and cap and a tank vent. There shall be a 1-1/2" flanged outlet and drain valve at the lowest point in the tank.

COMPLY_____ EXCEPTION_____

PUMP COMPARTMENT

The pump compartment shall be separate from the hose body and compartments so that each may flex independently of the other. It shall be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards.

The pump compartment shall be mounted on the chassis frame rails with rubber biscuits in a four-point pattern to allow for chassis frame twist.

Pump compartment, pump, plumbing and gauge panels shall be removable from the chassis in a single assembly.

COMPLY _____ EXCEPTION _____

PUMP MOUNTING

Pump shall be mounted to a substructure which shall be mounted to the chassis frame rail using rubber isolators. The mounting shall allow chassis frame rails to flex independently without damage to the fire pump.

COMPLY _____ EXCEPTION _____

PUMP CONTROL PANELS (SIDE CONTROL)

All pump controls and gauges shall be located at the left (driver's) side of the apparatus and properly marked.

The pump panel on the left (driver's) side must have the capability to either be hinged to gain access to the pump panel gauges and valves or a removable panel with lift and turn type fasteners.

The pump panel on the right (passenger's) side must have the capability to either be hinged to gain access to the pump panel gauges and valves or a removable panel with lift and turn type fasteners.

The control panels shall be no greater than 50.00" wide.

The gauge and control panels shall be two (2) separate panels for ease of maintenance.

Polished

stainless-steel trim collars shall be installed around all inlets and outlets.

All push/pull valve controls shall have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods shall be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls shall be capable of locking in any position. The control rods shall pull straight out of the panel and shall be equipped with universal joints to eliminate binding.

The identification tag for each valve control shall be recessed in the face of the tee handle.

All discharge outlets shall have color coded identification tags, with each discharge having its own unique color. Color coding shall include the labeling of the outlet and the drain for each corresponding discharge.

All line pressure gauges shall be mounted in individual chrome plated castings with the identification tag recessed in the casting below the gauge. All remaining identification tags shall be mounted on the pump panel in chrome plated bezels. Mounting of the castings and identification bezels shall be done with a threaded peg cast on the back side of the bezel or screws.

COMPLY_____ EXCEPTION_____

PUMP PANEL CONFIGURATION

The pump panel configuration shall be neat and orderly.

COMPLY_____ EXCEPTION_____

PUMP AND GAUGE PANEL

The pump and gauge panels shall be constructed of black vinyl covered aluminum, to allow easy identification of the gauges and controls and to eliminate glare.

The black vinyl shall be bonded to the aluminum, by the company that supplies the product.

A polished aluminum trim molding shall be provided around each panel.

The driver's side pump panel must have the capability to either be hinged to gain access to the pump panel gauges and valves or a removable panel and fastened with swell type fasteners.

The passenger's side pump panel shall be removable and fastened with swell type fasteners.

COMPLY_____ EXCEPTION_____

PUMP COMPARTMENT LIGHT

A pump compartment light shall be provided inside the right-side pump enclosure and accessible through a door on the pump panel.

A .125" weep hole shall be provided in each light lens, preventing moisture retention.

COMPLY_____ EXCEPTION_____

PUMP PANEL GAUGES AND CONTROLS

The following shall be provided on the pump and gauge panels in a neat and orderly fashion:

- Class 1 Enfo 3 System: With LED display of the engine oil pressure, engine temperature and engine rpm. A warning alarm shall be provided for these items.
- Tachometer: Electric
- Voltmeter

Also provided at the pump panel shall be the following:

- Master Pump Drain Control
- Engine Throttle, Vernier Type

COMPLY_____ EXCEPTION_____

AIR HORN BUTTON

An air horn control button shall be provided at the pump operator's control panel. This button shall be red in color and properly labeled and put within easy reach of the operator.

COMPLY_____ EXCEPTION_____

COLOR CODED NAME TAGS

There shall be fourteen (14) outlet discharges with special color-coded name tags. These tags shall be used for labeling the discharge pressure gauges, controls, outlets and drains. Tank to Pump (Black), Tank Fill (Black), Front Bumper Line No. 1 (Red), Front Bumper Line No. 2 (Blue), No. 1 Driver Side Discharge (Purple), No.2 Driver Side Discharge (Pink), No. 3 Passenger Side Discharge (Lime Green), No. 4 Passenger Side (Orange), Large Diameter Passenger Side Discharge (Brown), Rear Discharge No. 1 (Red), Rear Discharge No. 2 (White), Rear Discharge No. 3 (Green), Rear Discharge No. 4 (Yellow), Deluge Discharge (Magenta).

COMPLY_____ EXCEPTION_____

GAUGES, VACUUM AND PRESSURE

The pump vacuum and pressure gauges shall be liquid filled and manufactured by Class 1, Inc.

The gauges shall be a minimum of 6.00" in diameter and shall have white faces with black lettering, with a pressure range of 30.00"-0-600#.

The pump pressure and vacuum gauges shall be installed adjacent to each other at the pump operator's control panel.

Test port connections shall be provided at the pump operator's panel. One shall be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They shall have 0.25 in. standard pipe thread connections and polished stainless-steel plugs. They shall be marked with a label.

COMPLY_____ EXCEPTION_____

PRESSURE GAUGES

The individual "line" pressure gauges for the discharges shall be interlube filled and manufactured by Class 1.

The gauges shall be a minimum of 3.50" in diameter and shall have white faces with black lettering.

Gauges shall be compound type with a vacuum/pressure range of 30.00"-0-600#.

The individual pressure gauge shall be installed as close to the outlet control as practical.

COMPLY_____ EXCEPTION_____

WATER LEVEL GAUGE

One (1) Class 1 brand Intelli-Tank water tank level gauge shall be located at the pump operator's panel of the fire apparatus to provide wide angle viewing and a high-visibility display of the water tank level. Four (4) ultra-bright LED's on the display module allow the full, ¾, ½ and refill levels to be easily distinguished at a glance.

The long life and extreme durability of LED indicators eliminates light bulb replacement and maintenance. Color coded cover plates shall complete the assembly of the display module.

The system shall calibrate to any size and shape of tank and has a built-in diagnosis feature. It comes complete with an industrial pressure transducer, which will provide nine (9) accurate levels of indications. Each display also has a programmable night dimming feature.

State brand and model of Water Level Gauge: _____

COMPLY_____ EXCEPTION_____

STEP/LIGHT SHIELD

There shall be an aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the pump operator's panel.

- There shall be 12-volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges and instruments necessary for the operation of the apparatus. These lights shall be activated by the pump panel light switch. Additional lights shall be included every 18.00" depending on the size of the pump house.
- One (1) pump panel light shall come on when the pump is in ok to pump mode.

There shall be a light activated above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel.

There shall be a green pump engaged indicator light activated on at the operator's panel when the pump is shifted into gear from inside the cab.

There shall be one (1) white LED, step light provided above this step. In order to ensure exceptional illumination, each step light shall provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light. The step light shall be activated by the pump panel light switch.

COMPLY_____ EXCEPTION_____

ADDITIONAL STEP/LIGHT SHIELD

An additional polished, 16-gauge stainless steel light shield shall be provided above passenger's side pump panel.

- There shall be 12-volt DC white LED lights installed under the light shield to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus.
- These lights shall be activated by the pump panel light switch. Additional lights shall be included every 18.00" depending on the size of the pump house.

COMPLY_____ EXCEPTION_____

ELECTRONIC SIREN

A Whelen, Model: 295SLSA1, electronic siren with noise canceling microphone shall be provided.

This siren to be active when the battery switch is on and that emergency master switch is on.

Electronic siren head shall be located that both the driver and officer can activate and de-activate the siren.

The electronic siren shall be controlled on the siren head only. No horn button or foot switches shall be required.

COMPLY_____ EXCEPTION_____

SIREN PROGRAMMING

The electronic siren shall be programmed to include the warble and whoop tones.

COMPLY_____ EXCEPTION_____

SPEAKER

There shall be one (1) speaker provided. Each speaker shall be a Whelen model SA315P black nylon composite, 100-watt, with through bumper mounting brackets. Each speaker shall be connected to the siren amplifier.

The speaker(s) shall be recessed in the front bumper on the driver's side.

COMPLY_____ EXCEPTION_____

LOW FREQUENCY ELECTRONIC SIREN

One (1) Whelen Howler low frequency electronic siren shall be provided. The siren shall provide low frequency tones through two (2) low frequency speakers. The low frequency siren shall be activated by a switch located in the cab near the driver.

COMPLY_____ EXCEPTION_____

FEDERAL Q2B SIREN

A Federal Q2B siren shall be furnished. A siren brake button shall be installed and located that both the driver and officer can activate the siren brake.

The control solenoid shall be powered up after the emergency master switch is activated. The Federal Q2B siren shall be installed in the center of the cab grille.

The mechanical siren shall be actuated by a foot switch on the driver's and officer side and by the horn button in the steering wheel. The driver shall have the option to control the siren or the chassis horns from the horn button by means of a selector switch located on the instrument panel.

COMPLY_____ EXCEPTION_____

LIGHTBAR, CAB ROOF

There shall be an 88.00" Whelen Freedom Model FN**QLED lightbar mounted on the cab roof.

The lightbar shall include the following:

- One (1) red flashing LED module in the driver's side end position.
- One (1) red flashing LED module in the driver's side front corner position.
- One (1) red flashing LED module in the driver's side first front position.
- One (1) red flashing LED module in the driver's side second front position.
- One (1) red flashing LED module in the driver's side third front position.
- One (1) white flashing LED module in the driver's side fourth front position.
- Open in the driver's side fifth front position.
- Open in the driver's side sixth front position.
- Open in the driver's side seventh front position.
- Open in the passenger's side seventh position.
- Open in the passenger's side sixth front position.
- Open in the passenger's side fifth front position.
- One (1) white flashing LED module in the passenger's side fourth front position.
- One (1) red flashing LED module in the passenger's side third front position.
- One (1) red flashing LED module in the passenger's side second front position.
- One (1) red flashing LED module in the passenger's side first front position.
- One (1) red flashing LED module in the passenger's side front corner position.
- One (1) red flashing LED module in the passenger's side end position.

All lenses shall be clear.

There shall be a switch located in the cab on the switch panel to control this lightbar.

The white warning lights shall be disabled when the parking brake is applied.

The six (6) red flashing LED modules in the front positions may be load managed when the parking brake is applied.

COMPLY _____ EXCEPTION _____

FRONT ZONE LOWER LIGHTS

There shall be one (1) pair of Whelen, SurfaceMax C6L*C red, clear lens, flashing LED lights installed on the cab face above the headlights, in a common bezel with the directional lights.

There shall be a switch located in the cab on the switch panel to control the lights.

COMPLY _____ EXCEPTION _____

SIDE ZONE LOWER LIGHTING

A minimum of Ten (10) flashing super LED lights shall be located at the following positions:

- Two (2) lights, one (1) each side on the bumper extension – Whelen, SurfaceMax C6L*C red, clear lens each side.
- Two (2) lights, one (1) each side centered over front wheels – Whelen, SurfaceMax C6L*C red, clear lens each side.
- Two (2) lights, behind the crew cab doors located toward the top of the cab- Whelen, SurfaceMax C6L*C red, clear lens each side.
- Two (2) lights, one (1) each side under the forward edge of the side pump house running boards/hosewells. - Whelen, SurfaceMax C6L*C red, clear lens each side.
- Two (2) lights, centered over rear wheels - Whelen, SurfaceMax C6L*C red, clear lens each side.

There shall be a switch located in the cab on the switch panel to control the lights.

Each light shall have its own chrome flange, part number C6FC.

COMPLY _____ EXCEPTION _____

SIDE WARNING LIGHTS

There shall be four (4) Whelen, Model WIONSMC* LED light(s) provided and located One (1) as far forward in the front rub rail and One (1) as far rearward in the rear rub rail (on each side of truck).

The color of each light shall be red LED with a clear lens.

Each light shall be provided with a chrome plated ABS flange.

The light(s) shall be activated with the side warning switch.

COMPLY_____ EXCEPTION_____

REAR ZONE LOWER LIGHTING

There shall be four (4) Whelen, SurfaceMax C6L*C red, clear lens lights located at the rear of the apparatus.

- Two (2) of the lights shall be mounted in a cast aluminum housing.
- Two (2) of the lights shall be mounted in a chrome flange, part number C6FC.

There shall be a switch located in the cab on the switch panel to control the lights.

COMPLY_____ EXCEPTION_____

REAR/SIDE ZONE UPPER WARNING LIGHTS

There shall be two (2) Whelen, Model L31H*FN, LED warning beacons provided at the rear of the truck, located one (1) each side. There shall be a switch located in the cab on the switch panel to control the beacons.

The color of the lights shall be red LEDs with both domes red.

The rear warning lights shall be mounted on stainless steel brackets with all wiring totally enclosed. These brackets shall also support the deck lights and clearance/marker lights.

COMPLY_____ EXCEPTION_____

110-VOLT INTERIOR RECEPTACLE

There shall be one (1), 15-amp 120-volt AC three (3) wire straight blade duplex receptacle(s) with interior cover plate(s) installed in the bottom Right Hand corner of the Rear facing EMS compartment. The NEMA configuration for the receptacles shall be 5-15R.

The receptacle(s) shall be powered from the shoreline inlet.

There shall be a label installed near the receptacle(s) that state the following:

- Line Voltage

- Current Rating (amps)
- Phase
- Frequency
- Power Source

COMPLY_____ EXCEPTION_____

INSTALLATION OF RADIO AND ANTENNA:

The Three (3) Fire Department radios and (1) antenna from the loose equipment will be installed locally by MobileCom.

COMPLY_____ EXCEPTION_____

LOOSE EQUIPMENT

The following equipment shall be furnished with the completed unit. **To the highest degree possible, Pac Tool Mounts are to be used where “mounts” are listed.** Please note this will be the complement of loose equipment per unit. Please pay attention to items specifically for one unit versus the other:

- One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.
 - One pint of red and one pint of white touchup paint.
1. One (1) Motorola APX6500 7/800MHZ Mid Power Mobile, Part number M25URS9PW1AN.
 2. One (1) Motorola ENH: Astro Digital CAI/OP APX, Part number Q806BE.
 3. One (1) Motorola ENH: Hand Mic, GCAI Water Resistant, Part number G892AB.
 4. One (1) Motorola ADD: Palm Microphone, Part number W22BA.
 5. One (1) Motorola ENH: 2 Year SFS Lite, Part number G24AX.
 6. One (1) Motorola ADD: Remote Mount, Part number G67BZ.
 7. One (1) Motorola ADD: Impact Green Color Housing, Part number GA201AA.
 8. One (1) Motorola ADD: Remote Mount CBL 50’, Part number G609AC.
 9. One (1) Motorola ADD: Control Head Software, Part number G444AE.
 10. One (1) Motorola ENH: Smart Zone Operation APX 6500, Part number G51AU.
 11. One (1) Motorola ADD: P25 Trunking Software, Part number G361AH.
 12. One (1) Motorola ADD: ANT 3 DB Low Profile, Part number G174AD.

13. One (1) Motorola Auxiliary Speakers 7.5-Watt, Part number B18CR.
14. One (1) Motorola ADD: GPS Activation, Part number GA00229AA.
15. One (1) Motorola ADD: GPS Antenna, Part number GPSDM700/5800GGTU/M.
16. One (1) Motorola ADD: APX 02 Control Head, Part number GA00804AB.
17. One (1) Motorola ADD: Dual Control HD Hardware, Part number GA0092AC.
18. One (1) Motorola CM300D radio with a quarter wave VHF antenna (**Engine 304 only**).
19. One (1) Kocheck 6" NST Male adapter mount, Part number MM601.
20. One (1) Kocheck 4 ½" NST Male adapter mount, Part number MM4501.
21. One (1) Zico Bolt Cutter Bracket, Part number BCB.
22. Four (4) Red head brass style 148-3 triple holder set w/style 105 hydrant wrench complete with style 148 holder, one style 105 hydrant wrench and two (2) style 101 spanner wrenches.
23. Six (6) Performance Advantage Company (PAC Tools) Toolok's, Part number 1003.
24. Four (4) Performance Advantage Company (Pac Tools) Handlelok's, Part number 1004.
25. Two (2) Performance Advantage Company (Pac Tools) Ironsloc, Part number K5003.
26. Two (2) Firehooks unlimited 30" Pro Bar one-piece halligan tool, Part number: PRO-BAR 30.
27. Nine (9) TFT Valve integrated smooth bore nozzle, 15/16" smooth bore, pistol grip, built in stream shaper, retractable thread protector for when tip has been removed, 1.5" NH. Item number: TFT HVITG12.
28. Five (5) TFT Ball valve, 2.5" NH(F)x1.5" NH(M), 1 3/8" W/Way. Item number: TFT J140F.
29. Five (5) TFT Straight tip, 1.5" NH Inlet with 1 ¼" tip. Item number: TFT FSS11.
30. One (1) TFT HVO Shutoff.
31. One (1) TFT 1 1/16" Smooth Bore Tip, Part number FSS3.
32. One (1) TFT Metro 1 nozzle 14 Flow choices with inter changeable disc, PG 1.5" NH, Item number: TFT ME1-VPGI.
33. One (1) TFT FQ125BCL QUADRACUP TIP ONLY,30-60-90-125 GPM @ 75psi,1.5"NH,
34. One (1) TFT Booster Line Nozzle, model number ME0VPGI-100.
35. Two (2) TFT 2 ½" Fog Nozzles, model number ME22VPGI-354.

36. Ground Ladders:

- a) One (1) Duo-Safety series 900A, 24 foot 2-section extension ladder.
- b) One (1) Duo-Safety series 775A, 14-foot roof ladder.
- c) One (1) Duo Safety series 585-A, 10-foot aluminum folding ladder.

37. Skull Saver:

- a) One (1) R and B Fab Ladder Boot Large 9" x 24".

38. Deck Gun, Deck Gun Tips, Stream Straighter, Truck Mount Base, Portable Base:

- a) One (1) Task Force Tips (tft) xft-nj crossfire monitor top 2.50" nh (65mm) outlet monitor shall be properly installed on the deluge riser. The monitor shall include a task force tips (tft) xf-ss10 - stream straightener 10" 2.50" nh (65mm) threads. A task force tips (tft) mst-4nj - 4 stacked tips, 2.50" nh (65mm) designed for monitor use, these lightweight tips are hard coat anodized, allow four orifice options in one, and have pressure/flow charts laser engraved on each tip. 2.50" nh (65mm) shall be provided including tip sizes of 1.375" (35mm), 1.50" (38mm), 1.75" (45mm), and 2.00" (50mm). The monitor shall include both a fixed mounting base task force tips (tft) xff-apl - truck adapter, 3.00" npt female which will be screwed directly on a 3.00" npt (75mm) male thread. Also provided will be a task force tips (tft) safe-tak 1250 portable base with safe-tak valve is supplied with two clappered swivel inlets which includes a safety tie-down strap with attached storage cap. A task force tips (tft) xf-b - crossfire storage bracket a 13 ga., 304 stainless-steel bracket with strap holds the safe-tak 1250 portable base securely while being transported. This bracket dimensions are 14.75" x 7.75" x 2" (37.5 x 19.7 x 5.1 cm).

39. Four (4) Streamlight Vulcan LED model rechargeable handlights shall be provided.

Four (4) charging units for handlights shall be mounted on the apparatus. One (1) charging unit shall be shipped loose.

40. Hose:

- a) Twenty-Four (24) – 50' sections of 2.5" Mercedes Textiles Krakenexo hose, item number 12525050ATT. Color: Tan (750ft.), item number 12525050ATR. Color: Red (250ft.), item number 12525050ATC. Color: White (200ft.).
- b) Four (4) – 50' sections of 2" Mercedes Textiles Krakenexo hose, item number 12520050ATC. Color: Orange.
- c) Twenty-Four (24) – 50' sections of 1.88" Firequip combat master flow hose, item number FQ CM17RB. Colors: Red (200ft.), FQ CM17BB Blue (200ft.), FQ CM17YB Yellow (200ft.), FQ CM17LB Green (200ft.), FQ CM17WB White (400ft.).

- d) Twelve (12) Mercedes Textiles Deluge 5” x 100’ rubber covered in yellow-- PAT501002AT (Yellow) with anodized aluminum gold I-identify storz coupling set— 5180RZAG.
 - e) Two (2) Mercedes Textiles Deluge 5” x 50’ rubber covered in yellow-- PAT500502AT (Yellow) with anodized aluminum gold I-identify storz coupling set—5180RZAG.
 - f) Two (2) Mercedes Textiles Boostlite 1” x 100’ Treated Yellow fabric jacket solid coil reel hose—21010100ATY with aluminum NH thread expansion type coupling set-- 5116NH21R.
 - g) One (1) Mercedes Textiles 12525015ATT- KrakenExo 2.5” x 15 feet double jacket treated Tan with: 5140NH46R-Anodized gold aluminum NH way-out couplings.
 - h) Two (2) Fire Quip 100ft. Forestry Hose, Synthetic, 1” NST x 100ft. Yellow, Part No FQ FH10YD.
41. One (1) MSA Evolution 6000+ TIC w/ Quick Temp, Heat Seeker, Laser Pointer, Range Finder. MSA Evolution 6000 TIC Station Kit includes 2 batteries, retractable lanyard, 110V Charger, Carabiner, Carrying case, item no. 10173120.
 42. Two (2) TFT jumbo ball intake valve, 5”ST rigid x 6” NH(F). Item No. AXD1ST-NX-F.
 43. One (1) Euramco Ram Fan EX50Li Battery Operated.
 44. Two (2) Zico Model SAC-44 wheel “chocks” with SQCH-44-V holders.
 45. TFT Blitzfire monitor with 1, 1 ¼, 1 ½” smooth bore tips & fog attachment. model XXC-52.
 46. Five (5)- Streamlight Knucklehead Div 2 Flood with Clip- Alkaline, color: orange streamlight part no. 90644.
 47. One (1) – Firehooks unlimited NYF-4 4ft. NY Hook.
 48. Two (2) – Firehooks unlimited RH-6 6ft. NY Hooks.
 49. One (1) – Firehooks unlimited NYF-8 8ft. NY Hook.
 50. Two (2) – Firehooks Unlimited: LS-8 Flat head Axe, special yellow luminous triple strength fiberglass handle with a deer’s hoof. Knurled bottom grip.
 51. Two (2) – Firehooks unlimited: FAP Pickhead axe, fiberglass handle, 6lb.
 52. One (1) – Smoke Ejector Holder, Darley part number P780.
 53. One (1) Elkhart Brass Standpipe Flowmeter 555A, Part number 00555001.
 54. One (1) – Kobalt 230-piece Tool Set with Soft Case - Lowes part# 538864.
 55. One (1) – AutoCraft Nut Driver Set, SAE 7 Piece, Advance Auto part #AC418.
 56. One (1) – AutoCraft Nut Driver Set, Metric, 7-piece, Advance Auto part#AC419.

57. One (1) – Red Head 1.5” Double Female Adapter. - thefirestore.com Part No. 350001500115001.
58. Five (5) Red Head 2.5” F X 1.5” M Adaptors, Part# 37-2.5*1.5.
59. Three (3) Elkhart Brass D-327-A 2.5" NH F X 1.5" NH M Tapered Rigid Adapters – thefirestore.com Part No. ELK-15627001.
60. Three (3) Red Head 2.5” Double Male Adaptors, Part# 36-2.5 DM.
61. Three (3) Red Head 2.5” Double Female Adaptors, Part# 35-2.5 DF.
62. Two (2) – Red Head 5” Storz x 2.5” RLF Swivel Adaptor, Part# S-54RL-5S*2.5.
63. One (1) TFT Foam educator., TFT part# UE-095-NJ-NF.
64. Six (6) Hazard Control Technologies, Inc. F-500 Encapsulator Agent (5-gallon pail), Part No. F500-005G (R)
65. One (1). – Klutch 2lbs. Rubber Mallet, Item# 39932.
66. Two (2) – 5” TFT Storz Caps. -thefirestore.com- Part No. TFT-A01ST.
67. One (1) Hydra-Shield Manufacturing, Inc. Pre-Con Automatic Inlet Valves PC3 (**Engine 305 only**).
68. Four (4) Akron Brass Hose and Ladder Strap, Part No. 78.
69. One (1) – RIT systems 200ft. Chicago style primary w/markers, 3 retract 20ft. tags, Part no.A1101.
70. One (1) - Kocheck Low Level Strainer - 6" NH Long Handle Jet Siphon, Part No. LL60.
71. One (1) – Amerex 15lbs. ABC Dry chemical extinguisher “**with mounts**” part no. A411.
72. One (1) – Amerex Short CO2 Extinguisher “**with mounts**” part no. A331.
73. Two (2) – Amerex 2.5 gallon water extinguishers “**with mounts**” part no. A240.
74. 1 – Spill Kit.
75. 1 – Flow Stop (5 gallon).
76. One (1) - Paratech Standard VSK kit, part#22-796850, “**with mounts**” (**E-304 Only**).
77. One (1) – Turtle Plastics cribbing kit, Item# Std Cribbing Kit B (**E-304 Only**).
78. Two (2) – Milwaukee M18 pivot head flood lights, Fastenal part# 0233756.

79. One (1) – De Walt sawz-all, Model No. DCS367B with battery charger **“with mounts”**.
80. One (1) – Stihl MS-291 20” chain saw w/ 26RMC3 chain.
Two (2) – Stihl 26RMC3 chains.
One (1) – Stihl Pro Mark Apron Chaps, 9 ply – 36”.
81. One (1) Ready Rack Model No. MTB Multi-Purpose Tool Bag.
82. One (1) Reed Manufacturing Company Ratcheting Hydrant Wrench, 18” Long, Item # 02397, Catalog# HWFR.
83. Two (2) - Red Head Hydrant wrenches Style 105/105S Adjustable Hydrant Wrench w/Double Spanner Head.
84. Three (3) Sets of 5” spanner wrenches with brackets, Harrington part# HSSW 401.
85. Four (4) – Red Head Style 101 Universal Spanner Wrenches.
86. Two (2) TFT storz elbow, 5”st rigid x 4.5”nh(f)rlsw1, Part No. TFT AH3ST-NR.
87. One (1) – Fastenal part No. 5228-98990 Rigid 36” Bolt Cutters.
88. One (1) – Council 12# Double Faced Sledge Hammer w/fiberglass handle, Part# PR1200FG **“with mounts”**.
89. One (1) – Part No. PP-TOOL 1 1/8” x 51” Council Tool Pinch Point Crowbar **“with mounts”**.
90. Three (3) Blue Hawk 12ft. x 16ft. Salvage Covers, Lowe’s part number 0187738.
91. One (1) – AutoCraft Screwdriver, Slotted, 1/4” x 4”, Advance Auto part no. AC400.
92. One (1) Gear Wrench 12” Adjustable Wrench with Cushion Grip, Advance Auto Part# 81893.
93. Three (3) – TFT Hydrant Valve, Slow Close Style, 2.5” NH (F) Rocker Lug X 2.5” NH (M), TFT part number: TFT AV5NJ-NJ-SC.
94. Two (2) Council Tool Fire Swatter, Part No. FS15.
95. One (1) Council Tool Fire Rake w/52” hdl, Part No. LW1252.
96. One (1) Council Tool McLeod Tool w/ 48” hdl, Part No. MT48 FSS.
97. 1 – 2 ½” female to 1” garden hose adapter.
98. One (1) – Round shovel, Eagle Long-Handle Wood Digging Shovel, Lowes Part No. 99758, Model No. 1554300 **“with mounts”**.

99. One (1) – Flathead shovel, Blue Hawk Long Handle-Fiberglass Transfer Shovel, Lowes Part No. 109174 Model No. 16097900 **“with mounts”**.
100. One (1) – Push Broom Quickie Bulldozer 24-in Poly Fiber Stiff Push Broom Lowes Part No. 236443 Model No. 00599 **“with mounts”**.
101. One (1) MSA Altair 4XR LEL, O2, CO, H2S Gas Meter 4 Year Warranty, Glow in the Dark, Part No. MSA ALTAIR 4XR GLOW.
102. One (1) Red Head 5” Storz x 6” LHF Swivel Adaptor, Part# S-54-5S*6.
103. One (1) – Ram Mount RAM-109H-3U Swing Arm with horizontal Base and Bal.
104. One (1) Ram Mount RAM-234-3 Universal Laptop MNT.
105. One (1) Access Tools Inc/High Tec One Hand Jack Set, Advance Auto Part No. AETOHJS4.
106. One (1) Access Tools Inc/High Tec Frameless Window Car Opening Wedge, Advance Auto Part No. AETGM2.
107. One (1) Access Tools Inc/twin air jack air wedge, Part No. AETTAW.
108. One (1) Slide Lock Tool Co., Inc. Flex-A-Wedges (3 Per Pack), Part No. 0900.
109. One (1) – Firehooks unlimited Elevator keys.
110. 1 – Binoculars.
111. One (1) – Tele-Lite Sprinkler Stop 4 pack Kit, Part No. TL-SS-4PACK.
112. 1 – Ford M1 Meter Box Universal Key for Locking Lids, Lockless Lids and Yokebox Valves, Part No. MBUK, Vendor: Ferguson Enterprise.
113. Five (5) Collapsible traffic cones, with lights, minimum 28” high.
114. One (1) Greenlee GT-12A Non-Contact Voltage Detector.
115. Two (2) Greenlee cable cutters Cat No: 727 UPC No: 783310312918.
116. Two (2) Channellock 9 in. High-Leverage Lineman Pliers, Model#369.
117. Two (2) 12” OAL 2” Capacity Cast Iron Drop Forged Pipe Wrenches, Fastenal part#0266313.
118. One (1) Johnny Ray JR-500 swivel mount base.
119. One (1) Kochek 6” Barrel Strainer, Part# BS60.

120. Two (2) TFT gated wyes, folding long handles, 2.5"nh(f) x two - 1.5"nh(m), Part No. TFT AYNJ-NF.
121. Ten (10) South Park 2.5" Tri Lock Mounting Plate, Part# QL48Z25C.
122. Two (2) R&B Fabrication HS-100 Hose Strap for up to 100' of Hose.
123. One (1) Channellock 12-in Tongue and Groove Pliers model 442, Lowes part #97341.
124. One (1) Vise Grip 12" Original Large Jaw Locking Pliers, Advance Auto part#VGP12L3.
125. One (1) AutoCraft Utility Wire Brush, Advance Auto part#AC515.
126. One (1) Kochek 5" Storz to 6" NST Male Rigid Adapter, Kochek Part No. S36S56.
127. One (1) Paratech Model 48 – 3 Lift Bag Set, Part No. 22-889048G2. **(Engine 304 ONLY)**
128. One (1) Paratech Control Kit, Part No. 22-890351G2. **(Engine 304 ONLY)**
129. Three (3) Paratech Inline Relief Valves, Part No. 22-895490-150. **(Engine 304 ONLY)**

COMPLY_____ EXCEPTION_____

TOOL MOUNTING

The bidder will include a price to do the loose equipment tool mounting at their service facility.

COMPLY_____ EXCEPTION_____

PAINT

The exterior custom cab and body painting procedure shall consist of a seven (7) step finishing process as follows:

1. Manual Surface Preparation - All exposed metal surfaces on the custom cab and body shall be thoroughly cleaned and prepared for painting. Surfaces that shall not be painted include all chrome plated, polished stainless steel, anodized aluminum and bright aluminum treadplate. Each imperfection on the exterior metal surface shall be removed or filled and then sanded smooth for a smooth appearance. All seams shall be sealed before painting.
2. Chemical Cleaning and Treatment - The metal surfaces shall be properly cleaned using a high pressure and high temperature acid etching system. Surfaces are chemically cleaned to remove all dirt, oil, grease and metal oxides to ensure the subsequent coatings bond well. An ultra pure

water final rinse shall be applied to all metal surfaces, excluding undercarriage components, at the conclusion of the metal treatment process.

3. Primer/Surfacer Coats - A two (2) component urethane primer/surfacer shall be hand applied to the chemically treated metal surfaces to provide a strong corrosion protective base coat and to smooth out the surface.
4. Hand Sanding - The primer/surfacer coat shall be lightly sanded to an ultra-smooth finish.
5. Sealer Primer Coat - A two (2) component sealer primer coat shall be applied over the sanded primer.
6. Topcoat Paint - Urethane base coat shall be applied to opacity for correct color matching.
7. Clearcoat - Two (2) coats of an automotive grade two (2) component urethane shall be applied. Lap style doors shall be clear coated to match the body. Roll-up doors shall not be clear coated and the standard roll-up door warranty shall apply.

All removable items such as brackets, compartment doors, door hinges, trim, etc. shall be removed and painted separately to insure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly shall be finish painted before assembly.

The cab shall be all one-color painted Red. The rear body shall be all one-color painted Red.

COMPLY_____ EXCEPTION_____

PAINT - ENVIRONMENTAL IMPACT

Contractor shall meet or exceed all current State (his) regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water and soil. Controls shall include the following conditions:

- Topcoats and primers shall be chrome and lead free.
- Metal treatment chemicals shall be chrome free. The wastewater generated in the metal treatment process shall be treated on-site to remove any other heavy metals.
- Particulate emission collection from sanding operations shall have a 99.99% efficiency factor.
- Particulate emissions from painting operations shall be collected by a dry filter or water wash process. If the dry filter means is used, it shall have an efficiency rating of 98.00%. Water wash systems shall be 99.97% efficient.
- Water from water wash booths shall be reused. Solids shall be removed mechanically on a continual basis to keep the water clean.
- Paint wastes are disposed of in an environmentally safe manner. They are used as fuel in kilns used in the cement manufacturing process - thereby extracting energy from a waste material.

- Empty metal paint containers shall be cleaned, crushed and recycled to recover the metal.
- Solvents used in cleanup operations shall be collected, sent off-site for distillation and returned for reuse. Residue from the distillation operation shall be used as fuel in off-site cement kilns.

Additionally, the finished apparatus shall not be manufactured with or contain products that have ozone depleting substances. Contractor shall, upon demand, present evidence that his manufacturing facility meets the above conditions and that it is in compliance with his State EPA rules and regulations.

COMPLY_____ EXCEPTION_____

PAINT CHASSIS FRAME ASSEMBLY

The chassis frame assembly shall be painted black before the installation of the cab and body and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc.

Components that are included with the chassis frame assembly that shall be painted are:

- Frame rails
- Frame liners
- Cross members
- Axles
- Suspensions
- Steering gear
- Battery boxes
- Bumper extension weldment
- Frame extensions
- Body mounting angles
- Rear Body support substructure (front and rear)
- Pump house substructure
- Air tanks
- Fuel tank
- Castings
- Individual piece parts used in chassis and body assembly

Components treated with epoxy E-coat protection prior to paint:

- Two (2) C-channel frame rails
- Two (2) frame liners

COMPLY_____ EXCEPTION_____

COMPARTMENT INTERIOR PAINT

The interior of compartmentation shall be painted with a gray spatter type paint.

COMPLY_____ EXCEPTION_____

SCOTCH-LITE STRIPING

A "Scotch-Lite" striping will be provided by the bidder. The Scotch-Lite stripe layout will be determined by the Fire Department at the preconstruction conference. The Scotch-Lite striping will be reflective black in color outlined by vinyl gold leaf.

COMPLY_____ EXCEPTION_____

JOG(S) IN REFLECTIVE BAND

The reflective band located on each side of the apparatus body shall contain one (1) jog(s) and shall be angled at approximately 45 degrees when installed.

COMPLY_____ EXCEPTION_____

CHEVRON STRIPING, REAR

The entire rear of the truck will be covered with alternating strips of reflective striping.

The striping will be 6" Scotch-Lite.

The Scotch-Lite will be Red, White, and Blue to match an American Flag. Reference picture:



COMPLY_____ EXCEPTION_____

VINYL GOLD LEAF TRIM

Vinyl gold leaf trim will be provided by the bidder on this unit. Vinyl gold leaf trim will match the design of current Summerville Fire Department fire apparatus. Final layout will be done by Summerville Fire Department personnel at the pre-construction conference.

COMPLY_____ EXCEPTION_____

REFLECTIVE STRIPE INSIDE RUBRAILS

A reflective stripe shall be provided inside the extruded aluminum rubrails. The reflective material shall be white. There shall be a quantity of four (4) rubrails striped.

COMPLY_____ EXCEPTION_____

STOP SIGN, REFLECTIVE, CAB DOORS

A 12.00" x 12.00" reflective stop sign shall be provided on the interior of each cab door. The stop sign shall be located on the stainless-steel door panel.

This sign shall meet the NFPA 1901 requirement.

COMPLY_____ EXCEPTION_____

LETTERING

All lettering for the fire apparatus will be done by the winning bidder at the manufacturing plant.

COMPLY_____ EXCEPTION_____

FIRE APPARATUS PARTS CD MANUAL

There shall be two (2) custom parts manuals for the complete fire apparatus provided in CD format with the completed unit.

The manuals shall contain the following:

- Job number
- Part numbers with full descriptions
- Table of contents
- Parts section sorted in functional groups reflecting a major system, component, or assembly
- Parts section sorted in Alphabetical order
- Instructions on how to locate parts

The manuals shall be specifically written for the chassis and body model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.

COMPLY_____ EXCEPTION_____

SERVICE PARTS INTERNET SITE

The service parts information included in these manuals are also available on the factory website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.

COMPLY_____ EXCEPTION_____

CHASSIS SERVICE CD MANUALS

There shall be two (2) CD format chassis service manuals containing parts and service information on major components provided with the completed unit.

The manual shall contain the following sections:

- Job number
- Table of contents
- Troubleshooting
- Front Axle/Suspension
- Brakes
- Engine Tires
- Wheels
- Cab
- Electrical, DC
- Air Systems
- Plumbing
- Appendix

The manual shall be specifically written for the chassis model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.

COMPLY_____ EXCEPTION_____

CHASSIS OPERATION CD MANUALS

There shall be two (2) CD format chassis operation manuals provided.

ONE (1) YEAR MATERIAL AND WORKMANSHIP

Each new piece of apparatus shall be provided with a minimum one (1) year basic apparatus material and workmanship limited warranty. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.

A copy of the warranty certificate shall be submitted with the bid package. (no exception).

COMPLY_____ EXCEPTION_____



BID EVALUATION

Bids will be evaluated using the following criteria:

- Cost of bid.
- Compliance with our specifications.
- Delivery Date.
- Operation and maintenance cost of equipment.
- Life cycle cost of equal equipment.
- Performance of equipment in actual operating conditions.
- Availability of parts and service.
- Prior experience with vendor and their product.

INFORMATION

Any questions concerning the above specifications contact:

Roger Wnek,

Maintenance Coordinator

Phone: (843) 864-4544

E-mail: rwnek@summerville.sc.gov

The above is true and accurate. I have read and understand the above listed terms and conditions.

Signature of Officer: _____

Printed Name of Officer: _____

Title: _____

Company Name: _____

Date: _____

VENDOR'S NAME & ADDRESS

<u>Item #</u>	<u>Quantity</u>	<u>Description</u>	<u>Total</u>
1.	2 Each	2000 GPM Pumper for the Dept. of Fire, as per the specifications	
_____		(\$ _____)	\$ _____
Total Base Price of Truck		Figures	Ext. Figures
_____		(\$ _____)	\$ _____
Total Price of Loose Equipment		Figures	Ext. Figures
_____		(\$ _____)	\$ _____
All Loose Equipment + Truck		Figures	Ext. Figures

Manufacturer & Model # _____