

Antioch Fire Department / First Fire Protection District



Provided document- RFP FD 06-2018

Performance Based Apparatus Proposal for:

One (1) Single Axle Medium Duty 75 Ft Quint

The Antioch Fire Department serves a community of approx. 21,000 residents located in Lake County IL, operating out of three (3) fire stations and covering roughly 36 square mile including areas with fire hydrants and areas without. The proposed vehicle needs to meet the diverse needs of the department's multiple missions; including, Fire Suppression & Emergency Medical Services.

INSTRUCTIONS TO PROPONENTS

- **The Antioch Fire Department/ First Fire Protection District of Antioch invite submissions from interested parties for the design and construction of ONE (1) Single Axle Medium Duty 75 Ft Quint on a 4 door custom chassis, delivered no later than 365 days from award of contract.**
- Upon acceptance of a final specification from the successful bidder, absolutely no deviation from the bid specs shall be considered without written approval, in the form of a change order, approved by the Fire Chief or his approved designee.

- Sealed proposals will be received until 4:00 **pm Central Standard Time on Friday August 10th, 2018** at the following address:

Antioch Fire Station 1

835 Holbek Drive Antioch IL, 60002

Attn: Apparatus Committee

- Public Opening of the received proposals will be held at the closing time.
- Proposals received after this date and time will be rejected.
- Once a contract has been awarded, the name of the successful bidder will be available to anyone upon request. All submissions become the property of the Antioch Fire Department / First Fire Protection District of Antioch.
- Copies of the Provided document and future addendums are available for download from the Fire Department website: www.antiochfire.org.
- Proposals transmitted by facsimile machine or email will not be considered.
- Proposals submitted are irrevocable once they are submitted. Any questions and/or clarifications shall be sent in writing, via email. Phone calls and/or voicemails wishing to clarify this RFP are prohibited.
- Questions regarding the services required or information contained herein should be directed to Fire Chief Jon Cokefair at jcokefair@antiochfire.org

DEFINITIONS

In the contract, unless the context otherwise requires:

- “Department” shall mean the Antioch Fire Department/First Fire Protection District of Antioch
- “Supplier/Vendor” shall mean the party awarded the contract by the Department
- “Department Representative” shall mean the managers, employees, and agents of the Department designated to administer work under this contract.
- “Quint” shall refer to an NFPA 1901 compliant Quint.

PROPOSAL / MANUFACTURE GUARANTEE

- A 100% Performance bond will be required from the successful Supplier.

PROPOSAL SUBMISSIONS

- All costs incurred by the Bidder in the preparation and presentation of their proposal will be at their own expense.

DISCREPANCIES OR OMISSIONS

- Bidders finding discrepancies or omissions in the provided document, or having any doubts to the meaning or intent of any part thereof, should immediately notify the Department contact in writing, which may send written instructions or explanations to all Bidders on record with the Department. No responsibility will be accepted for oral instructions. Addenda or correspondence issued during the provided document period shall be considered part of this document and become part of the final contract documents.

WITHDRAWAL OF PROPOSAL

- Proposal submissions may be withdrawn personally, written by notice, provided the Department contact receive such notice of withdrawal, prior to closing date and time.

REVISION OF PROPOSAL

- A proposal already delivered may only be revised in the following manner, and the revision must be plainly referable to a particular proposal.
- Revisions to proposals already received shall be submitted by signed letter only, and follow the same manner for addressing as the original RFP. The revision must state only the amount of which a figure is to be increased or decreased, or a specific direction as to the exclusion or inclusion of particular words.

ACCEPTANCE OF PROPOSAL

- The Department is obligated to accept the most responsible proposal, and may not necessarily accept the lowest priced proposal or any proposal. At its sole discretion, the Department reserves the right to reject any or all proposals received and to accept any proposal, which the Department considers advantageous, whether or not it is the lowest priced proposal. The Department is not under any obligation to

award a contract, and reserves the right to terminate the provided document process at any time, and to withdraw from discussions with any or all of the bidders who have responded.

The Department shall not be obligated in any manner to any Bidder whatsoever until a written agreement has been duly executed relating to an approved proposal. No contract is formed as a consequence of this invitation to submit proposals.

- The Department reserves the right to accept the proposed offer in total or in part, to reject any or all offers, to waive any minor informalities, irregularities, or technicalities, and to accept the offer deemed most favorable to the Department.
- Proposals must meet all the requirements herein to be eligible for consideration. Proposals that are unsigned, incomplete, conditional, illegible, unbalanced, and obscure or contain additions not called for, reservations, erasures, alteration or irregularities of any kind may be rejected as informal.
- The Department reserves the right to obtain additional information from the shortlisted Bidders to clarify the information in their submission, and/or conduct interviews to discuss their suitability for the project.
- The Department shall not be obligated to either accept or reject any noncompliance with the requirements of this request.

CONTRACT NEGOTIATION

- The Department reserves the right to negotiate specific terms of the contract with the Bidders prior to the final award of the contract. The Department also reserves the right to negotiate specific terms of the contract with the successful Bidder as the contract progresses.

SOLICITATION OF EMPLOYEES

- Bidders and their Agents are hereby warned that any attempt to solicit individual members of the Selection Committee, Management and Employees of the Department or the respective Boards concerning the award of this contract may jeopardize the favorable consideration of their proposal.

CONFIDENTIALITY AND SECURITY

- This document or any portion thereof may not be used for any purpose other than submission of proposal. The successful Bidder shall agree not to divulge or release any information that has been given to it or acquired by it on a confidential basis during the course of carrying out its duties or performing its services. It is the Departments policy to maintain confidentiality with respect to all confidential information related to the RFP; however, the Department is subject to the Freedom of Information and Privacy Act.

QUALIFICATIONS AND EXPERIENCE

- The Department seeks proposals from qualified Bidders offering complete service facilities, within a reasonable distance from our main Fire Station. After delivery, support and service shall be considered when evaluating the submitted specifications; including the location, information and capabilities of the local service center and number of personnel on site to perform service. Service personnel must be available 24-hours per day, 7 days a week to provide emergency service or technical support as required by the Department. The local facility should include mobile service capability as well to provide "On-site" service of the apparatus.

REFERENCES

- Bidders are to provide with their proposals a list of Fire Departments within 100 miles of the Department's Main Fire Station with which you are currently or have recently supplied apparatus, which is identical or similar to that which is being proposed in this provided document. Please show date of contract, department name, and contact name and phone number for each reference.

SELECTION CRITERIA

- The evaluation criteria will include, but not be limited to: Bidder's offer, overall value; Bidder's financial stability, ability to meet specifications; general suitability; past performance; delivery dates; availability of parts and service; supplier qualifications and experience; references; prices bid; operating costs; value of warranty, and any value-added offerings.

EXCEPTIONS

- All exceptions shall be stated no matter how seemingly minor. Any exceptions not taken shall be assumed by the Department to be included in the proposal, regardless of the cost to the bidder. Exceptions will be referenced to the paragraph, page number and item number where the supplier has taken the exception; and technical information, drawings or photographs about the exception shall be provided within the submitted specification.
- Exceptions may be considered if they are equal to or superior to that specified and provided they are listed and fully explained on a separate page.
- The Department will be the sole judge as to the acceptability of any of the items listed as exceptions, and the decision of the Department will be final.

Proposals taking total exception to specifications shall not be acceptable.

Antioch Fire Department / First Fire Protection District of Antioch

Provided document- RFP FD 02-17

Performance Based Apparatus Proposal for One (1) Single Axle Quint

Registration of Intent to Bid

To ensure that you receive any addenda and other correspondence related to the Provided document, you are required to return this informational sheet to:

Antioch Fire Department/First Fire Protection District of Antioch

835 Holbek Drive

Antioch IL, 60002

The following information is required (please print):

Company Name: _____

Address: _____

Contact Name & Phone number: _____

Title: _____

Email Address:

OVERALL HEIGHT

An overall height shall not exceed 13 feet for this apparatus.

OVERALL LENGTH

An overall length shall not exceed 46 feet for this apparatus.

OVERALL WIDTH

An overall width shall not exceed 8.5 feet for this apparatus.

WHEELBASE

A wheelbase shall not be less than 220 inches or more than 234 inches for this apparatus.

ANGLE OF APPROACH

The angle of approach for the apparatus shall not be less than eight (8) degrees as specified by the current edition of NFPA 1901.

ANGLE OF DEPARTURE

The angle of departure for the apparatus shall not be less than eight (8) degrees as specified by the current edition of NFPA 1901.

ENGINEERING BLUEPRINTS

The bidder must submit "proposal" blueprints which are "representative" of the vehicle being proposed and these have been generated on computer-aided-design (CAD) equipment. The minimum blueprints submitted shall be on "B" size paper, 11" x 17" in size and views are on 1/16" to 1" scale. 24" x 36" prints are preferred.

The blueprints are provided as follows:

Left side exterior view

Right side exterior view

Rear exterior view

Front exterior view

Pump instrument panel view

The bidder shall provide construction drawings for approval prior to actual construction of the vehicle.

The design of the equipment is in accordance with the best engineering practices. The equipment design and accessory installation shall permit accessibility for use, maintenance and service. All components and assemblies shall be free of hazardous protrusions, sharp edges, cracks or other elements, which might cause injury to personnel or equipment.

All oil, hydraulic, and air tubing lines and electrical wiring shall be located in protective positions properly attached to the frame or body structure and shall have protective loom or grommets at each point where they pass through structural members, except where a through-frame connector is necessary.

Parts and components will be located or positioned for rapid and simple inspection and recognition of excessive wear or potential failure. Whenever functional layout of operating components determines that physical or visual interference between items cannot be avoided, the item predicted to require the most maintenance shall be located for best accessibility.

PRE-CONSTRUCTION CONFERENCE (AT FIRE DEPARTMENT)

A pre-construction conference shall be conducted at the Department Headquarters, at which time all final designs and equipment mounting locations will be approved, prior to any sheet metal being cut. A factory-trained dealer shall be present during the pre-construction conference to answer any design questions relating to the layout of the apparatus. BIDDER SHALL INDICATE INTENTION TO PROVIDE THE REQUIRED PRE-CONSTRUCTION CONFERENCE IN THE PROPOSAL PACKET.

INSPECTION TRIPS

Inspection trips for Fire Department personnel shall be made to the facility during the course of construction of the apparatus. Successful bidder shall provide at a minimum: one pre-paint inspection and one final inspection at the factory.

Inspection trips shall be for a minimum of four members of the committee.

Successful bidder shall consult with Fire Department committee chairperson as to the proper timing of the inspection trips. All travel, meals, and lodging expenses shall be included. If air travel is selected by the customer it will be at the customer's expense.

BIDDER SHALL INDICATE INTENTION TO PROVIDE THE REQUIRED INSPECTION TRIPS IN THE PROPOSAL PACKET.

ISO COMPLIANCE

The manufacturer shall operate a Quality Management System under the requirements of ISO 9001. These standards sponsored by the "International Organization for Standardization (ISO)" specify the quality systems that shall be established by the manufacturer for design, manufacture, installation and service.

A copy of the certificate of compliance shall be included with the bid.

NFPA COMPLIANCE

The manufacturer shall operate under the requirements of NFPA 1901. These standards shall be followed by the manufacturer for design, manufacturing, installation and service.

DEMONSTRATION

Department personnel shall be properly instructed as to the proper use of the entire apparatus including, but not limited to, chassis, fire pump system, the apparatus and all equipment. The demonstration shall be made by a factory trained Specialist who shall be responsible for complete instruction as to operation and maintenance of the chassis, and the completed vehicle.

The successful bidder shall provide 3 of these demonstrations on consecutive days.

The demonstration specialist shall remain at the Department for a sufficient amount of time to provide thorough instructions to all personnel, or as instructed by Chief of the Department. All meals, motel and travel costs shall be the responsibility of the successful bidder.

DELIVERY

The apparatus shall be delivered complete and ready for operation to the Department. The apparatus, to insure proper break-in of all components, shall be delivered under its own power - rail or truck freight is not acceptable.

WARRANTIES & GUARANTEES

All parts and labor related to the apparatus must be guaranteed and include a warranty. Included with all bids must be a list of all warranties and guarantees. If any work is unable to be guaranteed, the bidder must inform the Department in writing prior to the delivery of an item or any work being performed. Inspection, testing, and final determination of non-warranty work shall be performed at no cost to the Department.

PAINT WARRANTY FIVE YEAR

The PPG, paint performance guarantee, will cover the areas of the vehicle finished with the specified product for a minimum of FIVE (5) years beginning the day the vehicle is delivered to the purchaser.

The full apparatus body, manufactured and painted by the bidder, shall be covered for the following paint failures as outlined on the guarantee certificate:

- Peeling or delamination of the topcoat and/or other layers of paint.
- Cracking or checking.
- Loss of gloss caused by cracking, checking, or hazing.
- Any paint failure caused by defective PPG Fleet Finishes, which are covered by this guarantee.

All guarantee exclusions, limitations, and methods of claims are covered in the full certificate provided to the original purchaser.

OPERATION AND FAMILIARIZATION MANUAL

The apparatus manufacturer shall supply, at delivery, customized Operation & Familiarization Manual, complete with full-color photos of the actual, completed apparatus with each feature and control identified and its function explained.

Safety, Operation, Maintenance and Troubleshooting sections will include information about each major component of the apparatus (chassis, pump, foam system, generator, electrical devices, etc.). The manual shall be specific to the apparatus (or group of apparatus) being delivered. All safety and warning labels shall be represented in the manual for subsequent safety inspections to ensure their continued presence on the apparatus.

The manufacturer shall submit a sample manual with the bid proposal. Failure to do so will result in rejection of the proposal. Reference to "on delivery" or "at pre-build" submission is not an acceptable response for the bid document.

“Similar” or “Representative” manuals will not be accepted.

"ON-LINE" SERVICE MANUAL SUPPORT

As part of the standard delivery manual, the bidder shall give a password protected link to the end user, allowing access to the manufacturers' database on service parts. The internet-based system shall allow the end user to access the major component supplier's service parts listing such as Pump Manufacturer, Waterous, Akron, etc. This shall be accomplished with simplistic point and click features on the manufacturer line item within the "stripper" or "line item sheet". This will include, automatic updates, printable schematics and manufacturer's web links and is available in the commercially available format of Adobe Acrobat Reader to access these documents.

Parts Listings within Manuals

The manuals will include cross-reference part numbers from the bidder's part number to the vendor parts. Example: Bidder's Hydraulic Ladder Rack, Part #LR-MN-0002 cross-referenced to Ziamatic Corporation Part 098-MN2345. This will allow for reference between individual parts and complete installation assemblies as completed by the body builder.

The manuals will list all components of the vehicle that includes a vendor part utilized in a complete installation via the manufacturer's "line item sheet" or "stripper" utilized to manufacture the completed vehicle. These are "As Built" and proposals with "typical" or "generic" manuals will be rejected.

ILLUSTRATIVE SCHEMATICS WITHIN MANUALS

The bidder shall include installation diagrams and drawings of all major subassemblies. This will include components such as hydraulic ladder rack assemblies, pump panels, tanks, fire pumps, etc. The drawings shall be linked via an Internet based service program, in an electronic format from the manufacturers "stripper" (line item listing) of the manufacturing document. The bidder shall submit, upon request, a sample schematic.

DIGITAL IMAGES WITHIN MANUALS

In addition to two and three-dimensional installation drawings, the bidder shall make accessible, via an internet based link, the actual photos of the installed components listed within the "stripper" or line sheet. This will include, but not limited to wiring terminals, main body distribution strips, fire pump shifting, auxiliary components, etc. The bidder shall submit a sample of these upon request.

INSTALLATION INSTRUCTIONS WITHIN MANUALS

The bidder "work instructions" or "installation instructions" shall be included with the service manuals. These documents shall be accessible via a web-based link to the individual vehicle manufactured. The work instructions shall give

systematic instructions of the component installation process. The bidder shall submit, upon request, a sample set of instructions.

AUTOMATIC UPDATES OF MANUALS AND PARTS LISTINGS

The online manuals will include automatic updates that are accessible via the web link. When clicking on the part within the manufacturer's stripper or line sheet, it will allow the end user to access the component manufacturer website for updated information. This will allow for latest parts and service components from the individual part manufacturer or vendor.

ELECTRICAL SCHEMATICS

To maintain the vehicles electrical systems, the manufacturer shall provide 2 copies to the purchaser the instructional manuals, complete electrical information and schematics on the vehicle. The electrical information shall be provided as follows:

Wiring Systems 12 and 120 Volt:

- Graphic symbols for electrical diagrams.
- Wire labeling, imprinting codes and index.
- Computer generated electrical schematics indicating the circuit number, wire size, switches, circuit breaker and terminals on the vehicle.
- The bidder shall submit, upon request, a sample set of diagrams.

PENALTY CLAUSE

If the successful bidder fails to deliver the apparatus within 365 days after award of contract, a \$200.00 penalty will be incurred by the successful bidder for every day late.

CHASSIS

Custom Chassis

A custom fire truck chassis shall be furnished with the following apparatus body and equipment. See attached specifications for exact chassis configuration.

Wheelbase

The wheelbase shall be between 220 and 234 inches

GVW Rating

The gross vehicle rating shall be a minimum of 53,000 pounds.

Front Axle / Suspension

The front suspension and axle shall have a minimum ground rating of 22,000 pounds.

Rear Axle / Suspension

The rear suspension and axle shall have a minimum ground rating of 33,500 pounds.

Engine Work Light

The cab shall have a switch activated or automatic LED work light mounted under the body to illuminate the chassis components beneath when the cab is tilted.

Engine

- The chassis shall be powered by an electronically controlled diesel engine with no less than 500 HP.
- Engine shall meet the 2017 EPA emissions standards.
- Engine shall use spin on style fuel filters for both the primary and secondary fuel filters. Primary filter shall have a water separator and water-in-fuel sensor.
- The engine shall have On-Board Diagnostics, which provides self-diagnostic and reporting. The system shall illuminate a

malfunction indicator light on the dash console if a problem is detected.

- Vehicle shall have an auxiliary engine cooler accessed on the pump panel

Transmission

- The chassis shall utilize an electronic torque converting, 5 speed, 4000 EVS Allison automatic transmission.
- The transmission shall be equipped with prognostics to monitor oil life, filter life, and transmission health.
- An Allison Generation 5 pressure sensitive range selector touch pad shall be provided and located on the tunnel to the right of the driver.
- A wrench icon on the digital display of the shift selector shall indicate when service is due.
- Transmission shall include requirements for a PTO driven generator and aerial device.

Engine High Idle Control

The vehicle shall be equipped with an automatic high-idle speed control. The high idle shall be pre-set so when activated, it will operate the engine at the appropriate RPM to increase alternator output and optimize output of the HVAC system.

This device shall operate only when the master switch is activated and the transmission is in neutral with the parking brake set. The device shall disengage when the operator depresses the brake pedal, or the transmission is placed in gear, and shall be available to. A light on the dash screen shall indicate the high idle speed control.

Fuel Tank

Fuel tank shall be made of stainless steel and mounted at the rear of the chassis with stainless steel brackets. A fill inlet shall be located on the left side of the vehicle towards the rear of the body and be covered with a spring loaded, hinged door marked "Ultra Low Sulfur – Diesel Fuel Only".

System shall include reinforced wire braided fuel lines. Fuel tank shall meet all the NFPA 1901 requirements.

Exhaust System

- The exhaust system shall meet 2017 EPA standards including, but not limited to a Diesel Exhaust Fluid system.
- The exhaust tailpipe shall be run to the officer's side of the vehicle.
- There shall be a tailpipe adapter installed for integration with a Plymovent Pneumatic Grabber system. **No exception**
- A heat shield shall be installed under the body in areas where the exhaust system is routed.

DEF

A Diesel Exhaust Fluid (DEF) Tank shall be provided and not be less than 5 usable gallons. The tank shall be mounted in the driver's side body, forward of the rear axle. A fill inlet shall be accessed on the driver's side of the vehicle and be clearly labeled "DEF Only".

Auxiliary Engine Brake Control

An auxiliary engine brake control device shall be included. The electronic control device shall monitor various conditions and shall activate the engine brake only if all of the following conditions are simultaneously detected:

- A valid gear ratio is detected.
- The driver has requested or enabled engine compression brake operation.
- The throttle is at a minimum engine speed position.
- The electronic controller is not presently attempting to execute an electronically controlled final drive gear shift.
- The auxiliary brake shall be controlled through an on/off switch and individual low/medium/high selector switches on the dash.

Braking System

The braking system shall include:

- A four channel anti-lock brake system on the front and rear axles. The vehicles shall be monitored by the system.
- Shall be full air type.
- A Meritor-Wabco yellow spring set, push-pull parking brake controller. The control shall be mounted to the right of the steering column within easy reach of the driver.
- Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, with an automatic spring brake application at 40 psi.
- A pressure protection valve to prevent all air operated accessories from drawing air from the system pressure drops below 80 psi.
- System air tank shall be mounted with stainless steel brackets.
- An air dryer system with a replaceable spin-on cartridge.
- Color coded lines that are heat protected where necessary.

Radiator

Radiator shall meet or exceed the manufacturer recommendations.

Driveline

Driveline shall be heavy duty and balanced before installation.

Steering

- The steering wheel shall have tilting and telescoping abilities
- Shall be heavy-duty power steering

Cab and Body Material

The cab and body of the apparatus shall be made using a minimum of 3/16" aluminum. Cab and body shall not be made using dissimilar materials.

Front Bumper

- The front bumper shall be 12" high heavy-duty steel channel style.
- The bumper shall be mounted to a 24" chassis frame extension.
- A gravel pan shall be fabricated from NFPA compliant aluminum. The gravel pan shall be coated with a black spray on bed-liner.
- Front bumper shall be wrapped with reflective vinyl in a chevron pattern.

Front Bumper Compartment

- One Recessed fire hose compartment shall be constructed from smooth aluminum and installed in the center of the bumper extension. Water drain holes shall be drilled in the bottom.
- The compartment shall fit a 150' 1.75" trash line connected to a pre-piped discharge.
- The compartment shall fit 50' of 5" supply hose.
- The compartment shall have a door built in the following manner.
 - The center section of the bumper shall be cleanly cut out.
 - This section is to be re-attached with a heavy duty stainless steel piano hinge at the bottom.
 - One D-ring latch shall secure the cover in the closed position.
 - Shall have pneumatic stay arms to hold it in the open position.

Tow Hooks

Two steel tow hooks shall be installed under the bumper and attached to the frame.

Rear Towing Provisions

Two 3 inch tow eyes shall be furnished under the rear of the body and attached directly to the chassis frame rails. There shall be a reinforcement spreader bar connecting the two tow eyes. Tow eyes are to be constructed of 3/8" plate steel with a 4" I.D. hole. Shall be painted black

Tire Pressure Indicator

One tire pressure indicator shall be at each valve stem on the vehicle. If there is insufficient pressure, it shall be reflected on the instrument panel and on the actual valve stems as well.

Mud Flaps

One pair of black mud flaps shall be installed behind the front and rear wheels.

Fender Liners

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

Fenderettes

The front and rear wheel wells shall be radius cut for streamlined appearance. A black rubber fenderette shall be furnished at each rear wheel well opening, held in place with concealed stainless steel fasteners.

CUSTOM CAB

Cab Configurations

- Shall have a full tilt design specifically for the fire service.
- Be a minimum of 60 inches.
- Shall comply with NFPA 1901 standards.
- Cab shall be fully insulated for heat, cold and noise volume and comply with the corresponding NFPA standards

Cab Doors

- 2 doors to the front of the cab and 2 doors to the rear.
- Doors shall be full height covering and protecting the step areas when closed doors.
- Exterior handles shall be pull style and black in color.
- Doors shall be fitted with insulation and damping inside.
- Full length piano style hinges shall be concealed inside the door panel.
- Interior door handles shall be paddle style hinged towards the front of the cab.
- Have a 4-door locking system, with a manual door lock on each door.
- Each of the 4 doors shall have an electronic window regulator with the driver side having regulator that can operate all windows.

Door Panels

There shall be a reflective material in a Chevron pattern that matches the chevron pattern of the bumper installed on the inside panel of each cab door. The material shall cover as much of the inside panel as possible

Crew Cab Windows

One fixed window shall be provided on each side of the cab, to the rear of the front cab door. The windows shall be sized as large as possible to enhance natural light to the cab interior.

Grab Handles

There shall be one interior grab handle installed on the inside of each cab door. The handles shall extend horizontally with the width of the window just above the window sill.

Cab Steps

Shall meet NFPA 1901 15.7.4 in size and slip resistance requirements. The rear step well shall have a removable battery access covers. All tread plate surfaces shall be coated with a black spray on bed-liner. Do not spray the steps.

Mirrors

The apparatus shall have door mounted, heated, dual vision West Coast Style mirrors with remote cab operation capability. Shall be black in color.

Drip Rail

The exterior body shall have a drip rail extending the full length of the cab to protect from inclement weather. The drip rail shall be painted to match the cab roof.

Cab Lift

A hydraulic cab lift system shall be provided consisting of an electric powered hydraulic pump, dual lift cylinders and the needed hoses and valves. The cab lift system shall not function if the vehicle's parking brake is not engaged. Cab lift shall have a manual override option in case of electronic failure.

Cab Interior Construction/Paint

Metal surfaces in the cab interior shall be painted black in color.

Cab Floor

The cab and crew cab floor areas shall be covered in a rubberized, slip-resistant floor material.

Cab Defroster

The defroster shall be capable of clearing 98% of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. It shall meet or exceed SAE J382 requirements. 2 multi-speed fans shall be mounted to the ceiling, one the driver side and one on the passenger side, to aid in defrosting.

Cab Heating

- The heating system shall be capable of delivering 82,000 BTU/hour of heat to the entire cab.
- Heat and air circulation shall be provided to the driver and officer foot area
- A minimum of 880 CFM of air flow measured at the front seated positions and 1580 CFM of air flow per side in the rear seated positions for a combined total of 4040 CFM of air flow in the cab. **No exceptions**

Cab Air Conditioning

- A minimum of 96, BTU/hour of cooling capacity to the entire cab.
- One evaporator shall be located under the center dash and two crew overhead evaporators located near the B-pillar on each side of the cab.
- A gravity condensation drain system shall be utilized. These drains shall remove all condensation from the evaporator units and direct them to the exterior of the chassis cab. **No exceptions**
- The air conditioning system shall be capable of cooling the cab from 110 degrees Fahrenheit to 70 degrees Fahrenheit at 60%

humidity in less than 30 minutes. It shall be capable of cooling the cab from 100 degrees Fahrenheit to 73 degrees Fahrenheit at 80% humidity after a three hour heat soak. **No exceptions.**

- Ceiling mounted evaporator units in the center of the cab above or on the engine tunnel shall not be accepted.

Seats

The apparatus shall have the following seat configuration:

- Driver: Valor Magnus Air-Suspension and I Back Driver
- Officer: Valor Crew Seat SCBA Fixed Back Non-Flip 20", with IMMI SmartDock SCBA Locking System. Air-Suspension base
- Driver's Rear Facing Crew: Valor Crew Seat SCBA Fixed Back Non-Flip 20", with IMMI SmartDock SCBA Locking System
- Officer's Rear Facing Crew: Valor Crew Seat SCBA Fixed Back Non-Flip 20", with IMMI SmartDock SCBA Locking System

Air Bags

The airbag system shall include tube airbag protection for the driver's and officer's seats and side curtain airbags for the front facing and rear facing crew seats.

Seatbelts

Each seat shall have a seatbelt pretensioner system. All seat belts shall be colored red. They shall comply with NFPA 1901. Each seat shall also be equipped with seat belt sensors in the seat cushion and belt receptacle that activate an alarm indicating a seat is occupied but unbuckled.

Cab Dome Lights

There shall be four dual LED dome lights provided. Two lights shall be mounted above the inside shoulder of the driver and officer, and one light shall be mounted on each side of the crew cab.

The lights shall have the capability of both red and white light.

The red LED shall activate with a lens switch. The white LED shall be controlled with door switches and a lens switch.

Hand Lights

The hand lights shall be mounted by the successful bidder in order to comply with NFPA 1901 section 9.9.4. The location will be determined at the pre-construction conference.

PUMP / PLUMBING / WATER TANK

Pump

The apparatus shall have a Hale 1500 GPM pump.

Air Pump Shift

The apparatus shall have a 3 position air pump shifter within easy reach for the driver in the cab.

Tank

The apparatus shall have a minimum of a 500 gallon poly tank. The tank shall include a top fill and overflow pipe.

Engine Heat Exchanger Cooling System

As previously stated the engine shall have an auxiliary cooling system run through the pump. Access shall come from a turn knob on the pump panel

Pressure Controller

The pump shall be controlled with a PumpBoss 400 pressure governor.

Priming Pump

The priming system shall include the Standard model Trident Automatic AirPrime multi location system. The 3 locations shall be: the front suction, the driver's side large diameter intake and the officer's side large diameter intake.

Plumbing

Pump plumbing shall be stainless steel.

Pump Panel Surfaces

The pump panel on both the driver's and officer's side shall be coated in a black spray-on bedliner material. The panels should be able to swing out with a stainless-steel piano hinge with as large an opening as possible. A second door that allows access behind the pump panel without removing any fittings or appliances shall be added as well. The opening shall be as large as possible.

Pump Panel Lighting

Each side of the pump panel shall have a LumaBar SuperBright LED light bar.

The bar shall be mounted to the underside of an appropriate sized drip edge integrated in to the pump panel.

Water Level Indicators

One Class 1 Intelli-Tank 40 LED tank light shall be provided and mounted on the driver's side pump panel.

Two Whelen PSTANK 5mm Tank Status lights shall be provided. One light shall be mounted on both the officer and driver's side of the cab as high as possible for maximum visibility.

Air Horn Switch

One switch shall be provided that is directly wired to the air horns. The switch shall be clearly labeled and be located on the driver's side pump panel.

Pump Engaged Light

The pump panel shall include a red LED light that is illuminated when the vehicle is in pump. This light shall clearly be labeled "pump engaged".

Master Intake and Pump Discharge Gauges

These two gauges shall be mounted directly next to each other, as close to the pressure controller as possible. They shall be 6" Class 1 liquid filled dual scale gauges.

Discharge Pressure Gauges

Discharge pressure gauges shall be 2.5" Class 1 liquid filled. They shall have colored bezels that correspond with their discharge listed below.

Fire Pump Anode

One pump anode shall be installed to reduce corrosion with each intake. It shall be pressure fitted in or screw in and easily replaceable.

Manual Overrides

All intakes and discharges that are controlled using electronic methods shall have a manual override option.

Final Locations/Colors

The final location of all valves, drains, gauges, bezel/handle colors and other components of the pump panel shall be finalized in the pre-construction conference.

Intakes

The pump shall have 4 pump intakes mounted low on the pump panel:

- One 6" intake located on the officer's side, on top of the front bumper. It shall be actuated with an Akron Navigator Pro Valve Controller, model 9323. Shall be labeled as "*Front Suction*". The intake shall include a 6" to 5" Storz adapter. A 5" Storz cap shall be provided.
- One 6" intake located on the officer's side pump panel. It shall be actuated with an Akron Navigator Pro Valve Controller, model 9323. Shall be labeled as "*Officer's Suction*". The intake shall include a 6" to 5" Storz adapter. A 5" Storz cap shall be provided.
- One 6" intake located on the driver's side pump panel. It shall be actuated with an Akron Navigator Pro Valve Controller, model 9323. Shall be labeled as "*Driver's Suction*". The intake shall include a 6" to 5" Storz adapter. A 5" Storz cap shall be provided.
- One 2.5" intake located on the driver's side pump panel. It shall be actuated with an Akron Navigator Pro Valve Controller, model 9323. Shall be labeled as "*Auxiliary Intake*". The intake shall be capped with a winged 2.5" cap on a chain or cable.

The aerial device shall also include a 4" direct waterway intake on the rear of the vehicle. The intake shall include a 4" to 5" Storz adapter with a 5" Storz cap.

All intakes shall have a corresponding drain.

The “Front Suction” shall have additional drains for the bends in the pipe needed to route it to the front of the vehicle. This is to prevent water from remaining in the pipe and freezing in winter a climate.

Discharges

Speed Lays

There shall be 3 speed lays, mounted before the body, each within a removable tray provided by manufacturer. Each speed lay must be easily accessible from ground height.

- One labeled “Driver’s Side Crosslay” shall have a RED colored bezel for its corresponding discharge gauge. It shall be furnished to fit and connect 200’ of 1.75” hose and a nozzle provided by the fire department. The hose shall connect to a corresponding male swivel.
- One labeled “Officer’s Side Crosslay” shall have a YELLOW colored bezel for its corresponding discharge gauge. It shall be furnished to fit and connect 200’ of 1.75” hose and a nozzle provided by the fire department. The hose shall connect to a corresponding male swivel.
- One labeled “2 1/2 Crosslay” shall have a WHITE colored bezel for its corresponding discharge gauge. It shall be furnished to fit and connect 200’ of 2.5” hose and a nozzle provided by the fire department. The hose shall connect to a corresponding male swivel.
- The trays shall be weatherproof and provide protection of dust to the pump area.
- The 3 speed lay valves shall all be operated with “T Style” handles that are labeled with text and the corresponding color from the gauge bezel.
- Two vinyl covers shall be provided to cover the speed lays. The covers shall be secured with a hook and loop system.

Driver's Side

The driver's side shall have the following discharges on the pump panel. The color coded labeling shall comply with NFPA standards and include gauge bezel, handle and discharge label coloring:

- One labeled "Driver's Pump Front" shall have a colored bezel for its corresponding discharge gauge. It shall be 2.5" with a chrome plated 2.5" elbow NST. A 2.5" to 1.75" reducer shall be attached. A cap with chain or cable securement shall be provided. The valve shall be operated via a quarter turn ball valve exposed on the panel. This discharge shall be towards the front of the vehicle
- One labeled "Driver's Pump Rear" shall have a colored bezel for its corresponding discharge gauge. It shall be 2.5" with a chrome plated 2.5" elbow NST. A cap with chain or cable securement shall be provided. The valve shall be operated via a quarter turn ball valve exposed on the panel. This discharge shall be towards the rear of the vehicle.

Rear

- One 2.5" discharge with a chrome plated 2.5" elbow NST labeled "2 1/2 Rear" shall be provided as near the hose bed as possible
- The valve shall be operated with a "T Style" handle on the pump panel that is labeled with text and the corresponding color from the gauge bezel.

Officer's Side

The officer's side shall have the following discharges on the pump panel. The color coded labeling shall comply with NFPA standards and include gauge bezel, handle and discharge label coloring:

- One labeled "Officer's Pump Front" shall have a colored bezel for its corresponding discharge gauge. It shall be 2.5" with a chrome plated 2.5" elbow NST. A 2.5" to 1.75" reducer shall be attached. A cap with chain or cable securement shall be provided. The valve shall be operated with a "T Style" handle on the pump panel that is labeled with text and the corresponding color from the gauge bezel. This discharge shall be towards the front of the vehicle.
- One labeled "Officer's Pump LDH" shall have a colored bezel for its corresponding discharge gauge. It shall be 3" with a chrome plated 3" elbow NST. A 3" to 5" Storz adapter shall be installed with a 5" Storz cap on a chain or cable. The valve shall be operated with a "T Style" handle on the pump panel that is labeled with text and the corresponding color from the gauge bezel. This discharge shall be towards the rear of the vehicle.

Front

- The color coded labeling shall comply with NFPA standards and include gauge bezel, handle and discharge label coloring.
- There shall be one 2.5" swivel elbow installed on the front bumper by the hose compartment.
 - This shall supply a 150' 1.75" line and have to corresponding reducer.

- The valve shall be operated with a “T Style” handle on the pump panel that is labeled with text and the corresponding color from the gauge bezel.

Tank to Pump

A tank to pump valve shall be installed to NFPA standards and manufacturer recommendations. A corresponding LED light shall be provided, that illuminates when the valve is opened. The valve shall be operated with a “T Style” handle on the pump panel that is labeled with text. No gauge is required.

Tank Fill/Recirculating

A tank fill/recirculating valve shall be installed to NFPA standards and manufacturer recommendations. A corresponding LED light shall be provided, that illuminates when the valve is opened. The valve shall be operated with a “T Style” handle on the pump panel that is labeled with text. No gauge is required.

Aerial Master Stream

The apparatus shall have one valve capable of flowing water to the ladder through the pump. The valve shall be operated with a “crank style” valve on the pump panel that is labeled as “Aerial” with text and the corresponding color from the gauge bezel.

Drains

All discharges and intakes shall have drains compliant with NFPA standards and the manufacturer’s recommendation. A drain shall match the color and labeling of its corresponding discharge or intake. There shall be an included “Master Drain.” The aerial pipe shall have a drain on the rear of the vehicle.

Hose Bed

The apparatus shall have a hose bed that shall be able to store a minimum 600’ of 2.5” hose and 600’ of 5” hose that is pulled from the rear of the vehicle.

AERIAL DEVICE

Aerial Ladder

The apparatus shall have a 3 section aerial ladder at a minimum of 75 feet. The ladder shall have a minimum of 500 pound tip load. All components of the ladder shall comply with NFPA 1901 standards.

Lettering

The apparatus shall have "ANTIOCH" on both sides of the ladder in a color that is to be determined at the pre-construction conference.

Rung Lighting

Each aerial section of the ladder shall be equipped with LED luma-bar lighting to illuminate the rungs. The lighting shall run the full length of the climbing portion. They shall be activated from the main control station via a "Tracking Light" switch. The ladder rungs shall be red (fly), white (middle) and blue (base).

Tip Lighting

Two Fire Research Spectra LED Scene Light SPA 770-K20 top mount fixes pedestal light shall be installed at the tip of the aerial, one on each side. They shall be activated from the main control station via a "Tip Light" switch

Tracking Lights

Two Whelen Micro Pioneer model MPPWCS shall be installed at the lower end of the base section ahead of the lift cylinders of the ladder, one on each side. They shall be activated from the pedestal control station via a "Tracking Light" switch.

Stabilizers

Stabilizers and their controls shall be NFPA 1901 compliant. All lighting shall be LED.

Boom Support

A heavy-duty boom support shall be provided for support of the ladder in the travel position.

The boom support shall be have one LumaBar H2O white LED strip light mounted on the boom support cradle. This shall be activated with the aerial master switch.

Turntable

The sheet metal that is exposed to the elements, such as the base, pedestal and cat walks shall be coated in a black, NFPA 1901 compliant, non-slip coating.

Pedestal Control Station

The pedestal shall be on the left side of the ladder and be compliant with NFPA 1901 for all control switches and levers. The pedestal shall also have a two-way communication system from the tip to the pedestal. The pedestal shall have controls for the monitor. One air horn switch shall be provided on the control panel.

Pinnable Waterway

The aerial device shall have a waterway that is pinnable to the middle section when not in use for rescue situations.

High Angle Attachment

The ladder shall have an attachment point at the tip for use in high angle rescues.

Tip Controls

The tip of the ladder shall have monitor controls.

Creeper Controls

The ladder shall have lower speed controls to be accessed at the tip.

Equipment on Ladder

The ladder shall have the following equipment mounting locations in a way where it does not impede climbing:

- One 14' Duo-Safety roof ladder
- One 12' New York Hook (provided by fire department)
- One 8# flathead axe (provided by fire department)

CABINETS

Paint

Exterior

Paint shall be a black over red style with paint codes to be determined at pre-construction conference.

Interior

Interior paint shall be a black spray on bedliner material.

Cab Interior

Engine Compartment Mounting Plate

A mounting plate shall be installed over the engine compartment. The mounting plate shall cover the flat horizontal square footage. This plate shall be constructed of 1/8" steel and coated to match the interior. The mounting plate shall be capable of Fire Department removal and re-securing, for mounting equipment to it.

Binder Storage Module

One custom cab storage module shall be provided at the rearward area of the engine enclosure to accommodate a minimum of six 2" 3 ring binders. The binders shall be restrained when not in use. The module shall be fabricated of 1/8" smooth aluminum and the finish should match the interior. Module shall be mounted to the mounting plate over the engine tunnel, not the tunnel itself.

EMS Glove Box

One custom built glove box container shall be fabricated and mounted inside the vehicle. Design and placement of this container shall be determined at pre-construction conference.

EMS Compartment

One EMS compartment shall be built extending through the center of the crew cab, from the engine tunnel to the back wall. The compartment shall meet the following specifications:

- The compartment shall have two access windows that are 48" long by 24" tall. A window shall be on each side facing and lined up with the exterior door.
- There shall be 3 2 gang 110V outlets that tied directly to the shoreline. Location shall be determined at the pre-construction conference.
- The compartment shall be closed via a cargo net that is secured via hook and loop design.
- The height of the cabinet shall be as close to the same height as the engine tunnel as possible.
- The compartment shall be built from 1/8" aluminum with an opening facing the sides of the vehicle.
- The cabinet shall be finished to match the rest of the interior.
- An additional mounting plate shall cover the top of the compartment, similar to the "Engine Compartment Mounting Plate"

Exterior Compartments

- Compartments on the body shall all have swing-out doors. Doors shall have heavy duty pneumatic stay arms to assist in opening doors and keeping them open. Doors shall have a PVC coated steel chain applied to the top of each door, preventing hyperextension.
- The interior surfaces shall be painted with a black spray-on bedliner material.
- The interior cabinets shall be lit with LED strip lighting on the side walls. Interior lights shall be activated when the door is open.

- All shelving shall be able to be adjusted

Officer's Side

- The front compartment shall be full height and depth with three shelves.
- The middle compartment shall be maximum height and possible width with one shelf.
- The end compartment shall be maximum height and width possible with one heavy duty pull out tray. The tray will require additional fabrication for fitting saws and extinguishers. This shall be determined at the pre-construction conference.

Driver's Side

- The front compartment shall be full depth and height with four vertical pull out trays. These will be fit with FAE appliances and hand tools. The mounting locations will be determined at the pre-construction conference.
- The middle compartment shall be maximum height and possible width with one shelf.
- The end compartment shall be maximum height and width possible. Half of the compartment shall have two shelves and half shall be open.

Rear

The Rear compartment shall have a fully accessible design capable of storing the following equipment: (note, ladders shall be stored on the beam)

- One Duo-Safety 16' roof ladder
- One Duo-Safety 24' two section extension ladder
- One Duo-Safety 35' extension ladder
- One Duo-Safety 10' folding ladder
- One Duo-Safety 10'-15' combination ladder
- One 12' New York Hook (provided by fire department)
- One 10' New York Hook (provided by fire department)
- Two 8' New York Hooks (provided by fire department)
- Two 6' New York Hook (provided by fire department)
- Two 10' sections of 6" hard suction hose.

ELECTRICAL

12 Volt System

Jumper Studs

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

Air compressor / Battery Conditioner

A 110-volt Kussmaul Auto-Charge battery charger and conditioner shall be provided and installed within the chassis cab and wired to the battery system when shoreline power is connected. The charger shall be equipped with a level indicator to indicate the charge rate. The charger shall have an electronic sensing circuit to sense the true battery voltage while eliminate the need for external sense wires. Charging is completely automatic, when the battery is fully charge, all charging stops. There is no overcharging and no water boil off. The level indicator location shall be determined during pre-construction.

There shall be an air compressor furnished sufficient to maintain the vehicle brake system, and wired to the vehicle electrical system. This air compressor shall provide enough CFM to maintain the pressure for the vehicle air reservoir as well as an additional 1200 cfm air reservoir dedicated to the air horn system.

The air compressor shall be wired to the shoreline charging system.

Warning Equipment

All warning lights shall meet all of the NFPA 1901 requirements.

Front Zone Upper Warning Lights

There shall be two Whelen Ultra Freedom 21.50" light bars mounted on the cab roof. One above the driver's and officer's door facing forward.

Each light bar shall feature:

- Two red Linear Super LED corner modules
- One white 400 series Linear LED light front center
- One red 400 series linear LED end cap light
- Clear hard coated lenses.
- Designated with NFPA requirements.

One 3M Opticom traffic light emitter system and control device shall be installed on the apparatus cab roof. It shall be wired through the parking brake to deactivate when it is set.

Front Zone Lower Warning Lights

There shall be two Whelen 600 Series Super-LED Rota-Beam Lighthoods mounted on the cab face. Both shall be red with a clear lens. There shall be four Whelen model M7 LED warning lights installed. They shall be mounted two on each side of the chassis grill. The top light on the officer's side shall be green with a clear lens. The top light on the driver's side shall be red with a clear lens. The remaining lights shall be ½ red ½ white with a clear lens.

Side Zone Lower Warning Lights

There shall be four Whelen 600 Series Super-LED Lighthoods installed per the following:

- Two lights, one on each side of the bumper extension. They shall be red with a clear lens.
- Two lights included with the rear stabilizer lights. They shall be red with a clear lens.

Side Zone Upper Warning Lights

There shall be two Whelen 600 Series Super LED lighthoods mounted with NFPA compliance. Lights shall be red in color with a clear lens.

Rear Zone Lower Warning Lights

Two Whelen 600 Series Super-LED Lightheads shall be installed at the rear of the apparatus. They shall be red with a clear lens.

Rear Zone Upper Warning Lights

One pair of Whelen 600 Series Super-LED Rota-Beam Lightheads, one each side on the upper rear of the apparatus body. The driver side warning light shall be red with a clear lens, the officer's side shall be blue with a clear lens.

Mechanical Siren

One federal Q2B siren shall be provided and meet the following requirements:

- Siren shall be pedestal mounted on the driver's side on the top of the bumper.
- The control solenoid shall be powered up after the emergency master switch is activated.
- Controls for the siren and siren break on the officer side shall be mounted on the dash within easy reaching distance
- The siren shall be activated by a foot pedal switch on the driver's side

Air Horn

- Two air horns shall be provided. One mounted on the driver's side and one on the officer's side through the bumper with a flush design.
- The air horn shall be activated by a pull lanyard centered between the driver and officer and the horn button on the steering wheel.
- The driver shall have the option to control the air horns or chassis horns from the horn button by means of a selector switch located on the instrument panel.

- Air horn system shall have a dedicated 1700 cubic inch air horn reservoir.

Running Lights

All running lights shall comply with DOT and NFPA standards

Head Lights

There shall be four, rectangular LED lights mounted in the front quad style, the housing shall be on each side of the cab grille and coated with a black spray on bed-liner.

- The outside light on each side shall contain a Firetech HiViz Model FT-4X6-HL, low beam module.
- The inside light on each side shall contain a Firetech HiViz Model FT-4X6-H, high beam module.

Turn Signal Lights

There shall be four Whelen, Model 60A00TAR, amber LED populated arrow directional lights. Two shall be mounted with the headlights, one on each side. Two shall be mounted on the rear with the brake lights, one on each side.

Mid Body Turn Signal Lights

There shall be two amber Whelen Model 5V1 180 degree indicator lights. One on each side of the vehicle, low and in front of the rear fender. Lights shall flash with the corresponding turn signal and solid when there is no active signal.

Brake Lights

Two Whelen, Model 60BTT, red brake lights shall be provided. One light shall be mounted on each side of the rear of the vehicle.

Reverse Lights

Two Whelen, Model 60C00WCR, white reverse lights shall be provided. One light shall be mounted on each side of the rear of the vehicle.

Cab Clearance/Marker/ID Lighting

See brow light for information. For DOT compliance, an exception can be made with use of individual LED marker lights if unable to use integrated lights from Firetech Brow Light Model FT-B-72-ML-B.

Rear Clearance/Marker/ID Lighting

DOT compliant LED marker lights shall be provided on the rear of the vehicle

Scene Lighting

Brow Lights

One Firetech Brow Light, Model FT-B-72-ML-B, shall be mounted to the brow of the cab. Integrated marker light option is preferred. Brow light shall be wired to “Front Scene Light” switch.

Cab Floods

Two Firetech Model FT-MB-15-F-B, Minibrow Single Stack LED lights shall be provided. Each side of the vehicle shall have one mounted above the crew door. One light shall activate via the “Right Scene Lights” switch and the other via the “Left Scene Lights” switch.

Body Floods

Two Firetech Model FT-MB-21-F-B, Minibrow Single Stack LED lights shall be provided. Each side of the vehicle shall have one mounted on top of the body, near the rear axle. One light shall activate via the “Right Scene Lights” switch and the other via the “Left Scene Lights” switch.

Back Up Camera

One Firetech, Model FT-MB-24-C-F-B, rear camera-integrated scene light shall be installed on the rear of the vehicle.

Step Lighting

There shall be four Whelen, model 3SC0CDCR LED NFPA compliant ground lights provided. Each cab door’s corresponding step

shall have one light under the cab that is activated when opening the parking brake is set.

Ground Lighting

One Whelen, model 3SC0CDCR LED light shall be provided and mounted under the vehicle that activated when the parking brake is set in the following locations:

- Rear corners of the apparatus
- Under the steps for ladder access
- Under both the driver's side and officer's side of the pump panel.

Cab Electrical

Multiplex System

Vehicle electronics shall run through a multiplex system. Two touch screen controllers shall be mounted, one for the driver and one for the officer. The multiplex system shall not only include vehicle diagnostics but controls for emergency and scene lighting.

Electronic Siren Control

The electronic siren shall be controlled via an interface per the manufacturer's recommendation.

Backup Camera Screen

One LCD screen shall be provided for the vehicle backup camera. The screen shall be mounted in a way that it does not obstruct the driver's view and allows them to keep their eyes up while driving.

Officer's Side Speedometer

The officer's side shall include a digital speedometer easily viewed by the occupant.

Fuse Block

One 12-Volt 12-Place, Blue Sea #5026 fuse block shall be mounted on the side of the engine tunnel behind the officer's seat.

Generator

One PTO driven generator shall be provided and mounted on top of the body. One 200' cord reel supplied power box shall be mounted inside a compartment. The power box shall include 4 outlets. The generator shall be a minimum 5kW.

Circuit Breaker Box Location

The circuit breaker box shall be installed in an outside body compartment.

The instrument panel for the generator shall be installed next to the breaker panel.

Chassis Shore Line Receptacles

2 receptacles shall be wired to the shoreline for the charging of portables. Final location to be determined at pre-construction conference.