

WORK SESSION AGENDA FOR BOARD OF TRUSTEES
VILLAGE OF IRVINGTON, NY
WEDNESDAY, APRIL 15, 2026 AT 7:00 PM

** The Village Board Meeting will take place at 85 Main Street. Board members and staff will be present at 85 Main Street. The public may join in person or via Zoom **

Join Zoom Webinar
https://us02web.zoom.us/j/89798312903

Webinar ID: 89798312903

Use Computer Audio or DIal-in Audio: (646) 558-8656

1. **Call to order by Mayor Arlene Burgos**
2. **Pledge of allegiance to the flag of the United States of America**
3. **Executive Session regarding personnel**
4. **Discussion of Irvington Fire Rescue Truck (expected to commence at 7:30PM)**
   a. Fire Rescue Truck
5. **Update on municipal agreement with Con Edison**
6. **Adjournment**

PROPOSAL FOR FURNISHING FIRE APPARATUS

March 9, 2026

Irvington Fire Department
90 Main St
Irvington, NY 10533

The undersigned is prepared to manufacture for you, upon an order being placed by you, for final acceptance by Firematic Supply Company, Inc., at its home office in E. Yaphank, NY, the apparatus and equipment herein named and for the following prices:

One (1) new Pierce Enforcer heavy duty rescue per attached specs	$ 1,398,256.00
Price includes 1 factory trip and $20,000 in tool mounting	
	Total $ 1,398,256.00

Said apparatus and equipment are to be built and shipped in accordance with the specifications hereto attached, delays due to strikes, war, or intentional conflict, failures to obtain chassis, materials, or other causes beyond our control not preventing, within about 1350 calendar days after receipt of this order and the acceptance thereof at our office at E. Yaphank, NY, and to be delivered to you at Irvington FD

The specifications herein contained shall form a part of the final contract, and are subject to changes desired by the purchaser, provided such alterations are interlined prior to the acceptance by the company of the order to purchase, and provided such alterations do not materially affect the cost of the construction of the apparatus.

The proposal for fire apparatus conforms with all Federal Department of Transportations (DOT) rules and regulations in effect at the time of the bid, and with all National Fire Protections Association (NFPA) Guidelines for Automotive Fire Apparatus as published at the time of bid, except as modified by the customer specifications. Any increased cost incurred by first part because of future changes in or additions to said DOT or NFPA standards will be passed along to the customers as an addition to the price set forth above.

Unless accepted within 30 days from date, the right is reserved to withdraw this proposition.

Firematic Supply Company Inc.

By: _____
AUTHORIZED SALES REPRESENTATIVE
Jeff Horn

Firematic
SUPPLY COMPANY, INC.

Revised: 11/1/2017

Firematic Supply co Inc is pleased to submit a proposal to Irvington Fire Department for a **Pierce® Heavy Duty Rescue** per your request for quotation. The following paragraphs will describe in detail the apparatus, construction methods, and equipment proposed. This proposal will indicate size, type, model and make of components parts and equipment, providing proof of compliance with each and every item (except where noted) in the departments advertised specifications.

PIERCE MANUFACTURING was founded in 1913. Since then, we have been building bodies with one philosophy, "BUILD THE FINEST". Our skilled craftsmen take pride in their work, which is reflected, in the final product. We have been building fire apparatus since the early "forties" giving Pierce Manufacturing over 110 years of experience in the fire apparatus market. Pierce Manufacturing has built and put into service more than 75,000 apparatus. Our Wisconsin facilities have over 1.6 million total square feet of floor space situated on approximately 162 acres of land. Our Bradenton, Florida facilities have 410,000 square feet of floor space situated on approximately 35 acres of land.

Our beliefs in high ethical standards are carried through in all of our commitments and to everyone with whom we do business. Honesty, Integrity, Accountability and Citizenship are global tenets by which we all live and work. Consequently, we neither engage in, nor have we ever been convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.

Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification.

In accordance with the current edition of applicable NFPA standards, this proposal will specify whether the fire department, manufacturer, or apparatus dealership will provide required loose equipment.

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

GENERAL DESIGN AND CONSTRUCTION

To control quality, ensure compatibility, and provide a single source for service and warranty, the custom cab, chassis, pump module and body will be entirely designed, assembled/welded and painted in Pierce owned manufacturing facilities. This includes, but not limited to the cab weldment, the pumphouse module assembly, the chassis assembly, the body and the electrical system.

QUALITY AND WORKMANSHIP

Pierce has set the pace for quality and workmanship in the fire apparatus field. Our tradition of building the highest quality units with craftsmen second to none has been the rule right from the beginning and we demonstrate that ongoing commitment by: Ensuring all steel welding follows American Welding Society D1.1-2025 recommendations for structural steel welding. All aluminum welding follows American Welding society and ANSI D1.2-2014 requirements for structural welding of aluminum. All sheet metal welding follows American welding Society D1.3 2018 requirements for structural welding of sheet metal. Our flux core arc welding uses Hobart FabCO Excel-Arc 71, AWS A5.20, E71T1C/M and is performed to American Welding Society standards A5.20-E70T1. Furthermore, all employees classified as welders are tested and certified to meet the American welding Society codes upon hire.

Pierce also employs an American Welding Society certified welding inspector in plant during working hours to monitor weld quality.

Pierce Manufacturing operates a Quality Management System under the requirements of ISO 9001. A copy of the certificate of compliance is included with this proposal.

In addition to the Quality Management system, we also employ a Quality Achievement Supplier program to ensure the vendors and suppliers that we utilize meet the high standards we demand. That is just part of our overall "Quality at the Source" program at Pierce.

To demonstrate the quality of our products and services, a list of at least two (2) fire departments/municipalities that have purchased vehicles for a second time is provided.

DELIVERY

The apparatus will be delivered under its own power to ensure proper break-in of all components while the apparatus is still under warranty. 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.

MANUAL AND SERVICE INFORMATION

At time of delivery, complete operation and maintenance manuals covering the apparatus will be provided. A permanent plate will be mounted in the driver's compartment specifying the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.

SAFETY VIDEO

At the time of delivery Pierce will also provide one (1) 39-minute, professionally produced apparatus safety video, in DVD format. A link to the video is also available at www.Pierceparts.com. This video will address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus, including the following: vehicle pre-trip inspection, chassis operation, pump operation, aerial operation, and safety during maintenance.

PERFORMANCE TESTS

A road test will be conducted with the apparatus fully loaded and a continuous run of no less than ten (10) miles. During that time the apparatus will show no loss of power nor will it overheat. The transmission drive shaft or shafts and the axles will run quietly and be free of abnormal vibration or noise. The apparatus when fully loaded will not have less than 25 percent nor more than 50 percent on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle. The apparatus will meet the current edition of applicable NFPA standards acceleration and braking requirements.

SERVICE AND WARRANTY SUPPORT

Pierce dealership support will be provided by Firematic Supply Co Inc by operating in conjunction with a Pierce authorized service center. The service center will have factory-trained mechanics on staff versed in Pierce fire apparatus. The service facility will be located within fifty (50) miles of the fire department.

In addition to the dealership, Pierce has service facilities located in both, Weyauwega, Wisconsin and Bradenton, Florida. Pierce also maintains a dedicated parts facility of over 100,000 square feet in Appleton, Wisconsin. The parts facility stocks in excess of $15,000,000 in parts dedicated to service and replacement parts. The parts facility employs a staff dedicated solely for the distribution and shipment of service and replacement parts.

Service parts for the apparatus being proposed can be found via Pierceparts.com which, is an interactive online tool that delivers information regarding your specific apparatus as well as the opportunity to register for training classes.

As a Pierce customer you have the ability to view the complete bill of materials for your specific apparatus, including assembly drawings, piece part drawings, and beneficial parts notations. You will also have the ability to search the complete Pierce item master through a parts search function which offers all Pierce SKU's and descriptions offered on all Pierce apparatus. Published component catalogs, which include proprietary systems along with an extensive operator's manual library is available for easy reference.

Pierce Manufacturing maintains a dedicated service and warranty staff of over 80 personnel dedicated to customer support. Technical support is available 24/7/365 via the toll free hot line and has four (4) on staff EVTs that offer hands-on repair and maintenance training classes multiple times a year.

LIABILITY

The successful bidder will 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.

INSURANCE PROVIDED BY BIDDER

Commercial General Liability Insurance

The successful bidder will, 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:	$2,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form and will include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy will include Owner as an additional insured when required by written contract.

Commercial Automobile Liability Insurance

The successful bidder will, during the performance of the contract, keep in force at least the following minimum limits of commercial automobile liability insurance and coverage will be written on a Commercial Automobile liability form:

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

Umbrella/Excess Liability Insurance

The successful bidder will, 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:	$3,000,000
Each Occurrence:	$3,000,000

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

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

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

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as certificate holder.

INSURANCE PROVIDED BY MANUFACTURER

Product Liability Insurance

The manufacturer will, 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 Product Liability insurance:

Each Occurrence:	$1,000,000
Products/Completed Operations Aggregate:	$1,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form. The manufacturer's policy will include the owner as additional insured when required by written contract between the Owner and a Pierce authorized dealer.

Umbrella/Excess Liability Insurance

The manufacturer will, 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:

Each Occurrence:	$25,000,000
Aggregate:	$25,000,000

The umbrella policy will be written on an occurrence basis and provide excess to the manufacturer's General Liability/Products policies.

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

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

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Manufacturer agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as the certificate holder.

SINGLE SOURCE MANUFACTURER

Pierce Manufacturing, Inc. provides an integrated approach to the design and manufacture of our products that delivers superior apparatus and a dedicated support team. From our facilities, the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body will be entirely designed, tested, and hand assembled to the customer's exact specifications. The electrical system either hardwired or multiplexed, will be both designed and integrated by Pierce Manufacturing. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) will be provided by Pierce as a single source manufacturer. Pierce's single source solution adds value by providing a fully engineered product that offers durability, reliability, maintainability, performance, and a high level of quality.

Your apparatus will be manufactured in Appleton, Wisconsin.

NFPA 2024 STANDARDS

This unit will comply with the NFPA standards effective January 1, 2024, except for fire department directed exceptions. These exceptions will be set forth in the Statement of Exceptions.

Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus.

All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points will be identified on the customer approval print and are

shown as approximate. Actual location(s) will be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack.

A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating.

The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications.

An official of the company will designate, in writing, who is qualified to witness and certify test results.

NFPA COMPLIANCY

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

GENERATOR TEST

If the unit has a generator, the generator will be tested, approved, and certified by Underwriters Laboratories at the manufacturer's expense. The test results will be provided to the Fire Department at the time of delivery.

BREATHING AIR TEST

If the unit has breathing air, Pierce Manufacturing will draw an air sample from the air system and certify that the air quality meets the requirements of NFPA 1989, *Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection.*

VEHICLE INSPECTION PROGRAM CERTIFICATION

To assure the vehicle is built to current NFPA 1900 standards, the apparatus, in its entirety, will be third-party, independent, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition. The certification includes: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus.

A placard will be affixed in the driver's side area stating the third party agency, the date, the standard and the certificate number of the whole vehicle audit.

INSPECTION TRIP(S)

The bidder will provide one (1) factory inspection trip(s) for 4 members for final inspection customer representative(s). The inspection trip(s) will be scheduled at times mutually agreed upon between the manufacturer's representative and the customer. All costs such as travel, lodging and meals will be the responsibility of the bidder.

LOOSE EQUIPMENT AND TOOL MOUNTING

Central Fire District Fire Department Loose Equipment and Tool Mounting shall be included and mounted as per the direction of the fire department.

BID BOND

A bid bond as security for the bid in the form of a 10 percent bid bond will be provided with the proposal. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language which assures that the bidder/principal will 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.

Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will 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 will prevail.

PERFORMANCE BOND

Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will 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 will prevail.

Due to global supply chain constraints, any delivery date contained herein is a good faith estimate as of the date of this order/contract, and merely an approximation based on current information. Delivery updates will be made available, and a final firm delivery date will be provided as soon as possible.

If the Producer Price Index of Components for Manufacturing [www.bls.gov Series ID: WPUID6112] ("PPI") has increased at a compounded annual growth rate of 5.0 percent or more between the month Pierce accepts our order ("Order Month") and a month 14 months prior to the then predicted Ready For Pickup date ("Evaluation Month"), then pricing may be updated in an amount equal to the increase in PPI over 5.0 percent for each year or fractional year between the Order Month and the Evaluation Month.
The seller will document any such updated price for the customer's approval before proceeding and provide an option to cancel the order.

If the Producer Price Index of Components for Manufacturing [www.bls.gov Series ID: WPUID6112] ("PPI") has increased at a compounded annual growth rate of 5.0 percent or more between the month

Pierce accepts the order ("Order Month") and a month 14 months prior to the then predicted Ready For Pickup date ("Evaluation Month"), then pricing may be updated in an amount equal to the increase in PPI over 5.0 percent for each year or fractional year between the Order Month and the Evaluation Month.

The seller will document any such updated price for the customer's approval before proceeding and provide an option to cancel the order.

APPROVAL DRAWING

A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.

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

DRAWING, CAB TOP VIEW

On the sales drawing a top view of the cab seating and EMS cabinets will be provided. The top view will be a reference only of the seating and EMS cabinets in the order.

DRAWING, BUMPER EXTENSION TOP VIEW

On the sales drawing a top view of the bumper extension will be provided. The top view will be a reference only of the options in the order.

CAB CABINET DRAWINGS

There will be 3D multi-view drawings of each cabinet in the cab provided, including dimensions. This will include any auxiliary cabinets located behind the crew cab doors (if applicable). The drawings will be provided when the job is in detailed engineering.

ELECTRICAL WIRING DIAGRAMS

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

ENFORCER CHASSIS

The Pierce Enforcer™ is the custom chassis developed exclusively for the fire service. Chassis provided will be a new, tilt-type custom fire apparatus. The chassis will be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis will be designed and manufactured for heavy-duty service, with adequate strength, capacity for the intended load to be sustained, and the type of service required. The chassis will be the manufacturer's first line tilt cab.

MAXIMUM OVERALL HEIGHT

The maximum overall height of the apparatus will be 129".

MAXIMUM OVERALL LENGTH

The maximum overall length of the apparatus will be 360".

ANGLE OF DEPARTURE
The angle of departure will be 10.0 degrees. This will be effective with the truck in a unloaded state.

ANGLE OF APPROACH
The angle of approach will be 8.5 degrees. This will be effective with the truck in a unloaded state.

WHEELBASE
The wheelbase of the vehicle will be 184.

GVW RATING
The gross vehicle weight rating will be 44,000.

FRAME
The chassis frame will be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails will be heat-treated steel measuring 10.25" x 3.50" x 0.375".

Each rail will have a section modulus of 16.00 cubic inches, yield strength of 120,000 psi, and a resisting bending moment (rbm) of 1,921,069 inch-pounds.

FRAME REINFORCEMENT
A full-length mainframe "C" liner will be provided.

The liner will be an internal "C" design, heat-treated steel measuring 9.38" x 3.13" x 0.25". Each reinforcement member will have a section modulus of 3.90 cubic inches, yield strength of 120,000 psi and resisting bending moment (rbm) of 938,762 in-lb.

FRONT AXLE
The front axle will be a reverse "I" beam type with inclined king pins. It will be a Hendrickson SteerTek™ axle, with a rated capacity of 20,000 lb.

FRONT SUSPENSION
The front springs will be a Hendrickson, Steertek™ NXT, taper leaf design, with a ground rating of 20,000 lb.

SHOCK ABSORBERS
Hendrickson Steertek shock absorbers will be provided on the front axle.

FRONT OIL SEALS
Oil seals with viewing window will be provided on the front axle.

FRONT TIRES
Front tires will be Michelin 425/65R22.50 radials, 20 ply all-position XZY3 wide base tread, rated for 22,800 lb maximum axle load and 65 mph maximum speed.

The tires will be mounted on Alcoa© 22.50" x 12.25" Dura-Bright® polished aluminum disc type wheels with a ten (10) stud, 11.25" bolt circle.

REAR AXLE

The rear axle will be a Meritor™, Model RS-23-186, with a capacity of 24,000 lb.

TOP SPEED OF VEHICLE

A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 65 MPH / 104 KPH.

REAR SUSPENSION

The rear suspension will be Standens, semi-elliptical, 3.00" wide x 52.50" long, with a ground rating of 24,000 lb. The spring hangers will be castings.

The two (2) top leaves will wrap the forward spring hanger pin, and the rear of the spring will be a slipper style end that will ride in a rear slipper hanger.

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

REAR OIL SEALS

Oil seals will be provided on the rear axle(s).

REAR TIRES

Rear tires will be four (4) Michelin 11R22.50 radials, load range H, XDS2 tread, rated for 24,020 lb maximum axle load and 65 mph maximum speed.

The tires will be mounted on Alcoa®, Dura-Bright® model, 22.50" x 8.25" polished aluminum disc wheels with a ten (10) stud, 11.25" bolt circle.

TIRE BALANCE

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

TIRE PRESSURE MANAGEMENT

There will be a RealWheels LED AirSecure™ tire alert pressure management system provided, that will monitor each tire's pressure. A sensor will be provided on the valve stem of each tire for a total of six (6) tires.

The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor will activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi.

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

CHROME LUG NUT COVERS

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

FRONT HUB COVERS

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

MUD FLAPS
Mud flaps with a Pierce logo will be installed behind the front and rear wheels.

WHEEL CHOCKS
There will be one (1) pair of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks, with easy-grip handle provided.

Wheel Chock Brackets
There will be one (1) pair of Zico, Model SQCH-44-H, horizontal mounting wheel chock brackets provided for the Ziamatic, Model SAC-44-E, folding wheel chocks. The brackets will be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets will be mounted below the left side rear compartment.

ELECTRONIC STABILITY CONTROL
A vehicle control system will be provided as an integral part of the ABS brake system from Meritor Wabco.

The system will monitor and update the lateral acceleration of the vehicle and compare it to a critical threshold where a side roll event may occur. If the critical threshold is met, the vehicle control system will automatically reduce engine RPM, engage the engine retarder (if equipped), and selectively apply brakes to the individual wheel ends of the front and rear axles to reduce the possibility of a side roll event.

The system will monitor directional stability through a lateral accelerometer, steer angle sensor and yaw rate sensor. If spinout or drift out is detected, the vehicle control system will selectively apply brakes to the individual wheel ends of the front and rear axles to bring the vehicle back to its intended direction.

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

AUTOMATIC TRACTION CONTROL
An anti-slip feature will be included with the ABS. The Automatic Traction Control will be used for traction in poor road and weather conditions. The Automatic Traction Control will act as an electronic differential lock that will not allow a driving wheel to spin, thereby supplying traction at all times. The ABS electronic control unit (ECU) will work with the engine ECU, sharing information concerning wheel slip. Engine ECU will use information to control engine speed, allowing only as much throttle application as required for the available traction, regardless of how much the driver is asking for. An "off road traction" switch will be provided on the instrument panel. Activation of the switch will allow additional tire slip to let the truck climb out and get on top of deep snow or mud.

BRAKES

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

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

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

BRAKE SYSTEM AIR COMPRESSOR

The air compressor will be a Cummins/WABCO with 18.7 cubic feet per minute output.

BRAKE SYSTEM

The brake system will include:

- Brake treadle valve
- 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, with an automatic spring brake application at 40 psi
- A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa)
- 1/4 turn drain valves on each air tank

The air tank will be primed and painted to meet a minimum 750 hour salt spray test.

The air tanks will be painted black #98.

To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.

BRAKE SYSTEM AIR DRYER

The air dryer will be WABCO System Saver 1200 with spin-on coalescing filter cartridge and 100 watt heater.

BRAKE LINES

Color-coded nylon brake lines will be provided. The lines will be wrapped in a heat protective loom in the chassis areas that are subject to excessive heat.

AIR INLET

One (1) air inlet with 3D series male coupling will be provided. It will allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet will be located rearward in the driver side lower step well of cab. A check valve will be provided to prevent reverse flow of air. The inlet will

discharge into the "wet" tank of the brake system. A mating female fitting will also be provided with the loose equipment.

ADDITIONAL AIR TANK

An additional air tank with 1454 cubic inch displacement will be provided to increase the capacity of the main air brake system. This tank will be plumbed into the rear half of the brake system.

The air tank will be primed and painted to meet a minimum 750 hour spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.

The air tank(s) will be painted same as frame color.

The output flow of the engine air compressor will vary with engine rpm. Full compressor output will only be achieved at governed engine speed. Engine speed will be limited by generators, pumps and other PTO driven options.

AUTOMATIC MOISTURE EJECTOR(S)

Four (4) automatic moisture ejectors, Bendix®, Model DV-2, will be installed in the brake system.

Each moisture ejector will be equipped with a 12-volt heater, controlled by thermostat and ignition switch.

The moisture ejector(s) will be provided on the wet tank, primary and secondary tank and additional tank reservoirs(s).

MANUAL MOISTURE EJECTOR(S)

Five (5) manual moisture ejectors will be installed in the brake system.

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

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

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

Air lines will be routed from the air tank to the moisture ejector.

The moisture ejector(s) will be provided on the tbd reservoir(s).

COMPRESSION FITTINGS ONLY

Any nylon tube on the apparatus that is pneumatic will be plumbed with compression type fittings where applicable. Push lock fittings will not be acceptable for any pneumatic nylon tube plumbing.

ENGINE

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

Make:	Cummins
Model:	X10
Power:	450 hp at 1800 rpm

Torque:	1650 lb-ft at 1000 rpm
Governed Speed:	1900 rpm
Emissions Level:	EPA 2027
Fuel:	Diesel
Cylinders:	Six (6)
Displacement:	604 cubic inches (9.9L)
Starter:	Delco 39MT™
Fuel Filters:	Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter.

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

The engine will be filled with FA-4 10W30 oil as required by Cummins.

HIGH IDLE

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

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

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

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

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

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

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

CLUTCH FAN

A Horton® fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and fully engaged in "Pump" position. A compression fitting will be provided on the fan hub.

ENGINE AIR INTAKE

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

The ember separator is designed to prevent road dirt and recirculating hot air from entering the engine.

The ember separator will be easily accessible by tilting the cab.

EXHAUST SYSTEM

The exhaust system will be stainless steel from the turbo to the engine's aftertreatment device. The exhaust system will include an aftertreatment device to meet current EPA standards. An insulation wrap will be provided on all exhaust pipe between the turbo and the aftertreatment device to minimize the transfer of heat to the cab.

The exhaust will terminate horizontally ahead of the right side rear wheels and will extend 2.00" past the body rub rail. The exhaust pipes will be stainless steel.

There will be a stainless steel exhaust diffuser with a standard straight tip on the end provided to reduce the temperature of the exhaust as it exits. Heat deflector shields will be provided to isolate chassis and body components from the heat of the tailpipe diffuser.

EXHAUST MODIFICATION

An adapter for the Nederman exhaust extraction system will be provided on the end of the tail pipe.

There will be a 3-piece Nederman nozzle anchor plate provided tbd.

RADIATOR

The radiator and the complete cooling system will meet or exceed the current edition of applicable NFPA and engine manufacturer cooling system standards.

For maximum corrosion resistance and cooling performance, the entire radiator core will be constructed using long life aluminum alloy. The radiator core will consist of aluminum fins, having a serpentine design, brazed to aluminum tubes.

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

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

The radiator will be compatible with commercial antifreeze solutions.

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

A drain port will 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 will be provided to prevent recirculation of hot air to the inlet side of the radiator.

COOLANT LINES

Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing.

Hose clamps will be stainless steel constant torque type to prevent coolant leakage. They will expand and contract according to coolant system temperature thereby keeping a constant clamping pressure on the hose.

RADIATOR SKID PLATE

A lower radiator skid plate will be supplied for protection. The skid plate and mounting brackets will be constructed of 0.38" steel plate.

FUEL TANK

A 65 gallon fuel tank will be provided and mounted at the rear of the chassis. The tank will be constructed of stainless steel. It will be equipped with swash partitions and a vent. The exterior of the tank will be painted to match the chassis frame. To reduce the effects of corrosion, the fuel tank will be mounted with stainless steel straps.

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

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

A .50" diameter vent will be installed from tank top to just below fuel fill inlet.

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

All fuel lines will be of the wire braided type. Reusable fittings will be provided.

DIESEL EXHAUST FLUID TANK

A 4.5 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the driver's side body rearward of the rear axle.

A 0.50" drain plug will be provided in a low point of the tank for drainage.

A fill inlet will be provided and marked "Diesel Exhaust Fluid Only". The fill inlet will be located adjacent to the engine fuel inlet behind a common hinged, spring loaded, polished stainless steel door on the driver side of the vehicle.

The tank will meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing.

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

FUEL PRIMING PUMP

A Cummins automatic electronic fuel priming pump will be integrated as part of the engine.

FUEL SHUTOFF

A shutoff valve will be installed in the fuel line, on both sides of the fuel filter.

FUEL TANK DRAIN

A fuel tank drain, magnetic plug, will be installed on the under side of the fuel tank.

BY-PASS FUEL FILTER

In addition to the standard fuel filters a Davco Fuel Pro-382 filtering system will be provided. The fuel filtering system will be remote mounted on the chassis.

The system will have the following features:

- Self priming port
- Clear cover
- Drain valve
- Aluminum cylinder (act as fuel cooler)
- 12 Volt Heater

TRANSMISSION

An Allison 6th generation, Model EVS 4000P, electronic, torque converting, automatic transmission will be provided.

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

Two (2) PTO openings will be located on left side and top of converter housing (positions 8 o'clock and 1 o'clock).

A transmission temperature gauge with an amber light and buzzer will be installed on the cab instrument panel.

TRANSMISSION SHIFTER

A six (6)-speed push button shift module with the 4 + 2 "Mode" button will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation.

The Allison shifter will be a "double-digit" display model.

The transmission ratio will be 1st - 3.51 to 1.00, 2nd - 1.91 to 1.00, 3rd - 1.43 to 1.00, 4th - 1.00 to 1.00, 5th - 0.75 to 1.00, 6th - 0.64 to 1.00, R- 4.80 to 1.00.

TRANSMISSION COOLER
A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.

DOWNSHIFT MODE (W/ENGINE BRAKE)
The transmission will be provided with an aggressive downshift mode.

This will provide earlier transmission downshifts to 2nd gear from 6th gear, resulting in improved engine braking performance.

DRIVELINE
Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1810 universal joints.

The shafts will be dynamically balanced before installation.

A splined slip joint will be provided in each driveshaft where the driveline design requires it. The slip joint will be coated with Glidecoat® or equivalent.

DRIVELINE SAFETY LOOP(S)
There will be two (2) driveline safety loop(s) provided to help retain the drive shaft in the event of a drive shaft or cardan joint failure.

STEERING
Dual steering gear, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and Vickers® V20NF hydraulic pump with integral pressure and flow control. All power steering lines will have wire braded lines with crimped fittings.

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

STEERING WHEEL
The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design.

LOGO AND CUSTOMER DESIGNATION ON DASH
The dash panel will have an emblem containing the Pierce logo and customer name. The emblem will have three (3) rows of text for the customer's department name. There will 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 will be: Irvington

The second row of text will be: Fire

The third row of text will be: Dept

BUMPER
A one (1) piece steel painted bumper, minimum of 10.00" high, will be attached to the front of the frame.

To provide adequate support strength, the bumper will be mounted directly to the front of the C channel frame. The frame will be a bolted modular extension frame constructed of 50,000 psi tensile steel.

The bumper will be extended 10.00" from front face of cab.

The bumper will be metal finished and painted to match the lower job color of the apparatus.

Gravel Pan

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

TOW HOOKS

Two (2) painted steel tow hooks will be installed under the bumper and attached to the front frame members. The tow hooks will be painted to match the chassis frame assembly.

The tow hooks will be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow hooks will not be used for lifting of the apparatus.

PORTABLE WINCH RECEIVER

A portable winch receiver will be centered under the front bumper extension of the apparatus.

The winch receiver will be constructed of heavy steel tubing and reinforced to the bumper extension framework for the receiving portion. The winch receiver will be a class IV receiver and rated to 10,000 lb straight line pull.

FRONT BUMPER NOTCH

The front bumper will be notched for recessing of the Q2B siren. The notch will be designed so that the bumper is one continuous piece. The notch will be welded in place for strength with a continuous top and bottom flange. All welds will be metal finished for appearance. The siren will be located left of the bumper.

FRONT BUMPER UL-LX COATING

Protective black UL-LX® coating will be provided on the outside exterior of the top front bumper flange. It will not be sprayed on the underside of the flange.

The lining will be properly installed by an authorized UL-LX dealer.

CAB

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

The cab will be built by the apparatus manufacturer in a facility located on the manufacturer's premises.

For reasons of structural integrity and enhanced occupant protection, the cab will be a heavy duty design, constructed to the following minimal standards.

The cab will have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts), and rear wall areas. The A-pillar will be constructed of solid A356-T5 aluminum castings. The B-pillar and C-pillar will be constructed from 0.13" wall extrusions. The rear wall will be constructed of two (2) 2.00" x 2.00" outer aluminum extrusions and two (2) 2.00" x 1.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 4.625" x 3.864" x 0.090" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.25" thick corner casting at each of the front corners of the roof assembly.

The front of the cab will be constructed of a 0.13" firewall plate, covered with a minimum 0.090" front skin thickness, and reinforced with a full width x 0.50" thick cross-cab support located just below the windshield and fully welded to the engine tunnel. The cross-cab support will run the full width of the cab and weld to each A-pillar, the 0.13" firewall plate, and the front skin.

The cab floors will be constructed of 0.125" thick aluminum plate and reinforced at the firewall with an additional 0.375" thick cross-floor support providing a total thickness of 0.50" of structural material at the front floor area. The front floor area will also be supported with two (2) triangular 0.30" wall extrusions that also provides the mounting point for the cab lift. This tubing will run from the floor wireway of the cab to the engine tunnel side plates, creating the structure to support the forces created when lifting the cab.

The cab will be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability.

The centerline of front axle to the rear of the cab will be 70.00" long.

The overall height (from the cab roof to the ground) of approximately 99.00". The overall height listed will 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 will increase the overall height listed.

The floor to ceiling height inside the crew cab will be 54.50" in the center and outboard positions.

The crew cab floor will measure 46.00" from the rear wall to the back side of the rear facing seat risers.

The medium block engine tunnel, at the rearward highest point (knee level), will measure 61.50" to the rear wall. The big block engine tunnel will measure between 45.00" and 51.50" to the rear wall, depending on the engine.

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

The cab will be a full tilt cab style.

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

CAB ROOF DRIP RAIL

For enhanced protection from inclement weather, a drip rail will be furnished on the sides of the cab. The drip rail will be painted to match the cab roof, and bonded to the sides of the cab. The drip rail will extend the full length of the cab roof.

FENDER LINERS

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

PANORAMIC WINDSHIELD

A one (1)-piece safety glass windshield will be provided with over 2,775 square inches of clear viewing area. The windshield will be full width and will provide the occupants with a panoramic view. The windshield will consist of three (3) layers: outer light, middle safety laminate, and inner light. The outer light layer will provide superior chip resistance. The middle safety laminate layer will prevent the windshield glass pieces from detaching in the event of breakage. The inner light will provide yet another chip resistant layer. The cab windshield will be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern will be applied on the outside perimeter of the windshield for a finished automotive appearance.

WINDSHIELD WIPERS

Three (3) electric windshield wipers with washer will be provided that meet FMVSS and SAE requirements.

The washer reservoir will be able to be filled without raising the cab.

ENGINE TUNNEL

Engine hood side walls will be constructed of 0.375" aluminum. The top will be constructed of 0.125" aluminum and will be tapered at the top to allow for more driver and passenger elbow room.

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

The engine tunnel will be no higher than 17.00" off the crew cab floor.

INTERIOR CAB INSULATION

The cab will include 1.00" insulation in the ceiling, 1.50" insulation in the side walls, a minimum of 1.00" insulation in the crew cab floor, and 2.00" insulation in the rear wall to maximize acoustic absorption and thermal insulation.

CAB REAR WALL EXTERIOR COVERING

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

CAB LIFT

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

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

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

The cab will be capable of tilting 43 degrees to accommodate engine maintenance and removal.

The cab will be locked down by a 2-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system will 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 will return to the normally closed and locked position.

The hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position.

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

Cab Lift Interlock

The cab lift system will be interlocked to the parking brake. The cab tilt mechanism will 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 will be disabled.

GRILLE

A bright finished aluminum mesh grille screen, inserted behind a bright finished grille surround, will be provided on the front center of the cab.

DOOR JAMB SCUFFPLATES

All cab door jambs will be furnished with a polished stainless steel scuffplate, mounted on the striker side of the jamb and include the area behind the cab door handrails.

SIDE OF CAB MOLDING

Chrome molding will be provided on both sides of cab.

MIRRORS

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

DOORS

To enhance entry and egress to the cab, the forward cab door openings will be a minimum of 37.50" wide x 63.37" high. The crew cab doors will be located on the sides of the cab and will be constructed in the same manner as the forward cab doors. The crew cab door openings will be a minimum of 34.30" wide x 63.37" high.

The forward cab and crew cab doors will be constructed of extruded aluminum with a nominal material thickness of 0.093". The exterior door skins will be constructed from 0.090" aluminum.

A customized, vertical, pull-down type door handle will be provided on the exterior of each cab door. The finish of the door handle will be chrome/black. The exterior handle will be designed specifically for the fire service to prevent accidental activation, and will provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands.

Each door will also be provided with an interior flush, open style paddle handle that will be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles will provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands.

The cab doors will be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The keys will be Model 751. The locks will be capable of activating when the doors are open or closed. The doors will 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 0.38" pin and 11 gauge leaf will be provided on all cab doors. There will be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit.

A chrome handle will be provided on the inside of each cab door for ease of entry.

A red webbed grab handle will be installed on the crew cab door stop strap. The grab handles will be securely mounted.

The bottom cab step at each cab door location will be located below the cab doors and will be exposed to the exterior of the cab.

Door Panels

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

ELECTRIC OPERATED CAB DOOR WINDOWS

All four (4) cab doors will be equipped with electric operated windows with one (1) flush mounted automotive style switch on each door. The driver's door will have four (4) switches, one (1) to control each door window.

Each switch will allow intermittent or auto down operation for ease of use. Auto down operation will be actuated by holding the window down switch for approximately 1 second.

CAB STEPS

A dual step will be provided below each cab and crew cab door. The steps will be designed with grip strut inserts providing support, slip resistance, and drainage. The steps will be a bolt-in design to minimize repair costs should they need to be replaced. The forward cab steps will be a minimum 25.00" wide, and the crew cab steps will be 21.65" wide with a 7.00" minimum depth. The step design raises the middle step higher and closer to the cab floor, resulting in a 12.00" distance from the step to cab floor in the cab and a 10.25" distance from the step to cab floor in the crew cab. Stepping distances from the ground to first step will be approximately 16.50" and from first step to middle step will be approximately 12.00".

The vertical surface of the upper step well will be aluminum treadplate.

The first step will be lit by a white 12 volt DC LED light provided on the step.

CAB EXTERIOR HANDRAILS

A 1.25" diameter slip-resistant, knurled aluminum handrail will be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress.

STEP LIGHTS

There will be six (6) white LED step lights with chrome housing installed for cab and crew cab access steps.

- One (1) light for the left side cab access steps.
- Two (2) lights for the left side crew cab access steps.
- Two (2) lights for the right side crew cab access steps.
- One (1) light for the right side cab access step.

In order to ensure exceptional illumination, each light will 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 lights will be activated when the battery switch is on and the adjacent door is opened.

FENDER CROWNS

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

HANDRAIL (FRONT OF CAB)

A 10.00" long x 1.25" diameter, handrail will be mounted on the front of the cab centered below the windshield. The handrails will be extruded aluminum with a ribbed design to provide a positive gripping surface.

CREW CAB WINDOWS

One (1) fixed window with tinted glass will be provided on each side of the cab, to the rear of the front cab door. The windows will be sized to enhance light penetration into the cab interior. The windows will measure 18.70" wide x 23.75" high with chrome window trim.

BEHIND RIGHT SIDE CAB DOOR WINDOW TINT

The window behind the right side front cab door will be tinted medium gray.

BEHIND LEFT SIDE CAB DOOR WINDOW TINT

The window behind the left side front cab door will be tinted medium gray.

LEFT SIDE ROLLUP CREW CAB DOOR WINDOW TINT

The rollup window in the left side crew cab door will be tinted medium gray.

RIGHT SIDE ROLLUP CREW CAB DOOR WINDOW TINT

The rollup window in the right side crew cab door will be tinted medium gray.

WINDOW PROTECTOR BARS, CREW CAB DOORS

A knurled window protector bar will be installed on each crew cab door, 3.00" above the bottom of the window opening. The bar will 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.

STORAGE COMPARTMENT

Provided under the forward facing crew cab seats will be a transverse compartment. The compartment will be open top to bottom with no dividers.

The upper section will be 16.25" wide x 9.00" high x full width (transverse) of the crew cab. The lower section will be 16.50" wide x 25.50" high x 15.00" deep on both sides. The compartment will extend from the bottom of the cab to top of the seat riser.

A 8.00" diameter tube will be provided in the compartment located on each side of the cab. Part of the tube will be recessed below the compartment floor. The overall height of the tube will be 5.50" high at the back and 4.00" high at the front of the compartment for ease of removing the extinguisher.

There will be two (2) double pan doors painted to match the cab exterior with a non-locking D-Ring latch, one (1) on each side of the cab with a web strap for each exterior door provided as a door stop. The clear door opening of each compartment door will be 10.25" wide x 32.00" high.

The exterior access will be provided with no scuffplate on the lower door frame.

There will be one (1) drop down door, painted to match the cab interior with two (2) non-locking flush lift and turn latches with no louvers on the forward face of the seat riser.

The exterior of the compartment will be painted to match the cab interior color. The interior of the compartment will be painted to match the cab interior.

Compartment Light

There will be four (4) white LED strip lights, one (1) each side of exterior compartment door opening. The lights will be controlled by an automatic door switch.

CAB AND CREW CAB DOOR LINKAGES

All cab and crew cab door hardware linkages will have the plastic end clips replaced with metal for added security to prevent them from falling off.

All cab door linkages and moving components will be liberally coated with a lithium based lubricant.

CAB DASH

The driver side dash, switch panel located to the right of the driver, and center console will be constructed of metal and painted to match the cab interior.

The officer side dash will be a flat top design with an upper beveled edge to provide easy maintenance and will be constructed out of aluminum and painted to match the cab interior.

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

MOUNTING SYSTEM

There will be two (2) section(s) of Pac Trac equipment mounting systems located rear wall in the cab each side of forward facing crew seats.

Pac Trac mounts will be certified by Pac Trac to meet the current edition of applicable NFPA standards for mounting of equipment inside the cab.

MOUNTING PLATE ON ENGINE TUNNEL

Equipment installation provisions will be installed on the engine tunnel.

A 0.188" smooth aluminum plate will be bolted to the top surface of the engine tunnel. The plate will follow the contour of the engine tunnel and will run the entire length of the engine tunnel. The plate will be spaced off the engine tunnel 1.00" to allow for wire routing below the plate.

The mounting surface will be painted to match the cab interior.

CAB INTERIOR

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

The engine tunnel will be padded and covered, on the top and sides, with dark silver gray 36 ounce leather grain vinyl resistant to oil, grease, and mildew.

For durability and ease of maintenance, the cab interior side walls will be painted aluminum. The rear wall will be painted aluminum.

The headliner will be installed in both forward and rear cab sections. Headliner material will be vinyl. A sound barrier will be part of its composition. Material will be installed on an aluminum sheet and securely fastened to interior cab ceiling.

The forward portion of the cab headliner will permit easy access for service of electrical wiring or other maintenance needs.

All wiring will be placed in metal raceways.

CAB INTERIOR UPHOLSTERY

The cab interior upholstery will be 36 oz dark silver gray vinyl.

CAB INTERIOR PAINT

The cab interior metal surfaces, excluding the rear heater panels, will be painted fire smoke gray, vinyl texture paint.

The rear heater panels will be painted black, vinyl textured paint.

CAB FLOOR

The cab and crew cab floor areas will be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler.

The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.

DEFROST/AIR CONDITIONING SYSTEM

A ceiling mounted combination heater, defroster and air conditioning system will be installed in the cab above the engine tunnel area.

Cab Defroster

A 54,000 BTU heater-defroster unit with 690 SCFM of air flow will be provided inside the cab. The heater-defrost will be installed in the forward portion of the cab ceiling. Air outlets will be strategically located in the cab header extrusion per the following:

- One (1) adjustable outlet directed towards the left side cab window.
- One (1) adjustable outlet directed towards the right side cab window.
- Six (6) fixed outlets directed at the windshield.

The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements.

Cab/Crew Auxiliary Heater

There will be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in each outboard rear facing seat riser with a dual scroll blower. An aluminum plenum incorporated into the cab structure to be used to transfer heat to the forward positions.

Air Conditioning

A 19.10 cubic inch compressor will be installed on the engine.

A roof-mounted condenser with a 78,000 BTU output at 2,400 SCFM that meets and exceeds the performance specification will be installed on the cab roof. Mounting the condenser below the cab or body would reduce the performance of the system and will not be acceptable. The condenser cover to be painted to match the cab roof.

The air conditioning system will be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit at 50 percent relative humidity within 30 minutes. The cooling performance test will be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours.

The evaporator unit will be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator will include one (1) high performance heating core, one (1) high performance cooling core with (1) plenum directed to the front and one (1) plenum directed to the rear of the cab. The rear plenum will be covered with a formed plastic cover.

The evaporator unit will have a 52,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications.

Adjustable air outlets will be strategically located on the forward plenum cover per the following:

- Four (4) outlets directed towards the seating position on the left side of the cab.
- Four (4) outlets directed towards the seating position on the right side of the cab.

Adjustable air outlets will be strategically located on the rear plenum cover per the following:

- Minimum of five (5) outlets directed towards crew cab area.

A high efficiency particulate air (HEPA) filter will be included for the system. Access to the filter cover will be secured with four (4) screws.

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

Climate Control

An automotive style controller will be provided to control the heat and air conditioning system within the cab. The controller will have three (3) functional knobs for fan speed, temperature, and air flow distribution (front to rear) control.

The system will control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature.

The AC system will be manually activated by pushing the center of the temperature control knob. Pushing the center of the air flow distribution knob will engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position.

The system controller will be located within panel position #12.

Gravity Drain Tubes

Two (2) condensate drain tubes will be provided for the air conditioning evaporator. The drip pan will have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps will be provided.

SUN VISORS

Two (2) smoked Lexan™ sun visors will be provided. The sun visors will be located above the windshield with one (1) mounted on each side of the cab.

There will be a black plastic thumb latch provided to help secure each sun visor in the stowed position.

GRAB HANDLES

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

ENGINE COMPARTMENT LIGHTS

There will be two (2) Whelen®, Model 3SC0CDCR, 12 volt DC, 3.00" white LED light(s) with Model 3FLANGEC, chrome flange kit(s) installed under the cab to be used as engine compartment illumination.

These light(s) will be activated automatically when the cab is raised or when the dip stick door is opened.

ACCESS TO ENGINE DIPSTICKS

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

The engine oil dipstick will allow for checking only. The transmission dipstick will allow for both checking and filling.

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

CAB SAFETY SYSTEM

The cab will be provided with a safety system designed to protect occupants in the event of a side roll or frontal impact, and will include the following:

- A supplemental restraint system (SRS) sensor will be installed on a structural cab member behind the instrument panel. The SRS sensor will perform real time diagnostics of all critical subsystems and will record sensory inputs immediately before and during a side roll or frontal impact event.
- A fault-indicating light will be provided on the vehicle's instrument panel allowing the driver to monitor the operational status of the SRS system.
- A driver side front air bag will be mounted in the steering wheel and will be designed to protect the head and upper torso of the occupant, when used in combination with the 3-point seat belt.
- A passenger side knee bolster air bag will be mounted in the modesty panel below the dash panel and will be designed to protect the legs of the occupant, when used in combination with the 3-point seat belt.
- Air curtains will be provided in the outboard bolster of outboard seat backs to provide a cushion between occupant and the cab wall.
- Suspension seats will be provided with devices to retract them to the lowest travel position during a side roll or frontal impact event.
- Seat belts will be provided with pre-tensioners to remove slack from the seat belt during a side roll or frontal impact event (with the exception of command chairs located in the command cab).

Frontal Impact Protection

The SRS system will provide protection during a frontal or oblique impact event. The system will activate when the vehicle decelerates at a predetermined G force known to cause injury to the occupants. The cab and chassis will have been subjected, via third party test facility, to a crash impact during frontal and oblique impact testing. Testing included all major chassis and cab components such as mounting straps for fuel and air tanks, suspension mounts, front suspension components, rear

suspensions components, frame rail cross members, engine and transmission and their mounts, pump house and mounts, frame extensions and body mounts. The testing provided configuration specific information used to optimize the timing for firing the safety restraint system. The sensor will activate the pyrotechnic devices when the correct crash algorithm, wave form, is detected.

The SRS system will deploy the following components in the event of a frontal or oblique impact event:

- Driver side front air bag
- Passenger side knee bolster air bag
- Air curtains mounted in the outboard bolster of outboard seat backs
- Suspension seats will be retracted to the lowest travel position
- Seat belts will be pre-tensioned to firmly hold the occupant in place

Side Roll Protection

The SRS system will provide protection during a fast or slow 90 degree roll to the side, in which the vehicle comes to rest on its side. The system will analyze the vehicle's angle and rate of roll to determine the optimal activation of the advanced occupant restraints.

The SRS system will deploy the following components in the event of a side roll:

- Air curtains mounted in the outboard bolster of outboard seat backs
- Suspension seats will be retracted to the lowest travel position
- Seat belts will be pre-tensioned to firmly hold the occupant in place

SEATING CAPACITY

The seating capacity of the vehicle (including tiller cab and belted seat positions in the rescue body) will be six (6).

DRIVER SEAT

A H.O. Bostrom Sierra 550 series, air suspension high back seat will be provided in the cab for the driver. For optimal comfort, the seat will be provided with 18.50" deep cushion. For increased convenience, the seat will include a manual control to adjust the horizontal position (5.50" travel). To provide flexibility for multiple driver configurations, the seat will have a reclining back, adjustable from 5 degrees back to 40 degrees forward.

To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled.

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A suspension seat safety system will be included. When activated in the event of a side roll, this system will pretension the seat belt and retract the seat to its lowest travel position.

The seat will include no additional zip clean covers.

The seat will be furnished with a 3-point, shoulder type seat belt.

OFFICER SEAT

A H.O. Bostrom, Tanker 450, SCBA fixed seat will be provided in the cab for the officer. For optimal comfort, the seat will be provided with 17.00" deep cushion.

The seat back will be an SCBA back style with a 5 degree fixed recline angle. The SCBA cavity will be adjustable from front to rear in 1.50" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A seat safety system will be included. When activated, this system will pretension the seat belt.

The seat will include no additional zip clean covers.

The seat will be furnished with a 3-point, shoulder type seat belt.

RADIO COMPARTMENT

A radio compartment will be provided under the officer's seat.

The inside compartment dimensions will be 14.00" wide x 7.50" high x 15.00" deep, with the back of the compartment angled up to match the cab structure.

A drop-down door with one (1) lift and turn latch will be provided for access.

The compartment will be constructed of smooth aluminum and painted to match the cab interior.

REAR FACING DRIVER SIDE OUTBOARD SEAT

There will be one (1) rear facing, HO Bostrom Tanker 450, SCBA seat provided at the driver side outboard position in the crew cab. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control).

The seat back will be an SCBA back style with 5 degree fixed recline angle. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A seat safety system will be included. When activated, this system will pretension the seat belt.

The seat will include no additional zip clean covers.

The seat will be furnished with a 3-point, shoulder type seat belt.

REAR FACING PASSENGER SIDE OUTBOARD SEAT

There will be one (1) rear facing, HO Bostrom Tanker 450 seat provided at the passenger side outboard position in the crew cab. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control).

The seat back will be an SCBA back style with 5 degree fixed recline angle. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A seat safety system will be included. When activated, this system will pretension the seat belt.

The seat will include no additional zip clean covers.

The seat will be furnished with a 3-point, shoulder type seat belt.

FORWARD FACING CENTER SEATS

There will be two (2) forward facing, HO Bostrom Tanker 450, SCBA seats provided at the center position in the crew cab.

For optimal comfort, the seats will be provided with 17.00" deep cushion.

The seat backs will be an SCBA back style with a 95 degree fixed recline angle. The SCBA cavity will be adjustable from front to rear in 1.50" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.

The seats will include the following feature incorporated into the side roll protection system:

- A seat safety system will be included. When activated, this system will pretension the seat belt around the occupant to firmly hold them in place in the event of a side roll.

The seats will include no additional zip clean covers.

The seats will be furnished with a 3-point, shoulder type seat belt.

SEAT UPHOLSTERY

All seat upholstery will be leather grain dark silver gray vinyl resistant to oil, grease and mildew. The cab and tiller cab (if applicable) will have six (6) seating positions.

AIR BOTTLE HOLDERS

All SCBA type seats in the cab will have a "Hands-Free" auto clamp style bracket in its backrest. For efficiency and convenience, the bracket will include an automatic spring clamp that allows the occupant

to store the SCBA bottle by simply pushing it into the seat back. For protection of all occupants in the cab, in the event of an accident, the inertial components within the clamp will constrain the SCBA bottle in the seat and will exceed the NFPA standard of 9G.

There will be a quantity of five (5) SCBA brackets.

SEAT BELTS

All cab and tiller cab (if applicable) seating positions will have orange seat belts. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length will meet or exceed the current edition of applicable NFPA and CAN/ULC - S515 standards.

The 3-point shoulder type seat belts will include height adjustment. This adjustment will optimize the belts effectiveness and comfort for the seated firefighter. The 3-point shoulder type seat belts will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.

The 3-point shoulder type belts will also include the ReadyReach® D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location.

Any flip up seats will include a 3-point shoulder type belts only.

To ensure safe operation, the seats will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled.

HELMET STORAGE PROVIDED BY FIRE DEPARTMENT

NFPA 1900, 2024 edition, section 11.1.8.4.1 and CAN/ULC 515:2024 edition, section 5.2, requires a location for helmet storage be provided.

There is no helmet storage on the apparatus as manufactured. The fire department will provide a location for storage of helmets.

CAB DOME LIGHTS

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

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

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

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

All dome lights on the apparatus will be illuminated per the current edition of applicable NFPA standards per seating position.

HAND HELD LIGHT

There will be six (6) Streamlight, Fire Vulcan, Model #44451, hand lights provided with a vehicle mount with 12VDC direct wire charging rack and quick release buckle strap mounted tbd.

Each light housing will be orange in color and be provided with a C4, LED and two (2) "ultra bright blue tail light LEDs" The tail light LEDs will have a dual mode of blinking or steady.

CAB INSTRUMENTATION

The cab instrument panel will include gauges, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches will be identified by a label adjacent to each item. Actuation of the headlight switch will illuminate the labels in low light conditions. Telltale indicator lamps will not be illuminated unless necessary. The cab instruments and controls will 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.

Gauges

The gauge panel will 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)
  - Amber indicator light in gauge dial

Indicator Lamps

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

The following amber telltale lamps will 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 will be present:
- Ladder rack down
- Parking brake
- Stop engine
- The following green telltale lamps will be present:
- Left turn
- Right turn
- Battery on
- Ignition
- Aux brake (auxiliary brake engaged) (where applicable)
- The following blue telltale lamps will be present:
- High beam

Alarms

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

Indicator Lamp and Alarm Prove-Out

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

Control Switches

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

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

Panel back lighting intensity control switch: A three (3)-position momentary rocker switch will 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 will 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 will be provided. The first switch position will turn off and deactivate vehicle ignition. The second switch position will activate vehicle ignition and will 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 will temporarily silence all active cab alarms. An alarm "chirp" may continue as long as alarm condition exists. Switching ignition to off position will terminate the alarm silence feature and reset function of cab alarm system.

Engine start switch: A two (2)-position momentary rocker switch will be provided. The first switch position is the default switch position. The second switch position will activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.

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

Heater, defrost, and air conditioning control panel.

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

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

Parking brake control: An air actuated push/pull park brake control.

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

High idle engagement switch: A maintained rocker switch with integral indicator lamp will be provided. The switch will 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 will indicate when the high idle function is engaged.

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

Emergency switching will 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 will 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.

Custom Switch Panels

The design of cab instrumentation will allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There will 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.

Diagnostic Panel

A diagnostic panel will be provided and accessible while standing on the ground. The panel will be located inside the driver's side door left of the steering column. The diagnostic panel will allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches will allow ABS systems to provide blink codes should a problem exist.

The diagnostic panel will include the following:

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

AIR RESTRICTION INDICATOR

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

"DO NOT MOVE APPARATUS" INDICATOR

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

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

CAB/BODY OPEN DOOR INDICATOR LIGHT

There will be three (3) Whelen®, Model WIONSM* 5.91" wide x 1.69" high x 1.10" deep flashing LED indicator lights with chrome trim provided overhead in clear view of the driver, to warn of an open cab or compartment door. Each light will be properly labeled.

- One (1) light with red LEDs and clear lens, will indicate the status of doors on the left side of the apparatus.
- One (1) light with amber LEDs and clear lens, will indicate the status of doors on the right side of the apparatus.
- One light with blue LEDs and clear lens, will indicate the status of the rear step and upper body compartments of the apparatus.

SWITCH PANELS

The built-in switch panels will be located in the lower console or overhead console of the cab. Switches will be rocker type with an indicator light, of which is an integral part of the switch.

WIPER CONTROL

Wiper control will consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls. The control will be located on the left side of the center instrument panel.

CAB USB

There will be four (4) USB terminations with a combination USB type A & C, wired to switched battery power, provided per the following:

- One (1) within reach of the driver
- One (1) within reach of the passenger
- Two (2) on the rear of the engine tunnel, one (1) each side.

This circuit may be load managed.

SPARE CIRCUIT

There will be four (4) pair of wires, including a positive and a negative, installed on the apparatus.

The wires will have the following features:

- The positive wire will be connected directly to the battery switched power.
- The negative wire will be connected to ground.
- Wires will be capable of carrying 15 amps.
- Power and ground will terminate TBD.
- Termination will be with heat shrinkable butt splicing.
- Wires will be protected to meet the NFPA Automotive Fire Apparatus standard.

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

STEREO RADIO

There will be one heavy duty AM/FM / Weatherband / Bluetooth stereo radio. The radio will be installed within reach of the driver. There will be 5.25" speakers installed one (1) pair of 5.25" speakers in the

cab and one (1) pair of 5.25" speakers in the crew cab. The antenna will be a roof-mounted rubber antenna located in an open space, on the cab roof.

The following Jensen features will be included:

- 180 watts max power (45W x 4); 100 watts RMS (25W x 4)
- Bluetooth® streaming audio (A2DP/AVRCP)
- Weatherband
- AM/FM tuner with 30 presets
- Audio settings (volume/bass/treble/balance/fade)
- Toggle switch between day and night display
- Daylight-readable, segmented LCD
- Two-wire power with non-volatile memory and clock support
- Low battery alert

INFORMATION CENTER

There will be a LCD display integral to the cab gauge panel provided that will display the following information:

- Total distance
- Trip distance
- Total hours
- Trip hours
- PTO "A" hours
- PTO "B" hours

COLLISION MITIGATION

There will be a HAAS Alert®, Model HA7 Responder-to-Vehicle (R2V) collision avoidance system provided on the apparatus. The HA7 cellular transponder module will be installed behind the cab windshield, as high and near to the center as practical, to allow clear visibility to the sky. The module dimensions are 5.40" long x 2.70" wide x 1.30" high, and operating temperature range is -40 degrees Celsius to 85 degrees Celsius.

The transponder will be connected to the vehicle's emergency master circuit and battery direct power and ground.

While responding with emergency lights on, the HA7 transponder sends alert messages via cellular network to motorists in the vicinity of the responding truck that are equipped with the WAZE app.

While on scene with emergency lights on, the HA7 transponder sends road hazard alerts to motorists in the vicinity of the truck that are equipped with the WAZE app.

The HA7 Responder-to-Vehicle (R2V) collision avoidance system will include the transponder and a 5 year cellular plan subscription.

Activation of the HAAS Alert system requires a representative of the customer to accept the End User License Agreement (EULA) via an on-line portal.

VEHICLE DATA RECORDER

There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided.

The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line.

The vehicle data recorder will 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
- Seat Belt Buckled Status - Yes/No by Position
- Master Optical Warning Device Switch - On/Off
- Internal clock syncs the time and date when a laptop is connected

Seat Belt Monitoring System

A seat belt monitoring system (SBMS) will be provided. The SBMS will be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following:

- Seat Occupied & Buckled = Green LED indicator illuminated
- Seat Occupied & Unbuckled = Red LED indicator with audible alarm
- No Occupant & Buckled = Red LED indicator with audible alarm
- No Occupant & Unbuckled = No indicator and no alarm
- FAULT = Blue LED indicator illuminated

The SBMS will include an audible alarm that will warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.

RADIO ANTENNA MOUNT

There will be two (2) Maxrad, Model BMATM, antenna-mounting base(s) with 25.00' coax cable and weatherproof cap provided.

The mount(s) will be located on the cab roof lower cab roof.

The cable will be routed to behind the officer's seat.

VEHICLE CAMERA SYSTEM

There will be a color vehicle camera system provided with the following:

- One (1) Analog High Definition (AHD) white camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse.

The camera image will be displayed on a 7.00" High Definition (HD) display located in view of the driver on the dash. The display will include manual camera activation capability and audio from the active camera.

The following components will be included:

- One (1) HD700136DC, display
- One (1) 1080p AHD rear camera
- All necessary cables

Camera Switcher
A camera switcher is not required.

RECESS REAR CAMERA
A rear camera recess will be provided tbd.

ELECTRICAL POWER CONTROL SYSTEM
A compartment will 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 will contain circuit protection devices and power control devices. Power and signal protection and control components will be protected against corrosion, excessive heat, excessive vibration, physical damage and water spray.

Serviceable components will be readily accessible.

Circuit protection devices, which conform to SAE standard, will be utilized to protect each circuit. All circuit protection devices will be sized to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will 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 will be utilized to protect electronic equipment.

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

Visual status indicators will 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 will be used.

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

Power and Ground Studs
Spare circuits will be provided in the primary distribution center for two-way radio equipment.

The spare circuits will 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

EMI/RFI Protection

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

The apparatus proposed will have the ability to operate in the electromagnetic environment typically found in fire ground operations. The contractor will 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 will be controlled by applying immune circuit designs, shielding, twisted pair wiring and filtering. The electrical system will be designed for full compatibility with low level control signals and high powered two-way radio communication systems. Harness and cable routing will be given careful attention to minimize the potential for conducting and radiated EMI-RFI susceptibility.

ELECTRICAL

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

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

1. All holes made in the roof will be caulked with silicon. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof.
2. Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body.
3. Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also, a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.
4. Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will have 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 will have corrosion preventative compound added to the socket terminal area.
6. All electrical terminals in exposed areas will have silicon applied completely over the metal portion of the terminal.

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection.

Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments.

An operational test will 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 will be recorded and provided to the purchaser at time of delivery.

BATTERY SYSTEM

Six (6) 12 volt, Deka, Model 1231MF, maintenance free group 31 batteries that include the following features, each, will be provided:

- 1000 CCA (cold cranking amps)
- 185 reserve capacity
- High cycle
- Ref. CA of 1190 at 0 degrees Fahrenheit
- 185 reserve capacity
- Threaded studs

BATTERY SYSTEM

There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel.

MASTER BATTERY SWITCH

There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system.

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

BATTERY COMPARTMENTS

Batteries will be placed on non-corrosive mats. The batteries will be stored in well-ventilated compartments that are located under the cab and bolted directly to the chassis frame. The battery compartments will be constructed of painted 0.188" stainless steel plate and designed to accommodate a maximum of three (3) group 31 batteries in each compartment. The battery hold-downs will be of a non-corrosive material. All bolts and nuts will be stainless steel.

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

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

JUMPER STUDS

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

BATTERY CHARGER

There will be a Kussmaul™, Chief Series Smart Charger 6012, product code 091-266-12-60, 60 amp battery charger with build-in touch screen display provided.

The battery charger will be wired to the AC shoreline inlet through a junction box located near the battery charger.

The battery charger will be located in the cab behind the driver seat.

REMOTE CONTROL PANEL - BATTERY CHARGER

There will be a Kussmaul™, Model 091-94-12 universal display panel included. It will be wired directly to the chassis batteries.

The battery charger indicator will be located on the left side of the cab centered above the wheel well.

AUTO EJECT FOR SHORELINE

There will be one (1) Kussmaul™, Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus.

The shoreline inlet(s) will include red weatherproof flip up cover(s).

There will be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting.

The shoreline(s) will be connected to the battery charger.

There will be a mating connector body supplied with the loose equipment.

There will be a label installed near the inlet(s) that state the following:

- Line Voltage
- Current Ratting (amps)
- Phase
- Frequency

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

ELECTRIC POWER FOR WINCH

Electric power provisions will be furnished for the portable winch from the chassis battery system.

The receiver plug will be located front.

A total quantity of four (4) receptacles will be provided.

STAINLESS STEEL BATTERY TRAYS

Stainless steel battery trays will be provided for the batteries to sit in. Drain holes will be provided.

ALTERNATOR

A Delco Remy®, Model 55SI, alternator will be provided. It will have a rated output current of 430 amps, as measured by SAE method J56. The alternator will feature an integral regulator and rectifier system that has been tested and qualified to an ambient temperature of 257 degrees Fahrenheit (125 degrees Celsius). The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.

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

HEADLIGHTS

There will be four (4) JW Speaker®, Model 8800, 4" x 6" rectangular LED lights mounted in the front quad style, chrome housing on each side of the cab grille:

- the outside light on each side will contain a part number 055***1 low beam module
- the inside light on each side will contain a part number 055***1 high beam module
- the headlights to include chrome bezels

The low beam lights will be activated when the headlight switch is on.

The high beam and low beam lights will be activated when the headlight switch and the high beam switch is activated.

DIRECTIONAL LIGHTS

There will be two (2) Whelen® 600 series, amber LED combination directional/marker lights provided. The lights will be located next to the headlights in a triple light wrap around polished housing on the outside cab corners, one each side.

The lens color(s) to be the same as the LEDs.

INTERMEDIATE LIGHT

There will be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light will double as a turn signal and marker light.

CAB CLEARANCE/MARKER/ID LIGHTS

There will be seven (7) amber LED lights provided per the following:

- Three (3) amber LED identification lights will be installed in the center of the cab above the windshield.
- Two (2) amber LED clearance lights will be installed, one (1) on each outboard side of the cab above the windshield as close to the outside of the apparatus as practical.
- Two (2) amber LED clearance lights will be installed, one (1) on each side of the cab as high and far forward as practical.

The lights will be installed without guards.

FRONT CAB SIDE DIRECTIONAL LIGHTS

There will be two (2) Truck-Lite®, Model 19036Y, amber LED lights installed to the outside of the chrome wrap around bezel, one (1) on each side of the cab.

The lights will activate as additional directional lights with the corresponding directional circuit.

REAR CLEARANCE/MARKER/ID LIGHTING

There will be a three (3) LED light bar 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 will 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
- All at the same height

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

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

There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

Per FMVSS 108 and CMVSS 108 requirements.

REAR FMVSS LIGHTING

The rear stop/tail and directional lighting included in the rear tail light housing will include the following:

- Two (2) Whelen®, Model M62BTT, 4.30" high x 6.70" wide x 1.40" deep brake/tail lights with red LEDs
- Two (2) Whelen, Model M62T, 4.30" high x 6.70" wide x 1.40" deep directional lights with amber LEDs. The directional lights will be set to Steady On (Arrow) flash pattern.
- The lens color(s) to be the same as the LEDs.

There will be two (2) Whelen Model M62BU, LED backup lights provided in the tail light housing.

LICENSE PLATE BRACKET

One (1) license plate bracket constructed of stainless steel will be provided at the rear of the apparatus.

One (1) white LED light with chrome housing will be provided to illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.

LIGHTING BEZEL

There will be two (2) Whelen, Model M6FCV4P, four (4) place chromed ABS housings with Pierce logos provided for the rear M6 series stop/tail, directional, back up, scene lights or warning lights.

BACK-UP ALARM

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

CAB PERIMETER SCENE LIGHTS

There will be four (4) Amdor, Model AY-LB-12HW0**, white LED strip lights provided, one (1) for each cab door that will meet NFPA ground lighting requirements.

These lights will 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.

BODY PERIMETER SCENE LIGHTS

There will be two (2) Amdor, Model AY-LB-12HW020, 350 lumens, 20.00" long, white LED's, 12 volt DC lights provided at the rear step area of the body, one (1) each side shining to the rear.

The perimeter scene lights will be activated when the parking brake is applied.

ADDITIONAL PERIMETER LIGHTS

There will be six (6) lights Amdor®, Model AY-LB-12HW012, 190 lumens each, 12.00" white LED perimeter light(s) provided one (1) light under compartment D1, one (1) light under compartment D3, one (1) light under compartment P1, one (1) light under compartment P3, one (1) light under compartment D4 and one (1) light under compartment P4.

These lights will be activated the same as the body perimeter lights.

STEP LIGHTS

All step lights on the apparatus will be illuminated per the current edition of applicable NFPA standards.

The step lights will be activated when the parking brake is applied and deactivated when the parking brake is released.

The following step lights will be provided:

Rear Stairway Lights

There will be a total of two (2) 12 volt DC, LED strips light provided to illuminate the stairway. One (1) light strip will be mounted at an angle on the side walls above the stairs on each side of the stairway.

Other Step Lights

Step lights will be provided both at the rear of the body and in the recessed walkway on the roof of the body. All of these step lights will be white LED lights.

There will be one (1) step light provided on each side of the tailboard at the rear of the body.

There will be one (1) chrome plated hooded step light provided every 4' in the recessed walkway.

All other steps on the apparatus will be illuminated per the current edition of applicable NFPA standards.

12 VOLT LIGHTING

There will be a Whelen® Model S86M**, 86.00" long 38,880 lumens DC powered light provided on the front cab roof as far forward as practical. The painted parts of this light assembly to be white. The light(s) to be installed with flat horizontal mounts.

The light will include the following:

- White scene LEDs
- Two (2) amber LED modules as clearance lights that are energized
- Three (3) amber LED modules as identification lights that are energized
- Four (4) additional LED modules. The additional additional modules to be four (4) scene light modules with white LEDs

The clearance and identification LEDs will be activated with the headlight switch.

The scene LEDs will be activated when the battery switch is on and by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel is on.

There will be a switch in the cab on the switch panel to control the flashing or spot LED modules.

Amber flashing LED modules will be deactivated when the parking brake is released.

The white scene and flashing LED modules may be load managed when the parking brake is applied.

12 VOLT DC SCENE LIGHTS

There will be one (1) Whelen® Model S30M**, 12,960 lumens 30.00" 12 volt DC light(s) with white LEDs provided on the left side of the cab roof located, over crew door. The painted parts of this light assembly to be white. The light(s) to be installed with flat horizontal mounts.

The light(s) will include the following:

- Six (6) scene light modules with white LEDs
- Three (3) amber LEDs as marker lights
- Two (2) additional LED modules. The additional modules to be two (2) scene light modules with white LEDs.

The lights will be activated per the following:

- The amber marker lights not activated.
- The scene LEDs will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel.
- There will be a switch in the cab on the switch panel to control the flashing or spot LED modules.
- The light(s) may be load managed when the parking brake is applied.

12 VOLT DC SCENE LIGHTS

There will be one (1) Whelen® Model S30M**, 12,960 lumens 30.00" 12 volt DC light(s) with white LEDs provided on the right side of the cab roof located, over crew door. The painted parts of this light assembly to be white. The light(s) to be installed with flat horizontal mounts.

The light(s) will include the following:

- Six (6) scene light modules with white LEDs
- Three (3) amber LEDs as marker lights
- Two (2) additional LED modules. The additional modules to be two (2) scene light modules with white LEDs.

The lights will be activated per the following:

- The amber marker lights not activated.
- The scene LEDs will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel.

- There will be a switch in the cab on the switch panel to control the flashing or spot LED modules.
- The light(s) may be load managed when the parking brake is applied.

12 VOLT LIGHTING

There will be two (2) Whelen® Model PCPSM1*, 10,444 lumens 12 volt DC surface mount light(s) installed on the body of the apparatus located, DS body inboard of emergency lights .

The light(s) will include black housing(s) with a chrome cover.

The light(s) will be controlled by the same control that has been selected for the driver's side scene light(s).

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

12 VOLT LIGHTING

There will be two (2) Whelen® PCPSM1*, 10,444 lumens 12 volt DC surface mount light(s) installed on the body of the apparatus located, PS body inboard of emergency lights .

The light(s) will include black housing(s) with a chrome cover.

The light(s) will be controlled by the same control that has been selected for the passenger's side scene light(s).

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

12 VOLT LIGHTING

There will be two (2) Whelen® Model PCPSM1*, 10,444 lumens 12 volt DC surface mount light(s) installed on the body of the apparatus located, rear body high.

The light(s) will include black housing(s) with a chrome cover.

The light(s) will be controlled by a switch at the driver's side switch panel, by a switch at the passenger's side switch panel and by a switch in a recessed cup located at the driver's side rear bulkhead.

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

HEAVY DUTY RESCUE BODY CONSTRUCTION

The body will be built as a separate module prior to being mounted onto the substructure. The rescue body will be constructed of 5052 aluminum. The structural support framing and the gussets used will be of 2.00" (51 mm) square 0.125" (3 mm) wall 6061 aluminum alloy tubing. All exterior body corners will be 3.00" (76 mm) radius aluminum, corrosion resistant alloy 6061 extrusions. Spacing of the 2.00" (51 mm) vertical supports will not exceed 14.00" (356 mm) on center. The roof and corner extrusions will be reinforced with interconnecting gusset supports at all stress points. The body will be properly welded into a unitized construction. Proper reinforcing and supports will be utilized throughout the entire construction process to ensure strength and rigidity.

The body will be supported by 2.00" (51 mm) x 2.00" (51 mm) x 0.25" (6 mm) wall aluminum tubing. The cross sill tubes will be spaced approximately 15.00" (381 mm) on center and interconnected to the body from front to rear.

A 1.00" (25 mm) x 3.00" (76 mm) aluminum bar will be used as a stringer and will be welded to the cross sills. The stringer will be used to mount the body to the chassis frame rails.

ROOF CONSTRUCTION

The roof will be integral with the body construction. The roof will be constructed of 0.125" (3 mm) bright aluminum treadplate and supported by 2.00" (51 mm) square 0.125" (3 mm) wall tubing welded in place approximately 12.00" (305 mm) on center. The roof will be further reinforced with 2.00" (51 mm) square gussets welded approximately every 48.00" (1219 mm). The roof perimeters will be constructed of a 3.00" (76 mm) radius extrusion with an integral drip molding. The roof extrusion will also have an inset allowing the roof panel to be recessed into the extrusion giving further support and sealing effect at the outside edge.

The roof panel will be welded to the roof extrusions and supports. All roof seams will be continuously welded.

BODY AND COMPARTMENT SUPPORT

The substructure for the body will not be integral with the body but will be a separate assembly.

The bottom of each lower compartment floor will be supported by an under slung steel angle grid that will be bolted to the chassis frame rails with grade 8 bolts in order to transfer major stress to the chassis frame and not through the body. The under slung support will be constructed of 0.50" (13 mm) x 2.50" (64 mm) x 2.50" (64 mm) steel angle vertical supports. Horizontal members will be 0.38" (10 mm) x 2.00" (51 mm) x 3.00" (76 mm) and 0.38" (10 mm) x 2.50" (64 mm) x 3.50" (89 mm) steel angle.

The complete substructure will be washed, primed and finish painted before being bolted to the chassis frame. A rubber coating will be applied over the painted under slung support structure for an additional corrosion barrier.

A 3.00" (76 mm) x 0.75" (19 mm) rubber liner will be placed on top of the chassis frame rails. The liner will be used to prevent metal to metal contact where the body stringer rests on the chassis frame rails.

The compartment floors will be bolted to the under slung substructure and the body will be secured to the chassis frame by a minimum of four (4) tie-down assemblies. Each tie-down assembly will consist of two (2) 2.00" (51 mm) x 6.25" (159 mm) x 0.75" (19 mm) steel plates and two (2) 14.00" (356 mm) long, 0.50" (13 mm) diameter steel rods. The tie-downs will be easily accessible so that the body may be removed.

BODY LENGTH

The length of the body will be 197.00".

BODY WIDTH

The width of the body will be 96.00".

Compartment Depth

Standard Depth
All standard depth side body compartments will measure 28.00" deep from the outside of the body to the rear compartment wall. The usable depth inside each side body compartment will be 26.00" deep.

Transverse
All transverse side body compartments will have a usable depth of 26.00" at the floor level. These compartments will extend over the frame rails through to the other side of the body.

BODY HEIGHT

The height of the body will be 103.25" without any roof mounted options.

ROOF CONFIGURATION

The roof of the body will be configured with two (2) equal size hatch compartments on each side of the roof with a recessed walkway in the center and zero (0) recessed areas located no recessed area required. If a transverse hatch compartment is selected, the size will be no transverse hatch required.

Recessed Area

The recessed area will be constructed of 0.125" aluminum treadplate and will have two (2) 1.00" diameter drain holes. The drains will be routed to drain below the body.

The recessed area will be sized appropriately in order to allow proper mounting space and clearance for all roof mounted equipment where the designated mounting location is the recess on the roof of the body. The maximum allowable depth of the recessed area will be equal to the depth of the recessed walkway. The recess will be configured so that whenever possible, items mounted in the recess will stow below the roof line of the body. If a piece of equipment is taller than the maximum depth of the recess, that item may protrude above the roof line.

Hatch Compartments

All compartment doors will be designed to hinge on the outboard side and will be held open with gas cylinder struts.

The outside walls of the compartments will be a double wall design to prevent equipment from denting the outside painted surface.

A 1.00" diameter drain will be provided on the floor of each compartment. The drains will be routed to drain below the body.

The handles provided on the hatch compartments will be one (1) chrome grab handle in the standard location of each each compartment.

Size of Hatch Compartments
The clear width of the side hatch compartments differs depending on the width of the body. The clear width of each side hatch compartment will be as follows:

Clear Width of Side Hatch Compartments According to Width of Body	
Body Width	**Clear Width of Hatch Compartments**

96.00"	26.50"
100.00"	28.50"

All hatch compartments on the roof of the body will have the same clear depth inside the compartment unless listed otherwise. The inside depth can differ depending on the height of the body and the height of the side compartments. The clear depth inside each hatch compartment is shown below and is based on the standard 64" (Roll) and 64.75" (Lap) high side compartments:

Inside Depth of All Hatch Compartments According to Body Height	
Body Height	**Inside Depth of Hatch Compartments**
90.00"	16.50"
98.00"	24.50"
100.00"	26.50"
103.25"	29.50"
106.25"	32.50"
Body Height Not Listed Here	Consult factory for depth of hatch compartments

Recessed Walkway

The recessed walkway will not be less than 30.00" wide. The depth of the walkway will be equal to the depth of the hatch compartments. The walkway will be constructed of aluminum treadplate and reinforced with 0.125" thick, 2.00" square aluminum tubing on 12.00" centers.

The treadplate in the walkway will be formed up 90 degrees at least 2.00" on each side to form a double 0.125" vertical wall for a water tight seal.

There will be two (2) 1.00" diameter drain holes provided in the walkway. The drains will be routed to drain below the body.

SIDE COMPARTMENT ROLL-UP DOORS

There will be eight (8) compartment doors installed on the side compartments, double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand roll-up doors.

Door(s) will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement.

Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second fin will serve as a wiping seal which will also allow for compression to prevent water ingression.

The doors will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials.

Bottom panel flange of roll-up door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.

A stainless steel lift bar to be provided for opening the door and located at the bottom of each door with latches on the outer extrusion of the door frame. A ledge to be supplied over lift bar for additional area to aid in closing the door. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.

All injection molded roll-up door wear components will be constructed of Type 6 nylon.

Each roll-up door will have a 3.00" diameter balancer/tensioner drum to assist in lifting the door.

The header for the roll-up door assembly will not exceed 4.00".

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

EXTERIOR COMPARTMENTS

The exterior compartment layout, dimensions and requirements will be minimum specifications. The doors will be able to withstand years of rugged service and wear. For this reason, the compartment door design, metal thickness and attachments will be strictly adhered to. The compartment will be constructed of .125" (3 mm)-corrosion resistant aluminum alloy, including all interior panels, floor and sides. The assemblies will be held inside fixtures while being welded.

Compartment flooring will be of the sweep out design with the floor higher than the compartment door frame. All compartments will be supported on top, rear and bottom. The rear wall of each exterior compartment will be welded to the cross sills. Drip protection will be provided over all door openings with an integral roof extrusion or aluminum extrusion.

WHEEL WELLS

The rear fenders will be an integral part of the body sides and compartments. The inside of the fender will be fitted with a full circular inner fender liner. All screws and bolts, which protrude into a compartment, will have acorn nuts attached.

LEFT FORWARD COMPARTMENTS

First Compartment

The first compartment will be located behind the cab. The compartment will be provided with a full-height roll-up door.

Dimensions of First Compartment	
Width	Door Frame Opening: 36.00" wide; Clear Door Opening: 33.50" wide; Interior Compartment Width: 38.50" wide

Height	Door Frame Opening: 64.00" high; Clear Door Opening: 58.00" high; Interior Compartment Height: 66.88" high

The compartment will be transverse, extending over the frame rails through to the other side of the body. The area over the frame rails will be 38.50" wide. The height of the area over the frame rails will be 49.25" high.

Second Compartment

The second compartment will be located behind the first compartment and directly ahead of the rear wheels. The compartment will be provided with a full-height roll-up door.

Dimensions of Second Compartment	
Width	Door Frame Opening: 36.00" wide; Clear Door Opening: 33.50" wide; Interior Compartment Width: 38.88" wide
Height	Door Frame Opening: 64.00" high; Clear Door Opening: 58.00" high; Interior Compartment Height: 66.88" high

The compartment will be transverse, extending over the frame rails through to the other side of the body. The area over the frame rails will be 38.88" wide. The height of the area over the frame rails will be 49.25" high.

Compartment Loading

Each compartment will be capable of holding 800 lb. The area over the frame rails in each compartment will be capable of holding an additional 1,000 lb.

LEFT OVER WHEEL COMPARTMENT

A compartment will be provided above the rear wheels. The compartment will be provided with a full height roll-up door.

Dimensions of Left Over Wheel Compartment	
Width	Door Frame Opening: 57.00" wide; Clear Door Opening: 54.50" wide; Interior Compartment Width: 62.50" wide
Height	Door Frame Opening: 36.25" high; Clear Door Opening: 31.25" high; Interior Compartment Height: 39.13" high

Compartment Loading

The compartment will be capable of holding 1,200 lb.

LEFT REAR SIDE COMPARTMENT

The left rear side compartment will be located directly behind the rear wheels. The compartment will be provided with a full-height roll-up door.

Dimensions of Left Rear Side Compartment	
Width	Door Frame Opening: 48.00" wide; Clear Door Opening: 45.50" wide; Interior Compartment

	Width: 50.50" wide
Height	Door Frame Opening: 64.00" high; Clear Door Opening: 58.00" high; Interior Compartment Height: 66.88" high

Compartment Loading
The compartment will be capable of holding 1,100 lb.

RIGHT FORWARD COMPARTMENTS

First Compartment
The first compartment will be located behind the cab. The compartment will be provided with a full-height roll-up door.

Dimensions of First Compartment	
Width	Door Frame Opening: 36.00" wide; Clear Door Opening: 33.50" wide; Interior Compartment Width: 38.50" wide
Height	Door Frame Opening: 64.00" high; Clear Door Opening: 58.00" high; Interior Compartment Height: 66.88" high

The compartment will be transverse, extending over the frame rails through to the other side of the body. The area over the frame rails will be 38.50" wide. The height of the area over the frame rails will be 49.25" high.

Second Compartment
The second compartment will be located behind the first compartment and directly ahead of the rear wheels. The compartment will be provided with a full-height roll-up door.

Dimensions of Second Compartment	
Width	Door Frame Opening: 36.00" wide; Clear Door Opening: 33.50" wide; Interior Compartment Width: 38.88" wide
Height	Door Frame Opening: 64.00" high; Clear Door Opening: 58.00" high; Interior Compartment Height: 66.88" high

The compartment will be transverse, extending over the frame rails through to the other side of the body. The area over the frame rails will be 38.88" wide. The height of the area over the frame rails will be 49.25" high.

Compartment Loading
Each compartment will be capable of holding 800 lb. The area over the frame rails in each compartment will be capable of holding an additional 1,000 lb.

RIGHT OVER WHEEL COMPARTMENT
A compartment will be provided above the rear wheels. The compartment will be provided with a full height roll-up door.

Dimensions of Right Over Wheel Compartment	
Width	Door Frame Opening: 57.00" wide; Clear Door Opening: 54.50" wide; Interior Compartment Width: 62.50" wide
Height	Door Frame Opening: 36.25" high; Clear Door Opening: 31.25" high; Interior Compartment Height: 39.13" high

Compartment Loading

The compartment will be capable of holding 1,200 lb.

RIGHT REAR SIDE COMPARTMENT

The right rear side compartment will be located directly behind the rear wheels. The compartment will be provided with a full-height roll-up door.

Dimensions of Right Rear Side Compartment	
Width	Door Frame Opening: 48.00" wide; Clear Door Opening: 45.50" wide; Interior Compartment Width: 50.50" wide
Height	Door Frame Opening: 64.00" high; Clear Door Opening: 58.00" high; Interior Compartment Height: 66.88" high

Compartment Loading

The compartment will be capable of holding 1,100 lb.

REAR STAIRWAY

Stairway Construction

A six (6) step stairway will be provided at the rear of the body to provide a means to access the recessed walkway on the roof of the body. The stairway will be constructed of aluminum treadplate. Step 1 will be located at the bottom of the stairway, directly above the rear bumper. Step 6 will be located at the top of the stairway. The recessed walkway will serve as the stepping surface for the Step 6.

There will be a total of two (2) compartments in the stairway.

The first compartment will be located in Step 1 of the stairway. The compartment door will be located in the riser of the step. The door will be a lift-up, lap style door constructed of aluminum treadplate with one (1) D-ring latch. A gas cylinder strut will be provided on both sides of each door to hold the door in the open position.

The second compartment will be located in Steps 2 through 6 of the stairway. The door for this compartment will be a one (1)-piece lift-up door that encompasses the entire stairway from Step 2 through Step 6. The door hinge will be located at the top of riser of Step 6, just below the recessed walkway. The door will be constructed of aluminum treadplate and will have one (1) D-ring latch located in the riser of Step 2. A gas cylinder strut will be provided on both sides of the door to hold the door in the open position.

Handrails will be provided on both sides of the stairway.

Compartment Sizes

The first compartment, which is located at the bottom of the stairway, is at the same height as the chassis frame rails. The depth of the first compartment is measured from the compartment door up to the end of the chassis frame rails.

The second compartment is located above the first compartment, is entirely above the frame rails. The depth of the second compartment depends on the width and/or depth of the adjacent compartments on the left and right sides of the body. These adjacent compartments are:

- Left Rear Side Compartment
- Right Rear Side Compartment
- Left Over the Wheel Tandem Compartments
- Right Over the Wheel Tandem Compartments

First Compartment

The first compartment will be located in Step 1 of the stairway.

Height and Width of First Compartment		
	Width	**Height**
Interior Dimensions	40.00"	13.50"
Door Frame Opening	40.00"	14.00"
Clear Door Opening	38.50"	12.25"

The depth of the first compartment extends up to the end of the chassis frame rails.

Depth of First Compartment	
Depth	26.00"

Second Compartment

The second compartment will be located in the area from Step 2 through Step 6 in the stairway.

Height and Width of Second Compartment		
	Width	**Height**
Interior Dimensions	40.00"	49.38"
Door Frame Opening	39.75"	51.00"
Clear Door Opening	36.00"	46.50"

Each step will correspond with a different depth, resulting in multiple depths inside the compartment. These depths are:

Depth of Second Compartment			
	48.00" Rear Side Compts	**60.00" Rear Side**	**Special Width Rear**

		Compts	Side Compts
Standard Depth Over Wheel Compts	2nd Step: 104.26" 3rd Step: 94.14" 4th Step: 84.02" 5th Step: 73.90" 6th Step: 63.78"	2nd Step: 116.26" 3rd Step: 106.14" 4th Step: 96.02" 5th Step: 85.90" 6th Step: 75.78"	Dimension available upon request
Transverse Over Wheel Compts	2nd Step: 41.63" 3rd Step: 31.51" 4th Step: 21.39" 5th Step: 11.27" 6th Step: No usable compartment depth	2nd Step: 53.63" 3rd Step: 43.51" 4th Step: 33.39" 5th Step: 23.27" 6th Step: 13.15"	Dimension available upon request

Compartment Loading

The lower compartment will be capable of holding 1,000 lb. The area over the frame rails will be capable of holding an additional 2,000 lb.

Hatch Compartment Modification

The hatch compartments that are forward of the stairway will remain as specified under the Roof Configuration. However, the hatch compartments that are adjacent to the stairway on each side of the body will be modified to accommodate the size of the stairway. The width of the hatch compartments will be as specified in the table below:

	96.00" Wide Body	100.00" Wide Body
Width of Hatch Compartments	21.63" wide	23.63" wide

HITCH RECEIVERS

A total of three (3) hitch receivers will be provided on the apparatus. The hitch receivers will be constructed of heavy steel tubing and reinforced to the apparatus framework.

Rear Receiver

A class IV hitch receiver will be installed under the body at the rear of the apparatus.

The hitch receiver will be tested to provide a 2:1 straight line pull no-yield safety factor over a maximum load rating of 10,000 lb . As a result, the hitch receiver will provide a towing capacity of 10,000 lb, and a 1,000 lb tongue weight when used with a weight distributing hitch assembly. The hitch receiver will also be capable of retaining a portable winch with a rating of no more than 10,000 lb, and is properly rated to be used for rope operations when used with properly rated equipment.

A heavy-duty slide-in tube and ball assembly with retaining pin will be included with the rear hitch receiver.

Trailer Wiring

The trailer connection for the rear hitch receiver will be a seven (7)-way flat blade recreational vehicle connector for trailer wiring compatible with electric brake systems, and a second connector with inverted ground meeting SAE J560 standards providing an auxiliary connection for warning devices.

Side Receivers

There will be one (1) hitch receiver installed through the body fender panel in front of the rear wheels on each side of the body.

Each hitch receiver will be tested to provide a 2:1 straight line pull no-yield safety factor over a maximum load rating of 10,000 lb. As a result, each of these hitch receivers will be capable of retaining a portable winch with a rating of no more than 10,000 lb. Each hitch receiver will also be capable of being used for rope operations when used with properly rated equipment.

A spring loaded stainless steel door will be provided on the exterior of the body to cover the end of each side hitch receiver. Each door will have a flush latch provided to prevent the door from opening while not in use. A stainless steel trim ring will be provided to prevent damage to the exterior finish around the opening. Each door will have a polished stainless steel finish.

Access to the pin of each side hitch receiver will be provided through the compartment ahead of the receiver and through the fender liner. A small hinged door will be provided to cover the fender access in order to prevent debris from entering the area of the retaining pin. A rubber cover will be provided to cover the access inside the forward compartment to prevent road dust from entering the compartment.

PINNABLE ROPE ANCHOR

A chrome plated pinnable eyebolt will be provided for use with any 2.00" hitch receiver. The eyebolt will be rated for 9,000 lb straight pull. When the eyebolt is pinned into a hitch receiver tube with a rating that provides a no-yield condition with a straight line pull that equals or exceeds the rating of this part, the eyebolt will be capable of being used for rope rescue operations if used with properly rated equipment.

A total of one (1) will be provided.

CORNER MOUNTED ROPE ANCHORS

There will be two (2) pairs of nickel plated steel rope anchor points installed on the body. Each rope anchor will be installed at a forty-five degree angle in the corner of the roof where the roof and body corner extrusions meet. Each rope anchor will have an inside diameter of 2.00". Each anchor will be supported to provide a maximum of 9,000 lb no-yield condition with a straight line pull.

Each pair of anchors will be installed in the following locations:

One (1) in each corner at the front on the roof of the body

One (1) mounted at an angle in each rear corner on the roof of the body

ADJUSTABLE VERTICAL DIVIDER

An adjustable vertical compartment divider will be provided. The divider will be constructed of 0.12" aluminum. The divider will be fastened to aluminum tracks on the top and bottom to allow side to side adjustment.

A total of two (2) divider(s) will be provided LS2.

EQUIPMENT MOUNTING

Pac Trac equipment mounting system will be installed on a compartment wall.

The mounting system will be provided on a total of two (2) compartment wall(s) located right wall of LS4 left wall of RS4.

STOKES/STRETCHER BASKET RACK

A rack constructed of one (1) storage trough for Stokes/Stretcher Basket(s) will be installed in a horizontal orientation in compartment LS4.

The clear rack trough dimensions will be tbd.

The rack will be fabricated of .125" aluminum with the exterior finished to match the compartment interior. The interior of the trough(s) will not be finished.

There will be a retaining strap with hook and loop fastener on both the left and right sides of the body provided to hold the stokes basket(s) in place.

STORAGE RACK FOR SPARE SCBA BOTTLES

A storage rack will be provided RS1 to hold 24 spare SCBA bottles. The rack will be built to hold the bottles see job 39258.

The rack will be constructed of 0.12 inch aluminum. The inside of the rack will be left unpainted and the outside of the rack will be painted the same color as the compartment it is installed in. The storage slots will angle to the rear of the rack to hold the bottle from falling out. A rubber bumper will be provided on the rear wall of each slot to absorb the shock of the bottle being placed into position. A scuff tape material will be applied to the inside of the slots to reduce scratching the bottles. Protection will be provided on the edge of the rack to prevent damage while loading.

The inside dimension of each bottle slot will be 7.00".

STORAGE RACK FOR SPARE SCBA BOTTLES

A storage rack will be provided LS2 to hold four (4) spare SCBA bottles. The rack will be built to hold the bottles 4 bins accross top of compartment for rope bag storage .

The rack will be constructed of .12 inch aluminum. The inside of the rack will be left unpainted and the outside of the rack will be painted the same color as the compartment it is installed in. The storage slots will be flat and not angled to the rear of the rack. A rubber bumper will be provided on the rear wall of each slot to absorb the shock of the bottle being placed into position. A scuff tape material will be applied to the inside of the slots to reduce scratching the bottles. Protection will be provided on the edge of the rack to prevent damage while loading.

The inside dimension of each bottle slot will be 12X12.

PIKE POLE STORAGE
Aluminum tubing will be used for the storage of eight (8) pike pole(s). If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate will be provided.

The make and model of the pike pole(s) will be: tbd

The pike pole storage tube(s) will be located LS4 RS4.

REAR BUMPER
A bumper will be provided at the rear of the body. The rear bumper will be constructed as an integral part of the rear body substructure with an aluminum treadplate deck mounted to the frame to provide a stepping surface. A No Insert will be welded into the treadplate deck. A 3.00" high kick plate constructed of aluminum treadplate will be provided on the bulkhead surfaces above the bumper.

The bumper will be approximately 13.00" deep and as wide as possible.

A 45 degree angle will be provided on each corner.

REAR WALL, BODY MATERIAL
The rear wall will be smooth and the same material as the body.

TOW EYES
There will be a total of two (2) painted tow eyes provided and mounted directly to the chassis frame rails at the rear of the apparatus. The inner and outer edges of the tow eyes will have a radius.

DOOR GUARD DRAIN TUBE
There will be eight (8) door guard(s) with 0.75" drain tube(s) provided and located all compts.

ELASTIC PULL STRAP FOR ROLL-UP DOOR
An elastic pull strap will be installed on a total of eight (8) compartment doors. The color of each elastic strap will be black. Each strap will be secured to the rear of the roll-up door and to the side of the compartment with a footman loop located approximately halfway up the side of the compartment. The compartment door(s) with the pull strap(s) will be: all side compts.

COMPARTMENT LIGHTING
There will be eight (8) compartments with Amdor, Model AY-9220, white 12 volt DC LED compartment light strips. The lights will be mounted with mechanical fasteners.

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

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

HATCH COMPARTMENT LIGHTING
There will be an LED strip light mounted on the hinged side of the interior in each hatch compartment.

Each light will be wired to an automatic door switch and to the "open door" indicator inside the cab.

STANDARD DEPTH ADJUSTABLE SHELF

An adjustable shelf will be provided. The shelf will be constructed of 0.188" thick aluminum with 2.00" high sides. The shelf will be provided painted spatter gray.

The shelf will be as deep as possible for a standard depth compartment, and as wide as possible for the specified mounting location.

The shelf will be secured within the compartment by means of adjustable threaded fasteners. These fasteners will slide in an extruded aluminum track to provide height adjustment.

The shelf will have a load capacity of 500 lb.

A total of two (2) shelves will be provided LS1.

HALF DEPTH ADJUSTABLE SHELF

An adjustable shelf will be provided for use in a transverse side body compartment. The shelf will be constructed of 0.188" thick aluminum with 2.00" high sides. The shelf will be provided painted spatter gray.

The shelf will be half depth of the transverse compartment and as wide as possible for the specified mounting location.

The shelf will be secured within the compartment by means of adjustable threaded fasteners. These fasteners will slide in an extruded aluminum track to provide height adjustment.

The shelf will have a load capacity of 500 lb.

A total of two (2) shelves will be provided LS3 upper RS3 upper.

TRANSVERSE TWO (2) WAY SLIDE-OUT TRAY

There will be one (1) slide-out tray provided for use in the transverse side body compartment(s).

Each tray will have 3.00" high sides, will span the full depth of the transverse compartment and will be as wide as possible for the designated mounting location with a minimum width of 21.00".

Each tray will be mounted on a heavy duty dual direction slide assembly manufactured by On Scene Solutions.

The slide will be constructed of anodized aluminum extrusions and assembled using stainless steel fasteners (no welds). Each slide will use a three (3) extrusion rail design utilizing twelve to sixteen (12 - 16) urethane rollers. Each roller will contain two (2) precision roller bearings mounted in an aluminum hub with a molded on urethane cover. The rollers will not lose contact with the rail extrusion during operation of the slide unit. Each slide will have a cable operated, spring loaded latch complimented by a large hand opening and red pull handle (pull to release). The slide will lock in the closed and full extension positions. The slide will be rated for a maximum distributed load of 1000 lb and a 500 lb end load.

Each tray will slide out 70 percent of its length to either side of the apparatus.

The capacity rating of the tray will be a maximum of 1,000 lb in the extended position.

Each tray will be fix mounted and therefore will not be adjustable vertically within the compartment.

The tray(s) will be located LS4, RS4.

STANDARD DEPTH SLIDE-OUT/TILT-DOWN TRAY

There will be one (1) slide-out tray provided.

Each tray will be constructed of 0.19" thick aluminum, will have 3.00" high sides and will be full depth for a standard depth compartment. The tray will be as wide as possible for the specified mounting location with a minimum width of 17.00" and maximum width of 50.00".

The tray will be mounted on a heavy duty slide-out and tilt-down slide manufactured by On Scene Solutions.

The slide will be constructed of anodized aluminum extrusions and assembled using stainless steel fasteners (no welds). Each slide will use a two extrusion rail design utilizing four (4) urethane rollers. Each roller will contain two (2) precision roller bearings mounted in an aluminum hub with molded on urethane cover. The roller will not lose contact with the rail extrusion during operation of the slide unit. Each slide will have a cable operated, spring loaded latch complimented by a large hand opening and red pull handle (Pull to Release). The slide will lock in the closed position.

Releasing the lock will allow the tray to slide out approximately ninety percent of its length from the stored position and tip 30 degrees down from horizontal.

The capacity rating of the tray will be a maximum of 250 lb in the extended position.

The vertical location of the tray within the compartment will be adjustable.

The tray(s) will be located RS2.

STANDARD DEPTH SLIDE-OUT FLOOR MOUNTED TRAY

There will be five (5) floor mounted slide-out tray(s) with 2.00" sides provided LS4 LS3 RS4 RS3 RS2. The tray(s) will be constructed of 0.19" aluminum with welded corners.

Each tray will be as deep as possible for a standard depth compartment and as wide as possible for the specified mounting location with a minimum width of 20.25" and a maximum width of 30.00".

There tray will be mounted on an On Scene Solutions, 86 series medium duty slide assembly capable of 100% extension.

The slide assembly will be constructed of anodized aluminum extrusions and will be assembled using stainless steel fasteners (no welds). The slide will use a three (3) extrusion rail design utilizing twelve (12) to sixteen (16) urethane rollers. Each roller will contain two (2) precision roller bearings mounted in an aluminum hub with a molded on urethane cover. The rollers will not lose contact with the rail extrusion during operation of the slide unit. The slide will have a cable operated, spring loaded latch complimented by a large hand opening and red pull handle (pull to release). The slide will lock in the closed and full extension positions.

The slide will be rated for a maximum distributed load of 600 lb in the extended position.

SPLASH GUARDS
The rear wheel well liners will be extended inward and will have a black rubber splash guard attached to prevent mud and dirt from spraying between the water tank and body panels. This guard will be notched to clear the rear springs if required.

RUB RAIL
Bottom edge of the side compartments will be trimmed with a bright aluminum extruded rub rail.

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

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

BODY FENDER CROWNS
Stainless steel fender crowns will be provided around the rear wheel openings.

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

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

HARD SUCTION HOSE
Hard suction hose will not be required.

HANDRAILS
Up to two (2) vertical handrail(s) will be provided at the rear of the body as necessary to meet NFPA requirements.

EXTINGUISHER STORAGE
A quantity of two (2) extinguisher compartments will be provided on the left side rearward of the rear wheels and on the right side rearward of the rear wheels. The extinguisher compartment will be in the form of an 8.50" square tube and of adequate depth to accommodate different size extinguishers. A brushed 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. There will also be a drain hole for each compartment.

ADDED EXTENSION LADDER
There will be one (1) 20', two (2) section, aluminum, Alco-Lite Series PEL-20 extension ladder provided and located rear steps.

ROOF LADDER

There will be one (1) 12' aluminum Alco-Lite PRL-12 roof ladder(s) provided.

LADDER/EQUIPMENT STORAGE

The apparatus will be equipped with a ladder/long equipment storage rack constructed of two (2) storage trough. The troughs will be accessible from the rear compartment of the body. The storage trough(s) will be arranged allowing equipment to be removed independently without the removal of adjacent equipment.

The storage troughs will be configured see 39258. The storage trough(s) will be mounted minimizing the forward compartment area required to accommodate the configuration.

If necessary, as determined by engineering, covers will be provided over trough(s) to prevent side compartment equipment from interfering with the removal of equipment stored in the trough(s), which extend into the forward side compartments. The covers will be finished to match the body compartment interior.

The storage configuration will be provided with a horizontally hinged drop down door with D/A finish and D-ring latch to secure and prevent equipment from migrating to the rear of the apparatus while in motion.

TWO-SECTION LADDER STORAGE TROUGH

There will be a total of one (1) ladder storage trough(s) provided inside the equipment storage rack. Each trough will be designed to hold one (1) 24' two (2)-section ladder manufactured by Duo-Safety.

ADDITIONAL FOLDING LADDER

There will be one (1) 12' aluminum Alco-Lite Series FL-12 folding ladder installed rear steps.

SWING DOWN STEP

A swing down style rear access step will be installed onto the rear tailboard. The step will swing up and stow above the tailboard in the "up" position and swing down for use as a stepping surface in the "down" position.

A chrome plated lift handle will be provided on the underside of the step to aid in raising and lowering the step.

The step will be provided with gas assist cylinders to secure the step in the up and down positions.

The step will be fabricated from polished aluminum treadplate with No Insert.

Non-Walk-In Body	38.50" wide x 8.00" deep
Walk-In Body	31.50" wide x 8.00" deep

When deployed, the step will meet the NFPA requirement for minimum stepping height from the ground.

INLET BLEEDER VALVE

A 0.75" bleeder valve will be provided for each side gated inlet.

The valves will be located behind the panel with a "T" swing style handle control extended to the outside of the panel.

The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage.

The water discharged by the bleeders will be routed below the chassis frame rails.

DISCHARGE CAPS/ INLET PLUGS

Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets.

Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size.

The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.

OUTLET BLEEDER VALVE

A 0.75" bleeder valve will 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 will be located behind the panel with a T swing style handle control extended to the outside of the side pump panel.

The handles will be chrome plated and provide a visual indication of valve position.

The T swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage.

Bleeders will be located at the bottom of the pump panel. They will be properly labeled identifying the discharge they are plumbed in to.

The water discharged by the bleeders will be routed below the chassis frame rails.

AIR HORN SYSTEM

Two (2) Grover air horns will be recessed in the front bumper.

The air horns will be chrome.

The air horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed to prevent the loss of air in the brake system.

Air Horn Location

The air horns will be located on the right side of the bumper, outside of the frame rail.

Air Horn Control
The air horn(s) will be activated by the following:

- Right side Linemaster® part number 632-SC36 foot switch tbd.
- Steering wheel horn ring with electric/air horn selector switch

ELECTRONIC SIREN
There will be a Code 3 Model 3692 electronic siren with microphone jack and noise-cancelling microphone provided.

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

Electronic siren head will be recessed in the driver side center switch panel.

ELECTRONIC SIREN CONTROL
The electronic siren will be activated by the following:

- Controlled by siren head only
- The right side push button.

- The steering wheel horn ring with siren/horn selector switch.
- The control to be available when the emergency master switch is on.

SPEAKER
There will be one (1) Code 3®, Model PB100C, speaker with chrome finish provided. The speaker will be connected to the siren amplifier.

The speaker(s) will be recessed in the center of the front bumper.

AUXILIARY MECHANICAL SIREN
There will be a Federal Signal Model Q2B mechanical siren furnished and installed in the front of the apparatus.

The Q2B will be chrome finish.

The siren will have a 2-gauge cable connected to a power solenoid that is connected by a 2-gauge cable ran battery direct to the primary chassis batteries and will be labeled Q2B+ at the battery. The power solenoid will only be enabled when the emergency master switch is on.

The siren will have a 2-gauge ground wire connected to the chassis battery stud. The cable will be labeled Q2B- at the battery.

The mechanical siren will be recessed in the front bumper on the left side. The siren will be properly supported using the bumper framework.

MECHANICAL SIREN CONTROL
The mechanical siren will be activated by the following:

- Left side foot switch.
- Steering wheel horn ring with horn/siren selector switch.
- Linemaster part number 632-SC36 as the right side foot switch.

A momentary red rocker switch will be included in the DS switch panel to activate the siren brake.

WARNING SYSTEM CONTROL

There will be a Whelen®, CenCom CORE™ WeCanX™ warning system control provided. The system will be a microprocessor based system that utilizes a centralized means of controlling the warning lighting on the vehicle.

The system will include a photocell mounted in a location in the cab with a clear view of the ambient light to sense external ambient light.

The warning system controlled warning lighting will be controlled as following:

When in respond mode (high ambient light):

When the emergency master switch is active, the associated warning light switch is activated, and the parking brake is released, and the vehicle is in high ambient light conditions, the warning light control system will change the flash pattern to LONG FLASH 75 RANDOM flash with high intensity light output.

When in respond mode (low ambient light):

When the emergency master switch is active, the associated warning light switch is activated, and the parking brake is released, and the vehicle is in low ambient light conditions, the warning light control system will change the flash pattern to SIGNAL ALERT 75 ALTERNATING flash with high intensity light output.

When in blocking mode (high ambient light):

When the emergency master switch is active, the associated warning light switch is activated, and the parking brake is applied, and the vehicle is in high ambient light conditions, the warning light control system will change the flash pattern to SINGLE FLASH 75 ALTERNATING flash with high intensity light output.

When in blocking mode (low ambient light):

When the emergency master switch is active, the associated warning light switch is activated, the parking brake is applied, and the vehicle is in low ambient light conditions, the warning light control system will enter the Whelen® Dynamic Variable Intensity (DVI) mode. DVI mode lowers warning light output intensity and creates a "calming" effect by slowing flash rates and synchronizing warning light flash patterns.

FRONT ZONE UPPER WARNING LIGHTS

There will be one (1) 81.00" Whelen® Model VWCX1 lightbar mounted on the cab roof.

The lightbar will include the following:

- One (1) red flashing LED module in the left side rear corner position.
- One (1) red flashing LED module in the left side end position.
- One (1) red flashing LED module in the left side front corner position.
- One (1) red flashing LED module in the left side first front position.
- One (1) red flashing LED module in the left side second front position.
- One (1) red flashing LED module in the left side third front position.
- One (1) red flashing LED module in the left side fourth front position.
- One (1) white flashing LED module in the left side fifth front position.
- One (1) red flashing LED module in the left side sixth front position.
- One (1) red flashing LED module in the left side seventh front position.
- One (1) red flashing LED module in the right side seventh front position.
- One (1) red flashing LED module in the right side sixth front position.
- One (1) white flashing LED module in the right side fifth front position.
- One (1) red flashing LED module in the right side fourth front position.
- One (1) red flashing LED module in the right side third front position.
- One (1) red flashing LED module in the right side second front position.
- One (1) red flashing LED module in the right side first front position.
- One (1) red flashing LED module in the right side front corner position.
- One (1) red flashing LED module in the right side end position.
- One (1) red flashing LED module in the right side rear corner position.

There will be clear lenses included on the lightbar.

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

The white LEDs will be deactivated when the parking brake is applied.

The lightbar will include a photocell to sense ambient light.

These light bars will be controlled utilizing the microprocessor based Whelen® CenCom CORE™ system.

LIGHTS, FRONT ZONE LOWER

There will be four (4) Whelen®, Model M6**S, 4.31" high x 6.75" wide x 1.37" deep steady burn LED warning lights installed on the cab face, above the headlights, mounted in two dual bezels.

- The left side outside warning light to include red LEDs
- The left side inside warning light to include red LEDs
- The right side inside warning light to include red LEDs
- The right side outside warning light to include red LEDs
- The warning light lens color(s) to be clear

- The housing to be polished and the trim shall be chrome

The lights will be controlled utilizing the Whelen® CenCom CORE™, supplier microprocessor system.

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

Any white lights will be de-activated when the park brake is set.

HEADLIGHT FLASHER

The high beam headlights will flash alternately between the left and right side.

There will be a switch installed in the cab on the switch panel to control the high beam flash. This switch will be live when the battery switch and the emergency master switches are on.

The flashing will automatically cancel when the hi-beam headlight switch is activated or when the parking brake is set.

SIDE ZONE LOWER LIGHTING

There will be six (6) Whelen®, Model M6**S, 4.31" high x 6.75" long x 1.37" deep flashing LED warning lights with chrome trim installed per the following:

- Two (2) lights located, one (1) each side on the bumper extension. The left side, side front light to include red warning LEDs and the right side, side front light to include red warning LEDs.
- Two (2) lights located, one (1) each side above the front wheels. The left side, side middle light to include red warning LEDs and the right side, side middle light to include red warning LEDs.
- Two (2) lights located, one (1) each side, centered above rear wheels. The left side, side rear light to include red warning LEDs and the right side, side rear light to include red warning LEDs.
- The warning light lens color(s) to be clear.

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

The flash pattern of the lights will be controlled through the supplier based electrical control system.

INTERIOR CAB DOOR WARNING LIGHTS

There will be four (4) Whelen® Model M4**, 3.37" high x 5.50" long x 1.37" deep flashing LED warning lights with chrome trim.

- One (1) light(s) to include amber flashing LED's on the left side cab door
- One (1) light(s) to include amber flashing LED's on the right side cab door.
- One (1) light(s) to include amber flashing LED's on the right side crew cab door.
- One (1) light(s) to include amber flashing LED's on the left side crew cab door.

The lens color(s) to be clear.

Each light will be located in the door pan as low and far to the outside as practical.

Each light will be activated when the battery switch is on, respective door is opened and the ignition switch is on.

ELECTRICAL CONNECTORS FOR WARNING LIGHTS

The lights will be installed with a weatherproof insulated crimped connectors in order to provide ease of connection/disconnection of the circuit applied to.

SIDE WARNING LIGHTS

There will be two (2) Whelen®, Model M9**S, steady burning warning light(s) with chrome trim provided, PS and DS body forward .

The light(s) to include red LEDs.

The lens color(s) to be clear.

These lights will be activated with the side warning switch.

These lights will be controlled utilizing the microprocessor based Whelen® CenCom CORE™ system.

White LEDs will be deactivated when the parking brake is applied.

REAR ZONE LOWER LIGHTING

There will be two (2) Whelen®, Model M6**, 4.31" high x 6.75" wide x 1.37" deep flashing LED warning lights located at the rear of the apparatus included in the tail light housings.

- The left side rear warning light to include red LEDs.
- The right side rear warning light to include red LEDs.
- The warning light lens color(s) to be clear.

The flash pattern of the lights will be controlled through the supplier based electrical control system.

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

REAR AND SIDE ZONE UPPER WARNING LIGHTS

There will be six (6) Whelen®, Model M9*CS, 6.50" high x 10.37" high x 1.37" deep steady burn LED warning lights with clear lenses and chrome trim provided per the following:

- One (1) light on the left side, side of the apparatus as high and close to the rear as practical. The left side, side rear light to include blue warning LEDs.
- One (1) light on the left side, rear of the apparatus as high and close to the outside as practical. The rear upper light on the left side to include red LEDs.
- One (1) light on the left side, rear of the apparatus as high and close to the first light as practical. The rear middle light on the left side to include amber LEDs.
- One (1) light on the right side, rear of the apparatus as high and close to the first light as practical. The rear middle light on the right side to include amber LEDs.
- One (1) light on the right side, rear of the apparatus as high and close to the outside as practical. The rear upper light on the right side to include red LEDs.
- One (1) light on the right side, side of the apparatus as high and close to the rear as practical. The right side, side rear light to include blue warning LEDs.

These lights will be controlled utilizing the microprocessor based Whelen® CenCom CORE™ system.

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

ELECTRICAL SYSTEM GENERAL DESIGN FOR ALTERNATING CURRENT

The following guidelines will apply to the 120/240 VAC system installation:

General

Any fixed line voltage power source producing alternating current (ac) line voltage will produce electric power at 60 cycles plus or minus 3 cycles.

Except where superseded by the requirements of the current edition of applicable NFPA standards, all components, equipment and installation procedures will conform to NFPA 70, National Electrical Code (herein referred to as the NEC).

Line voltage electrical system equipment and materials included on the apparatus will be listed and installed in accordance with the manufacturer's instructions. All products will be used only in the manner for which they have been listed.

Grounding

Grounding will be in accordance with Section 250-6 "Portable and Vehicle Mounted Generators" of the NEC. Ungrounded systems will not be used. Only stranded or braided copper conductors will be used for grounding and bonding.

An equipment grounding means will be provided in accordance with Section 250-91 (Grounding Conductor Material) of the NEC.

The grounded current carrying conductor (neutral) will be insulated from the equipment grounding conductors and from the equipment enclosures and other grounded parts. The neutral conductor will be colored white or gray in accordance with Section 200-6 (Means of Identifying Grounding Conductors) of the NEC.

In addition to the bonding required for the low voltage return current, each body and driving or crew compartment enclosure will be bonded to the vehicle frame by a copper conductor. This conductor will have a minimum amperage rating of 115 percent of the nameplate current rating of the power source specification label as defined in Section 310-15 (amp capacities) of the NEC. A single conductor properly sized to meet the low voltage and line voltage requirements will be permitted to be used.

All power source system mechanical and electrical components will be sized to support the continuous duty nameplate rating of the power source.

Operation

Instructions that provide the operator with the essential power source operating instructions, including the power-up and power-down sequence, will be permanently attached to the apparatus at any point where such operations can take place.

Provisions will be made for quickly and easily placing the power source into operation. The control will be marked to indicate when it is correctly positioned for power source operation. Any control device used in the drive train will be equipped with a means to prevent the unintentional movement of the control device from its set position.

A power source specification label will be permanently attached to the apparatus near the operator's control station. The label will provide the operator with the following information:

- Rated voltage(s) and type (ac or dc)
- Phase
- Rated frequency
- Rated amperage
- Continuous rated watts
- Power source engine speed

Direct drive (PTO) and portable generator installations will comply with Article 445 (Generators) of the NEC.

Overcurrent protection

The conductors used in the power supply assembly between the output terminals of the power source and the main over current protection device will not exceed 144.00" (3658 mm) in length.

For fixed power supplies, all conductors in the power supply assembly will be type THHW, THW, or use stranded conductors enclosed in nonmetallic liquid tight flexible conduit rated for a minimum of 194 degree Fahrenheit (90 degrees Celsius).

For portable power supplies, conductors located between the power source and the line side of the main overcurrent protection device will be type SO or type SEO with suffix WA flexible cord rated for 600-volts at 194 degrees Fahrenheit (90 degrees Celsius).

Wiring Methods

Fixed wiring systems will be limited to the following:

- Metallic or nonmetallic liquid tight flexible conduit rated at not less than 194 degrees Fahrenheit (90 degrees Celsius)
- or
- Type SO or Type SEO cord with a WA suffix, rated at 600 volts at not less than 194 degrees Fahrenheit (90 degrees Celsius)

Electrical cord or conduit will not be attached to chassis suspension components, water or fuel lines, air or air brake lines, fire pump piping, hydraulic lines, exhaust system components, or low voltage wiring. In addition the wiring will be run as follows.

- Separated by a minimum of 12.00" (305 mm), or properly shielded, from exhaust piping
- Separated from fuel lines by a minimum of 6.00" (152 mm) distance

Electrical cord or conduit will be supported within 6.00" (152 mm) of any junction box and at a minimum of every 24.00" (610 mm) of continuous run. Supports will be made of nonmetallic materials or corrosion protected metal. All supports will be of a design that does not cut or abrade the conduit or cable and will be mechanically fastened to the vehicle.

Wiring Identification
All line voltage conductors located in the main panel board will be individually and permanently identified. The identification will reference the wiring schematic or indicate the final termination point. When prewiring for future power sources or devices, the unterminated ends will be labeled showing function and wire size.

Wet Locations
All wet location receptacle outlets and inlet devices, including those on hardwired remote power distribution boxes, will be of the grounding type provided with a wet location cover and installed in accordance with Section 210-7 "Receptacles and Cord Connections" of the NEC.

All receptacles located in a wet location will be not less than 24.00" (610 mm) from the ground. Receptacles on off-road vehicles will be a minimum of 30.00" (762 mm) from the ground.

The face of any wet location receptacle will be installed in a plane from vertical to not more than 45 degrees off vertical. No receptacle will be installed in a face up position.

Dry Locations
All receptacles located in a dry location will be of the grounding type. Receptacles will be not less than 30.00" (762 mm) above the interior floor height.

All receptacles will be marked with the type of line voltage (120-volts or 240-volts) and the current rating in amps. If the receptacles are direct current, or other than single phase, they will be so marked.

Listing
All receptacles and electrical inlet devices will be listed to UL 498, Standard for Safety Attachment Plugs and Receptacles, or other appropriate performance standards. Receptacles used for direct current voltages will be rated for the appropriate service.

Electrical System Testing
The wiring and associated equipment will be tested by the apparatus manufacturer or the installer of the line voltage system.

The wiring and permanently connected devices and equipment will be subjected to a dielectric voltage withstand test of 900-volts for one (1) minute. The test will be conducted between live parts and the neutral conductor, and between live parts and the vehicle frame with any switches in the circuit(s) closed. This test will be conducted after all body work has been completed.

Electrical polarity verification will be made of all permanently wired equipment and receptacles to determine that connections have been properly made.

Operational Test per Current Edition NFPA Standard
The apparatus manufacturer will perform the following operation test and ensure that the power source and any devices that are attached to the line voltage electrical system are properly connected and in working order. The test will be witnessed and the results certified by an independent third-party certification organization.

The prime mover will be started from a cold start condition and the line voltage electrical system loaded to 100 percent of the nameplate rating.

The power source will be operated at 100 percent of its nameplate voltage for a minimum of two (2) hours unless the system meets category certification as defined in the current edition of applicable NFPA standards.

Where the line voltage power is derived from the vehicle's low voltage system, the minimum continuous electrical load as defined in the current edition of applicable NFPA standards will be applied to the low voltage electrical system during the operational test.

25KW SINGLE PHASE, PTO GENERATOR

The generator will be a single phase, four (4)-wire 120/240 volts AC, Harrison Hydra-Gen, 25KW driven by a transmission "power takeoff" attached to the transmission.

Generator will have a built-in automatic voltage control.

Generator will be:

Continuous Duty Rating:	25,000 watts
Phase:	Single
Nominal Cycles:	60 hertz
Nominal Amp Rating:	104 at 240-volts
Engine Speed at Engagement:	Idle
Engine Speed Engaged:	1100-1400 rpm range
Generator RPM:	1800 rpm

The output of the generator will be controlled by an electronic governor.

The main chassis transmission PTO will power the generator.

The generator will be operable in the stationary mode. There will be a shift control located inside the cab with an indicator light to note PTO engagement. The automatic high idle will be activated through interlocks only after the chassis parking brake is set, the truck transmission is in neutral and the generator PTO has been engaged.

To properly monitor the generator performance and load demands during operation, a digital generator meter display will be provided and a digital engine monitor will be mounted near the panel board.

The generator meter display will constantly monitor and display the following items:

- Frequency
- Amperage
- Voltage

GENERATOR LOCATION
The generator will be mounted under the body between the frame rails.

GENERATOR START
A switch will be located on the cab instrument panel and at the breaker panel area to engage the generator.

CIRCUIT BREAKER PANEL
The circuit breaker panel will be located high on the left wall of compartment LS4.

LIGHT TOWER
There will be one (1) Command Light Model KL415D-FX, light tower provided on the apparatus.

There will be four (4) Fire Research, Spectra Max Q28, 28,000 lumens 12 volt DC light heads included on this tower.

This tower will to include no back light or strobe light feature. The color of the tower to be black powder coat with black lamps.

The lights included on this tower may be load managed when the parking brake is applied.

This tower will activate the Do Not Move Truck Indicator light in the cab if not in the stowed position when the parking brake is released.

Light Tower Location
The light tower will be installed forward, on the rescue body roof.

Light Tower Controller
There will be a handheld wired controller included with the light tower.

Light Tower Controller Location
The light tower controller will be installed near the circuit breaker panel.

ELECTRIC CORD REEL
Furnished with the 120 volt AC electrical system will be a Hannay, Series 1620-17-18 cord reel. The reel will be provided with a 12-volt electric rewind switch, that is guarded to prevent accidental operation and labeled for its intended use. The switch will be protected with a fuse and installed at a height not to exceed 72 inches above the operators standing position.

The exterior finish of the reel(s) will be painted #269 gray from the reel manufacturer.

A captive roller assembly to be provided to aid in the payout and loading of the reel. A ball stop will be provided to prevent the cord from being wound on the reel.

A label will be provided in a readily visible location adjacent to the reel. The label will indicate current rating, current type, phase, voltage and total cable length.

A total of two (2) cord reels will be provided LS3 top center of compartment RS3 top center of compartment.

The cord reel will be configured with three (3) conductors.

CORD

Provided for electric distribution will be one (1) length installed on the reel of 200 feet of yellow 10/4 electrical cord. A Hubbell L14-20, 20 amp, 120/240 volt, twist lock connector body will be installed on the end of the cord.

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Provided for electric distribution will be one (1) length installed on the reel of 200 feet of yellow 10/4 electrical cord. A Hubbell L14-20, 20 amp, 120/240 volt, twist lock connector body will be installed on the end of the cord.

PORTABLE JUNCTION BOX

There will be two (2) Akron EJBX electric junction box(es) provided.

There will be a cable strain relief and a 1.00' pigtail with black plastic ribbed grip, NEMA L5-20, 20 amp, 120 volt twist lock plug provided for each box.

Each box will be provided with the following:

- four (4) 15/20 amp 120 volt AC duplex straight blade receptacles with flip up covers
- a 120 volt AC light inside the box

120 VOLT RECEPTACLE

There will be one (1), 4-place receptacle box(es) with four (4) 15/20 amp 120 volt AC three (3) wire straight blade receptacles with interior stainless steel wall plate(s) installed in cab TBD. The NEMA configuration for the receptacles will be 5-15R.

The receptacle(s) will be powered from the onboard generator to shoreline power transfer switch.

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

- Line Voltage
- Current Ratting (amps)
- Phase
- Frequency

120 VOLT RECEPTACLE

There will be eight (8), 15/20 amp 120 volt AC three (3) wire straight blade duplex receptacle(s) with an interior stainless steel wall plate, installed all compartments. The NEMA configuration for the receptacle(s) will be 5-20R.

The receptacle(s) will be powered from the on board generator.

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

- Line Voltage
- Current Ratting (amps)

- Phase
- Frequency

120 VOLT RECEPTACLE

There will be one (1), 4-place receptacle box(es) with four (4) 15/20 amp 120 volt AC three (3) wire straight blade receptacles with an interior stainless steel wall plate installed RS1. The NEMA configuration for the receptacles will be 5-20R.

The receptacle(s) will be powered from the on board generator.

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

- Line Voltage
- Current Ratting (amps)
- Phase
- Frequency

CASCADE STORAGE VESSELS

The breathing air cascade system will meet the current edition of applicable NFPA standards for a compressed air system that is used to provide air for human respiration, using self-contained breathing apparatus. It will be capable of operating in a range of ambient temperatures between 0-125 degrees Fahrenheit with a relative humidity up to and including 100 percent.

All flexible hose will be installed without excessive bending and in a manner to prevent cuts, abrasions, and excessive temperatures. In addition, the hose will be installed to allow its replacement without requiring removal of major vehicle components or vehicle-mounted equipment.

The breathing air system will be easy to maintain with an arrangement of components that allows for easy inspections, servicing, calibration, and adjustments without removing the components.

All major components in the breathing air system, including accessories, will be clearly identified and labeled. Appropriate caution and warning labels will be affixed where necessary to allow the equipment to be safely maintained and operated.

There will be two (2) complete manuals included. The manuals will document the operation and maintenance of the system.

The complete breathing air system will be tested for leaks and to ensure functionality prior to its delivery.

The cascade system storage cylinders will consist of the following major components:

- Four (4) Storage Vessels
- Four (4) Storage Vessel Shutoff Valves
- Four (4) Storage Vessel Relief Devices
- One (1) Storage Vessel Mounting Rack
- Four (4) Inlet/outlet Connections

The cascade storage vessels will each be rated for 6,000 psi. Each vessel will hold 510.50 cubic feet of air at rated pressure. The total air volume for this system will be 2,042 cubic feet. These vessels will be designed and constructed to conform to the requirements of the United Nations (UN) on the transportation of dangerous goods. Each vessel will be equipped with a UN shutoff valve and a built in, burst-disc pressure relief device.

The storage vessels will be installed in compartment in hatch compartments.

BREATHING AIR SYSTEM GENERAL DESIGN

The air system will meet the requirements for a compressed air system used to provide air suitable for human respiration with self-contained breathing apparatus.

If a compressor or booster system is supplied it will be capable of operating in a range of ambient temperature between 32 degree Fahrenheit and 100 degrees Fahrenheit (0 Celsius and 43 degrees Celsius).

If a cascade system is supplied it will be capable of operating in a range of ambient temperatures between 0 degrees Fahrenheit and 125 degrees Fahrenheit (-18 degrees Celsius and 52 degrees Celsius)

The air system will be capable of withstanding storage temperatures between 0 degrees Fahrenheit and 125 degrees Fahrenheit (-18 degrees Celsius and 52 degrees Celsius) without damage.

The air system in general will be capable of being stored and operated in environments with relative humidity up to and including 100 percent.

All flexible hose will be installed in such a manner as to prevent cuts, abrasions, exposure to damage, excessive temperatures, damage from loose equipment and excessive bending. The hose will be installed in a manner that permits removal of hose without removal of major vehicle components or vehicle mounted equipment.

The air system design will provide for maintainability by ensuring that the arrangement of the components will allow easy inspections, servicing, calibration and adjustment without removing the components.

All major components in the air system, including accessories, will be clearly identified and labeled. Appropriate caution and warning labels will be affixed where necessary to allow the equipment to be safely operated and adjusted.

Two complete manuals will be provided that document the operation and maintenance of the system.

If a compressor is supplied, the temperature of the compressed air will not exceed 25 degrees Fahrenheit (14 degrees Celsius) above ambient temperatures when measured at the discharge nozzle of the compressor after cooler. Audible and visual alarms, automatic shutdown and prevention of automatic restart will occur if any of the following conditions exist: low oil level or low oil pressure, high discharge air temperature, more than 24 ppm of moisture in the purification system outlet and if the carbon monoxide level exceeds 10 ppm.

The purification system will be capable of producing the required air quality for a minimum of 50 hours with inlet at 80 degrees Fahrenheit (27 degrees Celsius) at saturation.

Low pressure breathing air supply from reels or in remote locations will be provided with a low air pressure audible alarm warning device when the air volume is at or below 20 percent. This will include upper and lower control stations on aerial devices.

The complete breathing air system will be tested prior to delivery.

The fire department will receive training with this breathing air system. A demonstration of the operation of the breathing air system will be provided at the factory.

This demonstration will include the following:

- Review of all safety items in the system

- Review of all component manuals

- A walk around review of all the components that make up the system

- A hands-on system demonstration of each functional item in the system, during which proper use of the system components will be described

- A demonstration of how to properly shutdown and maintain the system

BREATHING AIR SYSTEM CONTROL PANEL

A control panel will be provided for the breathing air system, attached to the side of a SpaceSaver™ fill enclosure. The control panel will be made of 0.18" thick aluminum and will be provided with a painted, glare-resistant finish. The control panel will measure 9.75" x 42.75", and will be x 20.50" deep. The orientation of the control panel will match the orientation of the SpaceSaver fill enclosure it is attached to. If the control panel is attached to a vertical fill enclosure, the control panel will be orientated vertically. If the control panel is attached to a horizontal fill enclosure, the control panel will be orientated horizontally.

A painted aluminum box will house and protect the components behind the control panel. The panel will pivot on its mounting fasteners, to allow for maintenance of components behind the panel.

All gauges will be at least 2.50" in diameter, and they will be filled with glycerin. All valves will be a slow-operating screw type that will require minimal force, from three-fingered operation. A rope light will be fastened to the full vertical height of the control panel, to provide uniform illumination to all controls on the panel.

All tubing that is behind the panel will be stainless steel, with the exception of the supply hoses from the air storage and the hose that runs to the SCBA fill. These tubes and hoses will have a 4:1 safety factor.

A refill fitting will be supplied on the face of the air control panel, to allow the refilling of the system storage cylinders from an external source. With 6000 psi storage cylinders, a male CGA-677 fitting will be provided, and with 4500 and 5000 psi storage cylinders, a male CGA-347 fitting will be provided.

A breathing air supplied gauge will be provided on the panel.

There will be four (4) storage banks, each consisting of one (1) valve and one (1) gauge, provided on the control panel. If there are more cylinders than banks, two (2) cylinders will be connected to the first storage bank (or banks) as needed.

The system will be regulated with one (1) high pressure regulated circuit.

Air Control Panel Regulators	
High Pressure Regulators	Each high pressure regulated circuit provided on the panel will include the following components: • One (1) 0-6000 psi regulator set for 4500 psi working pressure • One (1) regulated pressure gauge.
Low Pressure Regulators	Each low pressure regulated circuit will be a low pressure, high flow rate circuit that consists of the following components: • One (1) 0-400 psi regulator set for 300 psi working pressure • One (1) regulated pressure gauge.

A pressure relief valve will be provided. The pressure relief valve will be preset, at no more than ten percent above the working pressure. A warning label that specifies the appropriate pressure regulator settings and the pressure relief setting will be placed adjacent to the regulator.

An SCBA fill valve to control the air flowing into the SCBA cylinders will be supplied on the air control panel. An SCBA fill gauge will be supplied on the air control panel, to view the pressure in the SCBA cylinders during filling. This valve and gauge will be used to manually vary the SCBA fill rates in accordance with the SCBA manufacturer's recommendations.

The panel will be configured with a single booster pump isolation valve.

The panel will be configured without a compressor connection.

FILL ENCLOSURE

The fill enclosure will be designed for mobile applications to fill SCBA or SCUBA cylinders. The enclosure will totally enclose the cylinder during the fill process. The enclosure will contain the cylinder and all fragments in the event of rupture during the fill process.

Construction will be of 0.18" plate steel. The fill enclosure door will be constructed of 0.25" stainless steel. The cylinder holders will be lined with a material to protect each cylinder from abrasion.

The fill enclosure will be designed to allow the filling of two (2) SCBA or SCUBA bottles either individually or simultaneously. Access to the enclosure for loading the cylinder will be through a manually operated slide up door and tilt out bottle holder. The door will be provided with a device to assist opening and provide smooth operation.

The loading position from the compartment floor to the center of the bottle valve will be 14.60" in the lower holder and 23.50" in the upper holder. This will place the lower loading position at waist height on average height vehicles.

The maximum length of either the SCBA or SCUBA bottle with the valve and fill adapter will be 29.00" in the lower holder and 27.00" in the upper holder.

Automatic safety interlocks will prevent cylinder filling until the door is completely closed. Two (2) fill hoses with SCBA or SCUBA adapters will be provided within the enclosure.

If a cylinder should rupture, rapidly expanding air will be vented through an opening in the bottom of the enclosure and out through the compartment floor. A break away rubber seal will be provided to seal the compartment floor.

To ensure the integrity of the fill enclosure, bidders will provide on request, an independent certification that a production unit has successfully withstood an SCBA cylinder explosion as per NFPA.

The fill enclosure will be a SpaceSaver model 100A. The dimensions of the fill enclosure will be approximately 42.56" high x 13.12" wide x 23.25" deep with a weight of approximately 400 lb.

A total of one (1) will be provided RS1 forward.

DUAL PRESSURE BREATHING AIR BOOSTER PUMP

There will be one (1) dual pressure breathing air booster pump provided. The booster pump will be installed in compartment rs1. Air will flow through the unit with or without the booster engaged. Air will flow from the air control panel storage cascade valves, to the booster, and back to the intake side of the regulator for ease of changing fill pressures at the air control panel.All moving parts of the booster will be fully enclosed in a plastic housing with screened vents for cooling.

The unit will be plugged into a 15 amp, 240 VAC receptacle located on an adjacent wall. The receptacle for the unit will be located for ease of disconnection from a standing position and connection to a shoreline.

Specifications will be as follows:

- Model A-2
- Size: 34.50" long x 19.00" wide x 15.75" high
- Weight: 145 lb
- Motor: Single phase, 110 VAC with thermal overload
- High Pressure Section: Non-lubricated, contaminant free, single seal, hard anodized pistons
- Drive Section: Sealed bearings
- Gauges: Inlet and outlet gauges reading 0 - 6,000 psi
- Standard Controls: Magnetic starter, thermal overload manual shutoff, over pressure safety shutoff
- Cooling: Cooling fan blowing over finned tubing
- Maintenance: Long life seals, infrequent replacement

- Clearance: A minimum clearance of 10.00" around the right side and back of the unit is recommended in order to keep the motor and other components cool enough to operate within the unit specifications. Failure to provide adequate air flow clearance may void the booster pump manufacturer's warranty.

The air control panel will have an isolation valve and check valve arrangement for the air booster pump. Closing these valves will allow use of the cascade system when the complete removal of the booster pump is required for maintenance or when source pressure exceeds 4,500 psi.

E-DRAULIC TOOL MOUNTING TURNTABLE

A turntable will be provided for mounting e-draulic tools. The unit will consist of a four (4) sided pedestal mounted on a circular base that is mounted on top of a 24.00" x 24.00" square platform. The circular base will be capable of rotating 360 degrees in any direction. A positive locking latch will be provided on the circular base to lock rotation and allow for easy access and removal of mounted equipment. A mounting bracket will be provided on each side of the pedestal, providing the ability to mount up to four (4) tools in a vertical orientation.

The overall dimensions of the turntable will be 24.00" wide x 24.00" deep x 33.00" high.

The turntable will be mounted in a floor mounted aluminum tray rated for up to 600 lb maximum distributed load. The tray will be mounted on a heavy duty, single direction cargo slide that is capable of up to 100% extension.

The brand, model and age of the tool(s) mounted on this turntable will be: hurst

A total of one (1) mounting turntable(s) will be provided and located LS1.

LOOSE EQUIPMENT

The following equipment will be furnished with the completed unit:

- One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.

NFPA LOOSE EQUIPMENT

NFPA Required Loose Equipment Provided by Fire Department

The following loose equipment as outlined in NFPA 1900, 2024 edition, table 8.1 and CAN/ULC S515:2024 edition, section 5.2 will be provided by the fire department:

- One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 107, *American National Standard for High-Visibility Safety Apparel and Accessories*, and have a five-point breakaway feature that includes two (2) at the shoulders, two (2) at the sides, and one (1) at the front.
- Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band.

- Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities.
- Four (4) ladder belts meeting the requirements of NFPA 2500.

NFPA Loose Equipment That Should be Considered

The following loose equipment as outlined in NFPA 1900, 2024 edition, appendix table A.8.4 (a) and CAN/ULC S515:2024 edition, section 5.2 should be considered:

- Two (2) SCBA apparatus
- Two (2) SCBA spare cylinders
- One (1) first aid kit
- One (1) automatic external defibrillator (AED)

DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT

The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.

WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT

The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.

PAINT PROCESS

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

1. Manual Surface Preparation - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate.
2. Chemical Cleaning and Pretreatment - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion.
3. Surfacer Primer - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective basecoat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a Critical aesthetic finish. The Surfacer Primer is a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded.
4. Finish Sanding - The Surfacer Primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat.

5. Sealer Primer - The Sealer Primer is applied prior to the Basecoat in all areas that have not been previously primed with the Surfacer Primer. The Sealer Primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when topcoated.
6. Basecoat Paint - Two coats of a high performance, two component high solids polyurethane basecoat will be applied. The Basecoat will be applied to a thickness that will achieve the proper color match. The Basecoat will be used in conjunction with a urethane clear coat to provide protection from the environment.
7. Clear Coat - Two (2) coats of Clear Coat will be applied over the Basecoat color. The Clear Coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style and roll-up doors will be Clear Coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacturer.

After the cab and body are painted, the color will be verified to make sure that it matches the color standard. Electronic color measuring equipment will be used to compare the color sample to the color standard entered into the computer. Color specifications will be used to determine the color match. A Delta E reading will be used to determine a good color match within each family color.

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

The paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) are to meet or exceed Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels are to meet or exceed the #6 A.C.T. standard in critical areas. The manufacture's written paint standards will be available upon request.

Environmental Impact

Contractor will meet or exceed all current state regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions:

- Topcoats and primers will be chrome and lead free.
- Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals.
- Particulate emission collection from sanding operations will have a 99.99 percent efficiency factor.
- Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98 percent. Water wash systems will be 99.97 percent efficient.
- Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean.
- Paint wastes are disposed of in an environmentally safe manner.
- Empty metal paint containers will be recycled to recover the metal.
- Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse.

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

TWO-TONE CAB PAINT

The cab will be painted two-tone with the upper section painted 2185 white and the lower section painted 71663 red. There will be a standard two-tone cab paint break provided.

There will be a standard cab shield provided.

BODY PAINT

The body will be painted to match the lower section of the cab.

GALVANIZED CHASSIS FRAME ASSEMBLY

The chassis frame assembly will be hot dip galvanized before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc.

Before the frame rails are finished, all areas will be sealed with a metal sealant after the components are torqued to the frame rails:

- The joint between all crossmembers and the frame

- The joint between all spring hangers and the frame.

Components that are included with the chassis frame assembly that will be hot dip galvanized are:

- Frame rails
- Frame liners
- Cross members
- Front frame extension

All galvanized components are inspected for compliance with ASTM specifications.

Battery boxes will be stainless steel.

All components that are not galvanized will be painted primer and gloss paint to match the lower job color (or as otherwise stated in a secondary option).

AXLE HUB PAINT

All axle hubs will be painted to match lower job color.

HOT DIP GALVANIZED BUMPER EXTENSION SUBSTRUCTURE

The bumper extension substructure will be treated through a hot dip galvanizing process. These components will be immersed in molten zinc to provide a coating that will help protect against the effects of corrosion.

COMPARTMENT INTERIOR PAINT
The interior of all compartments will be painted with a gray spatter finish for ease of cleaning and to make it easier to touch up scratches and nicks.

REFLECTIVE BAND
A 10.00" white reflective band will be provided across the front of the vehicle and along the sides of the body.

The reflective band provided on the cab face will be at the headlight level.

REAR CHEVRON STRIPING
There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. Covered surfaces will include the exterior rear wall. Rear compartment doors, entry doors, or walkway areas will not be covered.

The colors will be red and fluorescent yellow green diamond grade.

Each stripe will be 6.00" in width.

This will meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface will be covered with chevron striping.

SLIDE OUT TRAY DIAMOND GRADE CHEVRON STRIPING
A series of alternating red diamond grade and fluorescent yellow green diamond grade reflective stripes will be applied to the front and sides of ten (10) slide out tray(s) located all slide out trays.

CAB DOOR REFLECTIVE STRIPE
A 6.00" x 16.00" white reflective stripe will be provided across the interior of each cab door. The stripe will be located approximately 1.00" up from the bottom, on the door panel.

This stripe will meet the current edition of applicable NFPA standards.

LETTERING
The lettering will be totally encapsulated between two (2) layers of clear vinyl.

LETTERING
Forty-one (41) to sixty (60) genuine gold leaf lettering, 3.00" high, with outline and shade will be provided.

FIRE APPARATUS PARTS MANUAL
There will be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided.

The manual(s) will 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

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

Service Parts Internet Site

The service parts information included in these manuals are also available on the Pierce 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.

CHASSIS SERVICE MANUALS

There will be three (3) chassis service manuals containing parts and service information on major components provided. There will be two (2) hard copies and one (1) USB flash drive copy provided with the completed unit.

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

CHASSIS OPERATION MANUALS

There will be two (2) hard copies and one (1) USB flash drive provided that will include all of the same information. Manuals will be in the English language.

ENGINE MANUALS

There will be one (1) service manual(s) provided for a Cummins X10 engine. The manual(s) will be in a printed format.

ONE (1) YEAR MATERIAL AND WORKMANSHIP
A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.

ENGINE WARRANTY
A Cummins **five (5) year** limited engine warranty will be provided. A limited warranty certificate, WA0181, is included with this proposal.

STEERING GEAR WARRANTY
A TRW **one (1) year** limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with the bid package.

FIFTY (50) YEAR STRUCTURAL INTEGRITY
The Pierce custom chassis frame only (does not include crossmembers) limited warranty certificate, WA0013, is included with this proposal.

FRONT AXLE WARRANTY
A two (2) year/250,000 mile Hendrickson Steertek front axle warranty will be provided.

SINGLE REAR AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY
A Meritor™ Axle 5 year limited warranty will be provided.

ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY
A Meritor Wabco™ ABS brake system limited warranty certificate, WA0232, is included with this proposal.

TEN (10) YEAR STRUCTURAL INTEGRITY
The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.

TEN (10) YEAR PRO-RATED PAINT AND CORROSION
A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.

CAMERA SYSTEM WARRANTY
A Pierce fifty four (54) month warranty will be provided for the camera system.

COMPARTMENT LIGHT WARRANTY
The compartment lights will not offer an extended warranty.

TRANSMISSION WARRANTY
The transmission will have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty will be provided by Allison Transmission.

Note: The transmission cooler is not covered under any extended warranty you may be getting on your Allison Transmission. Please review your Allison Transmission warranty for coverage limitations.

TRANSMISSION COOLER WARRANTY
The transmission cooler will carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty will also be in effect for the first three (3) years of the

warranty coverage and will not exceed $10,000 per occurrence. A copy of the warranty certificate will be included with this proposal.

FIFTEEN (15) YEAR STRUCTURAL INTEGRITY

The Pierce heavy duty rescue apparatus body limited warranty certificate, WA0010, is included with this proposal.

ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY

An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of **ten (10) years**. A **five (5) year** limited warranty will be provided on painted roll up doors.

The limited warranty certificate, WA0185, is included with this proposal.

TEN (10) YEAR PRO-RATED PAINT AND CORROSION

A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.

THREE (3) YEAR MATERIAL AND WORKMANSHIP

The Pierce Goldstar gold leaf lamination limited warranty limited warranty certificate, WA0018, is included with this proposal.

VEHICLE STABILITY CERTIFICATION

The fire apparatus manufacturer will provide a certification stating the apparatus complies with NFPA 1900, current edition, section 7.14, Vehicle Stability. The certification is included with this proposal.

ENGINE INSTALLATION CERTIFICATION

The fire apparatus manufacturer will provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification will be provided at the time of delivery.

POWER STEERING CERTIFICATION

The fire apparatus manufacturer will provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification is included with this proposal.

CAB INTEGRITY CERTIFICATION

The fire apparatus manufacturer will provide a cab crash test certification with this proposal. The certification will state that a specimen representing the substantial structural configuration of the cab has been tested and certified by an independent third party test facility. Testing events will be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer will provide a state licensed professional engineer to witness and certify all testing events. Testing will meet or exceed the requirements below:

- SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks.
- European Occupant Protection Standard ECE Regulation No.29.
- SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks.

Side Impact
The cab will be subjected to dynamic preload where a 14,320-lb moving barrier is slammed into the side of the cab at 5.50 mph, striking with an impact of 13,000 ft-lb of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab will see in a rollover incident.

Frontal Impact
The same cab will withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420.

Additional Frontal Impact
The same cab will withstand a frontal impact of 65,098 ft-lb of force using a moving barrier. (Twice the force required by SAE J2420)

Roof Crush
The cab will be subjected to a roof crush force of 22,500 lb. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of ten (10) metric tons.

Additional Roof Crush
The same cab will be subjected to a roof crush force of 110,000 lbs. (Four and a half times the load criteria of ECE 29)

The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area.

CAB DOOR DURABILITY CERTIFICATION
Robust cab doors help protect occupants. Cab doors will survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder will certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.

WINDSHIELD WIPER DURABILITY CERTIFICATION
Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers will survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 *Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles.* The bidder will certify that the wiper system design has been tested and that the wiper system has met these criteria.

ELECTRIC WINDOW DURABILITY CERTIFICATION
Cab window roll-up systems can cause maintenance problems if not designed for long service life. The window regulator design will complete 30,000 complete up-down cycles and still function normally when finished. The bidder will certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear.

SEAT BELT ANCHOR STRENGTH
Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design will withstand 3000 lb of pull on both the lap

and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder will certify that each anchor design was pull tested to the required force and met the appropriate criteria.

SEAT MOUNTING STRENGTH

Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design will be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder will certify, at time of delivery, that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.

PERFORMANCE CERTIFICATIONS

Cab Air Conditioning

Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system will cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 78 degrees Fahrenheit in 30 minutes. The bidder will certify that a substantially similar cab has been tested and has met these criteria.

Cab Defroster

Visibility during inclement weather is essential to safe apparatus performance. The defroster system will clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles. The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.

Cab Auxiliary Heater

Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. An auxiliary cab heater will warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder will certify, at time of delivery, that a substantially similar cab has been tested and has met these criteria.

AMP DRAW REPORT

The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.

The manufacturer of the apparatus will provide the following:

- Documentation of the electrical system performance tests.
- A written load analysis, which will include the following:
    - The nameplate rating of the alternator.
    - The alternator rating under the conditions specified per:
        - Current edition of applicable NFPA standards.
    - The minimum continuous load of each component that is specified per:
        - Current edition of applicable NFPA standards.

- Additional loads that, when added to the minimum continuous load, determine the total connected load.
- Each individual intermittent load.

All of the above listed items will be provided by the bidder per the current edition of applicable NFPA standards.

Option List

3/9/2026

Customer:	Irvington Fire Department	**Bid Number:**	1751
Representative	Horn, Jeff	**Job Number:**	
Organization:	Firematic Supply Co, Inc	**Number of Units:**	1
Requirements Manager:		**Bid Date:**	03/04/2026
Description:	Irvington HDR	**Stock Number:**	
Body:	HDR, Non-Walk-In, Aluminum	**Price Level:**	54 (Current: 54)
Chassis:	Enforcer Chassis	**Lane:**	

Line	Option	Type	Option Description	Qty
1	0766614		Boiler Plates, Heavy Duty Rescue Fire Department/Customer - Irvington Fire Department Operating/In conjunction W-Service Center - In Conjunction Miles - 50 Miles Number of Fire Dept/Municipalities - 2 Bidder/Sales Organization - Firematic Supply co Inc Delivery - Delivery representative Dealership/Sales Organization, Service - Firematic Supply Co Inc	1
2	0661794		Single Source Compliance	1
3	0584456		Manufacture Location, Appleton, Wisconsin	1
4	0584452		RFP Location: Appleton, Wisconsin	1
5	0588609		Vehicle Destination, US	1
6	0816491		Comply NFPA 1900 Changes Effective Jan 1, 2024, With Exceptions	1
7	0533352		Special Services (Rescue) Fire Apparatus	1
8	0588614		Vehicle Certification, Rescue	1
9	0681285		Agency, Apparatus Certification, Rescue, U.L.	1
10	0816495		Certification, Vehicle Inspection Program, NFPA 1900	1
11	0000000	STF	Inspection Trip Qty, - 1 Fill in Blank - 4 members for final inspection	1
11	0000000	STF	Tool Mounting Qty, - 1 Fill in Blank -	1
12	0766110		Consortium, Sourcewell	1
13	0535579		Not Required, Unit of Measure, (no pump, no tank)	1
14	0529326		Bid Bond, 10%, Pierce Built Chassis	1
15	0816570		Performance Bond, 100% Req'd, PPI Terms	1
16	0000007		Approval Drawing	1
17	0765582		Drawing, Bumper Extension, Top View, Reference Only	1
18	0672031		Drawing, Cab, Top View, Seating and EMS Cabinets, Reference Only	1
19	0745732		Drawing, Cab Cabinets, 3D View	1
20	0002928		Electrical Diagrams	1
21	0649754		Enforcer Chassis	1
22	0021007		Maximum Overall Height Size - 129"	1
23	0021010		Maximum Overall Length Size - 360"	1
24	0523786		Angle of Approach Fill in Blank - 8.5 Condition of Truck - Unloaded	1
25	0523787		Angle of Departure Fill in Blank - 10.0 Condition of Truck - Unloaded	1
26	0000110		Wheelbase Wheelbase - 184	1
27	0000070		GVW Rating GVW rating - 44,000	1
28	0649713		Frame Rails, 10.25" x 3.50" x .375", Saber FR/Enf	1
29	0648354		Frame Liner, Internal "C", 9.38" x 3.13" x .25", Saber FR/Enf, 26" Qval	1
30	0821544		Axle, Front, Hendrickson Steertek, 20,000 lb, Saber FR/Enforcer	1
31	0821552		Suspension, Front, Hendrickson, Steertek NXT, 20,000 lb, Saber FR/Enforcer	1
32	0807746		Shock Absorbers on Front Axle, Steertek	1

Line	Option	Type	Option Description	Qty
33	0000322		Oil Seals, Front Axle	1
34	0078244		Tires, Front, Michelin, XZY3 (wb), 425/65R22.50, 20 ply	1
35	0052887		Wheels, Front, Alcoa, 22.50" x 12.25", Aluminum, Dura-Bright, Hub Pilot	1
36	0530457		Axle, Rear, Meritor RS23-186, 24,000 lb Saber/Enforcer	1
37	0544250		Top Speed of Vehicle, 65 MPH /104 KPH	1
38	0565379		Suspen, Rear, Single Slipper Spring, 24,000 lb, Saber/Enforcer	1
39	0000485		Oil Seals, Rear Axle	1
40	0633011		Tires, Rear, Michelin, XDS2, 11R22.50, LRH, Single	1
41	0826780		Wheels, Rear, Alcoa, 22.50" x 8.25", Alum, Dura-Bright, Hub Pilot, Single	1
42	0568081		Tire Balancing, Counteract Beads	1
43	0620570		Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle	1
			Qty, Tire Pressure Ind - 6	
44	0801909		Lug Nut, Covers, Chrome	1
45	0003245		Axle Hub Covers w/center hole, S/S, Front Axle	1
46	0002045		Mud Flap, Front and Rear, Pierce Logo	1
47	0544802		Chocks, Wheel, SAC-44-E, Folding, (Up to 44" Diameter Tires)	1
			Qty, Pair - 01	
48	0544806		Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal	1
			Qty, Pair - 01	
			Location, Wheel Chocks - Left Side Rear Compt	
49	0820509		ESC/ABS/ATC Wabco Brake System, Single Rear Axle, NFPA 1900/ULC	1
50	0810608		Brakes, Meritor, EX225, 17", Disc Plus, Front w/ Steertek	1
51	0509206		Brakes, Meritor, EX225, Disc Plus, Rear, Single Axle	1
52	0020784		Air Compressor, Brake, Cummins/Wabco 18.7 CFM	1
53	0644232		Brake Reservoirs, 4,272 Cubic Inch Minimum Capacity, Saber FR/Enforcer	1
			Paint Color, Air Tanks - Black #98	
54	0568012		Air Dryer, Wabco System Saver 1200, Heater, 2010	1
55	0000790		Brake Lines, Nylon	1
56	0000854		Air Inlet, w/Disconnect Coupling	1
			Location, Air Coupling(s) - DS Step Well, Rearward	
			Qty, Air Coupling (s) - 1	
57	0000845		Air Tank, Additional for Extra Capacity	1
			Paint Color, Air Tanks - Frame color	
58	0000820		Moisture Ejector, Automatic, w/Heat	4
			Qty, Auto. Moisture Eject - 4	
			Location, Moisture Ejector - Wet Tank, Primary and Secondary and Additional Tank	
59	0012034		Moisture Ejector, Manual, Remote Mounted	5
			Location - tbd	
			Qty, Man. Moist Ejector - 5	
60	0615609		Fittings, Compression Type, Entire Apparatus, Single Rear Axle	1
61	0810947		Engine, Cummins X10, 450 hp, HT1650 lb-ft, W/OBD, EPA 2027, Saber FR/Enforcer	1
62	0811409		Not Required, Engine Contingency Adjustment	1
63	0001244		High Idle w/Electronic Engine, Custom	1
64	0687994		Engine Brake, Jacobs Compression Brake, Cummins Engine	1
			Switch, Engine Brake - e) Cummins Hi Med Lo	
65	0812692		Clutch, Fan, Air Actuated, Horton Drive Master, Compression Fitting	1
66	0644573		Air Intake, Water & Ember Screen, Saber FR/Enforcer	1
67	0814375		Exhaust System, Horizontal, Right Side	1
			Exhaust, Diffuser - S/S (Premium)	
			Exhaust, Material/Finish - Stainless Steel (Premium)	
			Location, Diffuser Termination - 2.00" Past Rub Rail (Standard)	
			Tip, Exhaust - Straight Tip (Standard)	
68	0816171		Adapter, Exhaust, Nederman, for 6" or 7" Diffuser Outlet	1
			Location - tbd	
			Anchor Plate, Nederman - 3-Piece	
69	0788765		Radiator, Saber FR/Enforcer	1
70	0001090		Cooling Hoses, Rubber	1
71	0756651		Skid Plate, Radiator, .38", Painted Job Color	1
72	0545339		Fuel Tank, 65 Gallon, Left Side Fill, Stainless Steel	1
			Finish, Fuel Tank - Painted	
73	0001128		Lines, Fuel, Wire Braided, Reusable Fittings	1

Line	Option	Type	Option Description	Qty
74	0582182		DEF Tank, 4.5 Gallon, DS Fill, Rear of Rear Axle, Common Door	1
			Door, Material & Finish, DEF Tank - Polished Stainless	
75	0723716		Fuel Priming Pump, Electronic, Automatic, Cummins, No Swt Req'd	1
76	0552607		Shutoff Valves (2), Fuel Line @ Filter	1
77	0699437		Cooler, Chassis Fuel, Not Req'd.	1
78	0019441		Drain Plug, Fuel Tank, Magnetic, In Place Of Standard	1
79	0621022		Filter, Davco Fuel Pro-382, With Heater, IATS, ISL9	1
80	0887546		Trans, Allison 6th Gen, 4000 EVS P, w/Prognostics, Imp/Vel/SFR/Enf	1
81	0510877		Transmission, Shifter, 6-Spd, Push Button w/4+2 mode	1
			Trans, ratio - 4000 EVS, 6Spd	
82	0684459		Transmission Oil Cooler, Modine, External	1
83	0535530		Mode, Downshift, Aggressive downshift to 2nd, w/engine brake, 6 speed	1
84	0001375		Driveline, Spicer 1810	1
85	0010931		Driveline Safety Loop	2
			Qty, - 02	
86	0637248		Steering, Dual Gear, TRW TAS-65, w/tilt, Pump w/ Cooler, Saber FR/Enforcer	1
87	0605356		Steering Wheel, 4 Spoke without Controls, Saber FR/Enforcer	1
88	0690274		Logo/Emblem, on Dash	1
			Text, Row (1) One - Irvington	
			Text, Row (2) Two - Fire	
			Text, Row (3) Three - Dept	
89	0776962		Bumper, 10" Ext, Form, Steel, Painted, SFR/Enf	1
90	0614646		No Lift & Tow Package, Imp/Vel, AXT, SFR/Enf	1
91	0002283		Tow Hooks, Painted	1
92	0566485		Receiver, Portable Winch, Centered Under Front Bumper, 10K Pull	1
93	0558109		Notch, Front For Recessing Of Q2B, Painted Bumper	1
			Location - left	
94	0698960		Coating, Top Flange, Front Bumper, Outside Exterior, UL-LX Coating, Black	1
95	0625650		Cab, Enforcer, 7000	1
96	0647919		Engine Tunnel, ISL, Spray Insulation, Saber FR/Enforcer	1
97	0887601		Cab Insulation, Enforcer/Saber FR	1
98	0610508		Rear Wall, Interior, Adjustable Seating, Not Available	1
99	0632103		Rear Wall, Exterior, Cab, Saber FR/Enforcer	1
			Material, Exterior Rear Wall - Aluminum Treadplate	
100	0639727		Cab Lift, Elec/Hyd, Manual Override, Saber FR/Enforcer	1
101	0695930		Grille, Bright Finished, Front of Cab, Enforcer	1
102	0648912		Scuffplates, S/S At Cab Door Jambs and Handrails	1
			Material Trim/Scuffplate - c) S/S, Polished	
103	0647932		Not Required, Trim, S/S Band, Across Cab Face, AXT/Saber/Enforcer	1
104	0087357		Molding, Chrome on Side of Cab	1
105	0521669		Mirrors, Retrac, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex	1
106	0648171		Door, Half-Height, Saber FR/Enforcer 4-Door Cab, Level Roof	1
			Key Model, Cab Doors - 751	
			Cab, Exterior Door Handle, Finish - 4-Door, Chrome/Black	
107	0655543		Door Panel, Brushed Stainless Steel, Saber/Enforcer 4-Door Cab	1
108	0630636		Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber FR/Enforcer	1
109	0790923		Steps, 4-Door Cab, Dual, Grip Strut, Saber FR/Enforcer	1
			Light, Step, Additional - P25 LED	
			Step Well Material - Aluminum Treadplate	
110	0770194		Handrail, Exterior, Knurled, Alum, 4-Door Cab	1
111	0892638		Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	1
			Color, Trim - Chrome Housing	
112	0002141		Fenders, s/s on cab - Saber/Enforcer	1
113	0558101		Handrail, 10" on Cab Below Windshield, Single	1
114	0637984		Window, Side of C/C, Fixed, SFR/Enf	1
115	0786278		Window Tint, Crew Cab Door, Right Side, Medium Gray	1
116	0786289		Window Tint, Crew Cab Door, Left Side, Medium Gray	1
117	0786283		Window Tint, Behind Cab Door, Right Side, Medium Gray	1
118	0786295		Window Tint, Behind Cab Door, Left Side, Medium Gray	1
119	0651518		Window Protector Bars, Knurled, Crew Doors, 3" Above Window Sill Plate	1
120	0898687		Compt, Saddle, Transverse C/C, Dbl Pan, Rec Tube, 70" SFR/Enf	1
			Light, Short Transverse Compt - Pierce, Both Sides	

Line	Option	Type	Option Description	Qty
120			Louvers - no louvers Scuffplate, Material/Finish - No Scuffplate Finish, Cab Compt/Component - Cab Interior Door, Cab Exterior Cabinet - Double Pan, (2), Non-Locking Door, Exterior Stop - 2-Web Strap Door, Cab Interior Cabinet - Lap, Drop, (2) Latches, Non-Locking Location, Recess Floor - Each Diameter, Extinguisher - 8.00" Diameter	
121	0741621		Metal Clip, Door Linkage Clips and Lubricate	1
122	0894089		Dash, Heavy Duty Metal, Enforcer Material Finish, Metal Dash - Match Interior Paint	1
123	0664351		Pac Trac, Installed in Cab/Crew Cab Location - rear wall in the cab each side of forward facing crew seats Qty, - 02	2
124	0607217		Mounting Provisions, 3/16" Alum, Full Engine Tunnel, Saber FR/Enforcer Mounting Provision Spacing - 1.00" Material Finish, Cab Interior - Painted	1
125	0750824		Cab Interior, Vinyl Headliner, Saber FR/Enforcer, CARE Color, Cab Interior Vinyl/Fabric - Endure Vinyl - Silver/Gray Engine Tunnel Cover - Dark Silver Gray Endure Vinyl Cab Interior Rear Wall Material - Painted Aluminum	1
126	0753903		Cab Interior, Paint Color, Saber FR/Enforcer Color, Cab Interior Paint - i) fire smoke gray	1
127	0052100		Floor, Rubber Padded, Cab & Crew Cab, Saber/Enforcer	1
128	0891411		HVAC, Heavy-Duty, Enforcer, CARE Paint Color, A/C Condenser - Painted to Match Cab Roof HVAC System, Filter Access - Removable Panel Auxiliary Cab Heater - Both HVAC System, Control Loc. - Panel Position #12 Plenum Cover Material - Formed Plastic	1
129	0639675		Sun Visor, Smoked Lexan, AXT, Imp/Vel, SFR/Enf Sun Visor Retention - Thumb Latch	1
130	0634328		Grab Handles, Driver and Officer Door Posts, SFR/Enf	1
131	0693439		Lights, Engine Compt, Custom, Auto Sw, w/Fld Chk Dr Wln 3SC0CDCR, 3" LED Trim Qty, - 02	2
132	0631830		Fluid Check Access, Saber FR/Enforcer, Arrow XT Latch, Door, Storage - Lift and Turn Latch, Flush	1
133	0828042		Side Roll and Frontal Impact Protection, SRS	1
134	0622617		Seating Capacity, 6 Belted Seats	1
135	0736211		Seat, Driver, Bostrom, Sierra 550, Air Ride, High Back, Safety, PRIMARY, SFR/Enf Bostrom, Zip Clean Cover - (0) None	1
136	0632914		Seat, Officer, Bostrom 450, Fixed, SCBA, Safety, PRIMARY, SFR/Enf Bostrom, Zip Clean Cover - (0) None	1
137	0620420		Radio Compartment, Below Non-Air Ride Seat, Saber FR/Enforcer Latch, Door, Storage - Lift and Turn Latch	1
138	0633758		Seat, Rr Fcng C/C, LS Otbrd, Bostrom 450, SCBA, Safety, PRIMARY, SFR/Enf Bostrom, Zip Clean Cover - (0) None	1
139	0102783		Not Required, Seat, Rr Facing C/C, Center	1
140	0633756		Seat, Rr Fcng C/C, RS Otbrd, Bostrom 450, SCBA, Safety, PRIMARY, SFR/Enf Bostrom, Zip Clean Cover - (0) None	1
141	0108189		Not Required, Seat, Forward Facing C/C, LS Outboard	1
142	0820998		Seat, Fwd Fcng C/C, Ctr, (2) Bostrom 450, SCBA, Safety, PRIMARY, SFR/Enf Bostrom, Zip Clean Cover - (0) None	1
143	0108190		Not Required, Seat, Forward Facing C/C, RS Outboard	1
144	0042359		Upholstery, Seats In Cab, All Vinyl, Bostrom, CARE Color, Cab Interior Vinyl/Fabric - a) Dark Silver/Gray Qty, - 06	6
145	0543991		Bracket, Air Bottle, Hands-Free II, Cab Seats Qty, - 05	5
146	0603866		Seat Belt, Dual Retractor, ReadyReach, Saber FR/Enforcer Seat Belt Color - Orange	1
147	0817557		Helmet Storage, Provided by Fire Department, NFPA/ULC 2024	1

Line	Option	Type	Option Description	Qty
148	0647647		Lights, Dome, FRP Dual LED 4 Lts	1
			Color, Dome Lt - Red & White	
			Color, Dome Lt Bzl - Black	
			Control, Dome Lt White - Door Switches and Lens Switch	
			Control, Dome Lt Color - Lens Switch	
149	0813183		Not Required, Enhanced Software for Cab and Crew Cab Dome Lts	1
150	0797301		Handlts, (6) Streamlight, Fire Vulcan, 44451, C4 LED, Tail Lts, 12v, Orange	1
			Location, Portable Hand Light - tbd	
151	0644187		Cab Instruments, Black Gauges, Black Bezels, Saber FR/Enforcer	1
			Emergency Switching - Individual Switches	
152	0002544		Air Restriction Indicator - Pierce Chassis	1
153	0543751		Light, Do Not Move Apparatus	1
			Alarm, Do Not Move Truck - Pulsing Alarm	
154	0840912	SP	Light, Open Door - Wln, WIONSM*, DS Red, PS Amb, Upper Cmpt/Rear Step Blue, HDR	1
			Color, Trim - Chrome Trim	
155	0632738		Switching, Cab Instrument Lower Console & Overhead, Rocker, Enforcer	1
156	0802940		Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer	1
			Location, Wiper Control - Standard Location	
157	0834416		USB, Cab, 4, 12V DC, Dual USB Termination, NFPA1900/ULC	1
			USB, Type - USB Combo A & C	
158	0820904		Wiring, Spare, 15 A 12V DC 1st NFPA1900/ULC	4
			Qty, - 04	
			12vdc power from - Battery switched	
			Wire termination - Butt Splice	
			Location, Spare Wiring - TBD	
159	0819994		Radio, Jensen, AM/FM/WB, Bluetooth	1
			Speakers, AM/FM Radio - Two (2) pairs of speakers, Cab/Crew	
			Antenna, AM/FM Radio - c) Roof-mounted rubber antenna	
			Location, AM/FM Radio - a) within reach of the driver	
160	0763646		Vehicle Information Center, LCD On Gauge Cluster Only, Sab/Enf	1
			System Of Measurement - US Customary	
161	0816633		Collision Mitigation, HAAS Alert (R2V), HA7	1
			Subscription, HAAS R2V - R2V - 5 Year Data Plan Subscription	
162	0610240		Vehicle Data Recorder w/Seat Belt Monitor	1
163	0818413		Antenna Mount, Custom Chassis, Maxrad BMATM, 25' Coax, Location Feature	2
			Location - lower cab roof	
			Qty, - 02	
			Location, Antenna Cable - behind officer's seat	
164	0808099		Camera, Pierce, 7" HD, R, Camera, AHD	1
			Color - 4) white	
			Location, Camera Monitor - Driver Side Dash	
165	0814831		Not Required, Camera Switcher	1
166	0785771		Recess, Rear Vision Camera	1
			Location - tbd	
167	0624241		Electrical Power/Signal Protection & Control, Enforcer	1
168	0831839		Not Required, Prognostics, Electrical System	1
169	0624256		Electrical System, Enforcer Hard Wired	1
170	0098841		Batteries, (6) Deka Grp 31, 1000 CCA each, Threaded Stud	1
171	0008621		Battery System, Single Start, All Custom Chassis	1
172	0546514		Battery Compartment, Stainless Steel, Saber/Enforcer	1
			Material Finish - Painted	
173	0812586		Charger, Sngl Sys, Kussmaul, Chief 091-266-12-60, 60 Amp	1
174	0814869		Location, Cab, Charger, Behind Driver Seat	1
175	0813791		Panel, Charger Display, Kussmaul, 091-94-12, Batt Dir	1
176	0815291		Location, Cab, Ind/Remote, LS Above Wheel Well	1
177	0811952		Not Required, Indicator/Remote Status	1
178	0824337		Not Required, Location Ind/Remote	1
179	0016857		Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super	1
			Qty, - 01	
			Color, Kussmaul Cover - b) red	
			Shoreline Connection - Battery Charger	

Line	Option	Type	Option Description	Qty
180	0026800		Shoreline Location	1
			Location, Shoreline(s) - DS Cab Side	
181	0009429		Electric Power Only, Portable Winch	4
			Location - front	
			Qty, Receptacles - 04	
182	0002683		Tray, Battery, S/S, w/drains	1
183	0647728		Alternator, 430 amp, Delco Remy 55SI	1
184	0644176		Load Manager, Integrated In Electrical System, Saber FR/Enforcer	1
185	0783153		Headlights, Rect LED, JW Spkr Evo 2, AXT/Enf/Imp/Sab/Vel	1
			Color, Headlight Bez - Chrome Bezel	
186	0840415		Light, Directional, Wln 600 Cmb, Cab Crn, Wrp Bzl Out HD Lts, Enf/Sab	1
			Color, Lens, LED's - Match	
			Color, Trim - Polished Housing	
187	0620054		Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	1
188	0735474		Lights, Clearance/Marker/ID, Front, P25 LED 7 Lts, Saber FR/Enforcer	1
			Light Guard - No Guards	
189	0625210		Lights, Directional, Cab Front Side, Truck-Lite 19036Y LED, AXT/Enf	1
190	0627282		Lights, Clearance/Marker/ID, Rear, FRP LED Bar & P25 LED 4Lts	1
191	0804514		Lights, Tail, Wln M62BTT* Red Stop/Tail & M62T* Amber Dir Arw For Hsg	1
			Color, Lens, LED's - Match	
			Flash Pattern, Directional Lts - Steady On (Arrow)	
192	0806466		Lights, Backup, Wln M62BU, LED, For Tail Lt Housing	1
193	0889577		Bracket, License Plate & Light, P25 LED, Stainless Brkt	1
			Color, Trim - Chrome Housing	
194	0556842		Bezels, Wln, (2) M6 Chrome Pierce, For mtg (4) Wln M6 lights	1
195	0589905		Alarm, Back-up Warning, PRECO 1040	1
196	0817254		Lights, Perimeter Cab, Amdor AY-LB-12HW0** LED 4Dr	1
197	0616293		Not Required, Lights Perimeter Pump House, No Pump	1
198	0770056		Lights, Perimeter Body, Amdor AY-LB-12HW020 LED 2lts, Rear Step	1
			Control, Perimeter Lts - Parking Brake Applied	
199	0769567		Lights, Perimeter, Amdor AY-LB-12HW012 12", Brkt	6
			Qty, Lights - 06	
			Location, Additional Perimeter Lights - Under Compt D1, 1lt, Under Compt D3, 1lt, Under Compt P1, 1lt, Under Compt P3, 1lt, Under Compt D4, 1lt and Under Compt P4, 1lt	
200	0814230		Not Required, Enhanced Software for Perimeter Lts	1
201	0768217		Lights, Step, P25 at Rear & Walkway, LED Light Strips in Stairway, Prk Brk	1
202	0814164		Light, Roof Mt, Wln S86M**, 86" Cnt Feature, Mkr Lts Activated, Mt Fet	1
			Color, Wln Lt Housing - White Paint	
			Control, Scene Lts - Cab Sw Panel DS and Cab Sw Panel PS	
			LED Module Type - 4 White Spot	
			Mount, Wln Summit - SUBKT4 Flat Mnt Horizontal	
203	0727946		Lights, Wln, S30M** 30" 12VDC LED, RS Cab, Mt Fet	1
			Location - over crew door	
			Qty, - 01	
			Control, Light - Mkr Lt Not Connected	
			Color, Wln Lt Housing - White Paint	
			Control, Scene Lts - Cab Sw Panel DS and Cab Sw Panel PS	
			LED Module Type - 2 White Spot	
			Mount, Wln Summit - SUBKT4 Flat Mnt Horizontal	
204	0727947		Lights, Wln, S30M** 30" 12VDC LED, LS Cab, Mt Fet	1
			Location - over crew door	
			Qty, - 01	
			Control, Light - Mkr Lt Not Connected	
			Color, Wln Lt Housing - White Paint	
			Control, Scene Lts - Cab Sw Panel DS and Cab Sw Panel PS	
			LED Module Type - 2 White Spot	
			Mount, Wln Summit - SUBKT4 Flat Mnt Horizontal	
205	0766905		Lights, Wln, PCPSM1*, Pioneer, 12 VDC, 2nd	2
			Location - PS body inboard of emergency lights	
			Qty, - 02	
			Color, Wln Lt Housing - Chrome Cover	
			Control, Scene Lts - PS Scene Lts	

Line	Option	Type	Option Description	Qty
206	0766906		Lights, Wln, PCPSM1*, Pioneer, 12 VDC, 1st	2
			Location - DS body inboard of emergency lights	
			Qty, - 02	
			Color, Wln Lt Housing - Chrome Cover	
			Control, Scene Lts - DS Scene Lts	
207	0763739		Lights, Wln, PCPSM1*, Pioneer, 12 VDC, 3rd	2
			Location - rear body high	
			Qty, - 02	
			Color, Wln Lt Housing - Chrome Cover	
			Control, Scene Lts - Cab Sw Panel DS, Cab Sw Panel PS and Body Switch, DS Rear Bulkhead	
208	0645677		Lights, Not Required, Rear Work, Alt. 12 Volt Lights At Rear Body	1
209	0795742		Not Required, Walking Surface, Alt. Walking Surface Lights, HDR	1
210	0019030		HDR, Non-Walk-In, Aluminum	1
211	0020721		16.5' Body Length, 36.36.57.48, NWI	1
212	0656687		96" Body Width, NWI	1
213	0798578		103.25" Body Height, NWI	1
214	0838442		NWI, Roof	1
			Size, Transverse Hatch - No Transverse Hatch	
			Location, Recessed Area - No Recessed Area	
			Hatch Compt, Handle - Chrome Grab Handle	
			Hatch Compt, Config - Two Each Side	
			Qty, Recessed Area - 0	
215	0594265		Doors, Amdor, Roll-up, Side Compartments	8
			Qty, Door Accessory - 08	
			Color, Roll-up Door - AMDOR Painted to Match Lower Body	
			Latch, Roll-up Door - Non-Locking Liftbar	
216	0041727		16.5' Body Roll Doors, 36.36.57.48, NWI	1
217	0010409		Left Forward Compt, 36" & 36" Roll, NWI	1
218	0018724		Left Over Wheel Compt, 57", Roll, NWI	1
219	0018738		Left Rear Compt, 48" Roll, NWI	1
220	0012908		Right Forward Compt, 36" & 36", Roll, NWI	1
221	0018816		Right Over Wheel Compt, 57" Roll, NWI	1
222	0018830		Right Rear Compartment, 48" Roll, NWI	1
223	0780752		Rear Stairway, 6 Steps, 2 Compts, Single Axle	1
224	0090566		Hitch, Receiver, Rear/Sides, Through Body, Includes Ball	1
			Finish - Polished Stainless	
			Connection, Trailer/12V Electrical - Trailer Electric Brakes	
225	0004897		Rope Anchor, Pinnable, 9000 lb Rated, Part Only	1
			Qty, - 1	
226	0799944		Rope Anchors, 45 Deg Angle, Corner Extrusions, 9,000 lb, Pair	2
			Qty, Pair - 02	
			Location, Rope Anchors, First Pair - Roof Top, Front Corners	
			Location, Rope Anchors, Second Pair - Roof Top, Rear Corners	
227	0053760		Divider, Compartment, Vertical, Adjustable	2
			Location - LS2	
			Qty, - 02	
228	0694080		Pac Trac on Compt Wall, Each	2
			Location - right wall of LS4 left wall of RS4	
			Qty, - 02	
229	0541051		Rack, Stokes/Stretcher Basket, Horizontal Trough(s)	1
			Location - LS4	
			Dimensions - tbd	
			Restraint, Equipment Rack - LS, RS Straps	
			Qty, Stokes Troughs - 1	
230	0533910		Rack, SCBA Bottles, SPECIAL SIZE	4
			Location - LS2	
			Qty, - 04	
			Configuration - 4 bins accross top of compartment for rope bag storage	
			Dimensions - 12X12	
231	0650973		Rack, SCBA Bottles, 7.00" x 7.00", Additional	24
			Location - RS1	
			Qty, - 24	

Line	Option	Type	Option Description	Qty
231			Configuration - see job 39258	
232	0085038		Tube, Alum, Pike Pole Storage	8
			Location - LS4	
			RS4	
			Qty, - 08	
			Pike Pole Make and Model - tbd	
233	0834826		Bumper, Rear Non-Walk-In	1
			Rear Bumper, Depth - 13.00"	
			Step Insert - No Insert (Treadplate)	
			Rear Bumper, Corner - 45 Degree Angle	
234	0793822		Not Required, Water Tank, Rescue	1
235	0023410		Not Required, Overflow	1
236	0028107		Not Required, Foam Cell Modification	1
237	0553729		Not Required, Restraint, Water Tank, Heavy Duty	1
238	0680848		No Hose Bed, HDR	1
239	0013534		Not Required, Running Boards	1
240	0690026		Wall, Rear, Body Material, HDR	1
241	0003540		Tow Eyes (2) (Tanker/Rescue)	1
242	0838121		Guard, Drip Pan, Rollup Door, w/Drain Hose	8
			Location - all compts	
			Qty, - 08	
243	0738965		Pull Strap for Rollup Doors, Elastic, HDR	8
			Qty, Door Accessory - 08	
			Location, Door Accessory - all side compts	
			Color - 1) black	
244	0659111		Lights, Compt, Amdor AY-9220 LED, Dual Lt Strips, HDR	8
			Location - all body compartments	
			Qty, - 08	
245	0606068		Lights, Hatch Compt, Pierce LED Strip Lights, HDR	1
246	0652247		Shelf, Adjustable, 500 lb Capacity, Standard Depth, HDR	2
			Qty, Shelf - 02	
			Location, Shelf - LS1	
			Material Finish, Shelf - Painted - Spatter Gray	
247	0652244		Shelf, Adjustable, 500 lb Capacity, 1/2 Trans, HDR	2
			Qty, Shelf - 02	
			Location, Shelf - LS3 upper	
			RS3 upper	
			Material Finish, Shelf - Painted - Spatter Gray	
248	0618445	SP	Tray, 1000 lb, Slide-out, 2-Way, Non-Adj, 3" Sides, OSS, Full Trans, HDR	1
			Location - LS4, RS4	
			Qty, Tray (slide-out) - 01	
249	0618465	SP	Tray, 250 lb, Tilt/Slide-out, 30 Deg, Adj, Std Depth, OSS. Up to 50" W, HDR	1
			Location - RS2	
			Qty, Tray (slide-out) - 01	
250	0628153	SP	Tray, Floor Mounted, Slide-Out, Standard Depth, 600 lb, 2" Sides, HDR, OSS	5
			Qty, - 05	
			location - LS4	
			LS3	
			RS4	
			RS3	
			RS2	
			Material - paint to match compt interior	
251	0024018		Splash Guard, Wheel Well, Inside of Rear Wheel	1
252	0004016		Rub Rail, Aluminum Extruded, Side of Body	1
253	0004024		Fender Crowns, Rear, S/S	1
254	0519849		Not Required, Hose, Hard Suction	1
255	0840043		Handrail, Rear, Standard, HDR	1
256	0638299		Compt, Extinguisher Fender Panel, 8.50" Square, HDR	2
			Qty, - 02	
			Door Finish, Fender Compt - Brushed	
			Location, Fender Compt - Single - LS Rear and Single - RS Rear	
			Latch, Air Bottle Compt - Flush Lift & Turn	
			Insert, Air Bottle Compt - Rubber Matting	
257	0044229		No Extension Ladder Req'd	1

Line	Option	Type	Option Description	Qty
258	0566627	SP	Ladder, 20' Alco-Lite PEL-20, 2-Section	1
			Location - rear steps	
			Qty, - 01	
259	0024266		Ladder, 12' Alco-Lite, PRL-12, Roof	1
			Qty, - 01	
260	0074248		Not Required, Folding Ladder	1
261	0540739		Not Required, Rack, Equipment Storage	1
262	0540716		Rack, Equipment Storage, Rear Compt	1
			Configuration - see 39258	
			Restraint, Equipment Rack - D/A Finish Door w/D-Ring (Drop Down)	
			Qty, Equipment Troughs - 2	
263	0540845		Trough, Ladder, Duo-Safety, 2-Section, 24' 900A	1
			Qty, - 1	
264	0505879		Ladder, 12' Alco-Lite Folding, FL-12	1
			Location - rear steps	
			Qty, - 01	
265	0838837		Step, Rear, Swing Down, Gas Assist Cylinders, HDR, Non-MUX	1
			Step Insert - No Insert (Treadplate)	
266	0518339		Not Required, Pump House, Rescue	1
267	0092531		Not Required, Pump House Structure	1
268	0796159		Not Required, Pump, Rescue	1
269	0012216		No Seal/Packing Required	1
270	0012690		Not Required, Trans, Pump	1
271	0669703		Not Required, Pumping Mode	1
272	0024484		Not Required, Pump Shift	1
273	0046295		Transmission Lock-up, Not Req'd, NO PUMP	1
274	0046296		Not Required, Auxiliary Cooling System, NO PUMP	1
275	0024513		Not Required, Intake Relief Valve	1
276	0046403		No Relief Valve Req'd, No Pump	1
277	0012336		No Pump Primer Req'd	1
278	0012816		Not Required, Pump Manuals	1
279	0090789		Not Required, Plumbing, No Pump	1
280	0046371		Not Required, No Plumbing or Foam System	1
281	0796254		No Main Inlet Required, Rescue No Pump	1
282	0584002		Not Required, Cap, Main Pump Inlet, No Side Inlet Caps Required, No Pump	1
283	0089389		No Valves, (No Pump)	1
284	0074685		Not Required, Inlet Installation	1
285	0064700		Not Required, Inlet Control	1
286	0055600		Not Required, Auxiliary Inlet, Left Side	1
287	0029147		Not Required, Inlet, Right Side	1
288	0723049		Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	1
289	0681730		Not Required, Tank to Pump, No Pump	1
290	0074900		Not Required, Tank Fill	1
291	0089394		Not Required, Outlet Control, No Pump	1
292	0551181		Not Required, Outlet, Left Side, Rescue	1
293	0055095		Not Required, Elbow, Left Side Outlets, 2.50"	1
294	0021143		Not Required, Outlet, Right Side	1
295	0021134		Not Required, Elbow, Right Side Outlets, 2.50"	1
296	0092572		Not Required, Outlet, Front	1
297	0752097		Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	1
298	0723042		Valve, 0.75" Bleeder, Discharges, "T" Swing Handle	1
299	0029260		Not Required, Speedlays	1
300	0750536		Hose Restr, Spdly, Not Required, No Spdly	1
301	0046372		Not Required, Foam System, Pump, or Plumbing	1
302	0552517		Not Required, Refill, Foam Tank	1
303	0042573		Not Required, Foam System Demonstration	1
304	0045465		Not Required, Foam Tanks	1
305	0091110		Not Required, Foam Tank Drain	1
306	0738072		Approval Dwg, Pump Panel(s), Not Required	1
307	0000261		Not Required, Pump Panel Layout	1
308	0030701		Not Required, Material, Pump Panels, No Panel	1

Line	Option	Type	Option Description	Qty
309	0046495		Not Required, Pump Access, No Pump	1
310	0634458		Not Required, No Chassis Engine Gauges @ Pump Panel	1
311	0046400		Throttle, Engine, Not Required, No Pump/Skid Pump	1
312	0892618		Not Required, Indicator Light, Pump Panel, No Pump or Skid Pump	1
313	0046378		Not Required, Gauges, Vac/Pressure, No Pump	1
314	0046375		Not Required, Gauges, No Pump	1
315	0006774		Not Required, Foam Level Gauge	1
316	0046280		Not Required, Light Shield, No Pump	1
317	0837187		Air Horns, (2) Grover Stuttertone, 6" Round, In Bumper	1
			Finish, Air Horns - Grover, Chrome	
318	0606831		Location, Air Horns, Bumper, Right Side, Outside Frame, Same Side (Pos #1 & #2)	1
319	0757092		Control, Air Horn, Multi Select	1
320	0757084		Control, Air Horn, Horn Ring	1
321	0731923		Control, Air Horn, Ft Sw, Linemaster 632-SC36, RS, Location	1
			Location - tbd	
322	0552268		Siren, Code 3 3692, 200W w/Mic Jack and Mic	1
323	0510206		Location, Elect Siren, Recessed Overhead In Console	1
			Location, Elec Siren - Overhead, DS Center Sw Pnl	
324	0748306		Control, Elec Siren, Multi Select	1
325	0805709		Control, Elec Siren, Horn Ring, Interlock	1
			Control, Interlocks - E Master On	
326	0748292		Control, Elec Siren, Push Button Sw, RS	1
327	0899995		Control, Elec Siren, Head	1
328	0601375		Speaker, (1) Code 3, PB100C, Chrome	1
			Connection, Speaker - siren head	
329	0601565		Location, Speaker, Frt Bumper, Recessed, Center (Pos 4)	1
330	0895310		Siren, Federal Q2B	1
			Finish, Q2B Siren - Chrome	
331	0006097		Location of Siren, Recessed in Bumper	1
			Location, Siren, Mech - a) Left	
332	0748305		Control, Mech Siren, Multi Select	1
333	0732666		Control Mech Siren, Ft Sw RS, Linemaster 632-SC36	1
334	0748282		Control Mech Siren, Ft Sw LS	1
335	0748280		Control Mech Siren, Horn Ring	1
336	0726839		Sw, Siren Brake, Momentary Red Rocker, Location, Hardwire	1
			Location - DS switch panel	
337	0811625		Control System, Supplier Based, Electrical Wln CenCom Core C399 HW CCCo	1
338	0824788		Not Required	1
339	0746353		Not Required, Warning Lights Intensity	1
340	0893307	SP	Lightbar, Wln, Frdm D WCX, 81", RRRRRRRWRRRRWRRRRRRR, CCCo	1
			Filter, Whl Freedom Ltbrs - No Filters	
341	0724596		Lights, Front Zone, Wln M6**S, 4Lts Q Bezel, CCCo	1
			Color, Lens, LED's - Clear	
			Color, Lt DS Frnt Outside - Left Red	
			Color, Lt PS Frnt Outside - Right Red	
			Color, Lt DS Front Inside - Left Red	
			Color, Lt PS Front Inside - Right Red	
			Color, Q Bezel and Trim - Polished Chrome	
342	0653937		Flasher, Headlight Alternating	1
			Headlt flash deactivation - a)w/high beam	
343	0731868		Lights, Side Zone Lower, Wln M6**S, M6**S, M6**S, CCCo 6Lts	1
			Location, Lights Front Side - b)each side bumper	
			Color, Lens, LED's - Clear	
			Location, Lights Mid Side - Over Front Wheels	
			Location, Lights Rear Side - Centered Above Rear Wheels	
			Color, Trim - Chrome Trim	
			Color, Lt Side Front, DS - Left Red	
			Color, Lt Side Front, PS - Right Red	
			Color, Lt Side Mid DS - Left Red	
			Color, Lt Side Mid PS - Right Red	
			Color, Lt Side Rear PS - Right Red	
			Color, Lt Side Rear DS - Left Red	

Line	Option	Type	Option Description	Qty
344	0895994		Lights, Door Interior Flash, 4 Dr Cab, Wln M4**	1
			Color, Lens, LEDs - Clear	
			Color, Trim - Chrome Trim	
			Control, Door Int Flash - Ignition Switch	
			Location, Light, Door Int Flash - Low and Outside	
			Color, Lt Cab Left - Amber Flashing	
			Color, Lt Cab Right - Amber Flashing	
			Color, Lt Crew Cab Left - Amber Flashing	
			Color, Lt Crew Cab Right - Amber Flashing	
345	0815847		Connectors, Door Interior Flash, All Cabs, Weatherproof	1
346	0813095		Lights, Side, Wln M9**S, CCCo, 1st	2
			Location - PS and DS body forward	
			Qty, - 02	
			Color, Lights, Warning - Red	
			Control, Light - b) side warning	
			Color, Lens, LED's - Clear	
			Color, Trim - Chrome Trim	
347	0727126		Lights, Rear Zn Lwr, Wln M6**, For Tail Lt Housing CCCo	1
			Color, Lens, LED's - Clear	
			Color, Lt DS Rear - Left Red	
			Color, Lt PS Rear - Right Red	
348	0726196	SP	Lights, Rear/Side Up Zone, Wln M9*CS 6Lts, CCCo	1
			Color, Lt, Rear Upper DS - Red SB	
			Color, Lt, Rear Upper PS - Red SB	
			Color, Trim - Chrome Trim	
			Color, Lt Side Rear PS - Right Blue	
			Color, Lt Side Rear DS - Left Blue	
			Color, Lt, Rear Mid LS - Amber	
			Color, Lt, Rear Mid RS - Amber	
349	0006551		Not Required, Lights, Rear Upper Zone Blocking	1
350	0006646		Electrical System, 120/240VAC, General Design	1
351	0819272		Generator, Harrison, 25kW, 1 Phase, PTO Shaft Drive (25KW Cont. Rating)	1
352	0016645		Location, PTO Generator, Between the Frame Rails	1
353	0009440		Starting Sw, Truck Engine Powered Gen, Cab and Breaker Box	1
354	0016757		Not Required, Remote Start, Generator	1
355	0016740		Not Required, Fuel System	1
356	0016767		Not Required, Oil Drain Extension, Generator	1
357	0036738		Circuit Breaker Panel, Included With PTO Generator	1
			Location, Circuit Breaker Panel - LS4, Left Wall High	
358	0016771		Not Required, Routing Exhaust, Generator	1
359	0725224	SP	Light Twr, CL KL415D-FX, 12 Volt DC LED, Cld 4lts	1
			Back Light or Strobe Light - No Strobe or Back Light	
			Color, Tower, CL - Black with Black Lts	
360	0639593		Location, Light Tower, Rescue Body Roof, Forward	1
361	0664794		Controller, Light Tower, CL, Wired Hndhld	1
362	0664785		Location, Light Tower Controller, Near the Circuit Breaker Panel	1
363	0676669	SP	Reel, Elect Cable, Hannay, 1620-17-18, (3) Wire	2
			Location, Cord Reel - LS3 top center of compartment RS3 top center of compartment	
			Qty, Cord Reels - 2	
			Reel Guide - b) Captive roller	
			Finish, Reel - Painted Gray	
364	0086632		Cord, Electric, 10/4 Yellow, 4 Wire	1
			Lengths of Elect Cord - 1	
			Feet of Yellow Cord - e)200	
			Connection, Cord - Hubbell 20A 120/240V Twst Lk	
365	0598500		Cord, Electric, 10/4 Yellow, 4 Wire 2nd	1
			Lengths of Elect Cord - 1	
			Feet of Yellow Cord - e)200	
			Connection, Cord - Hubbell 20A 120/240V Twst Lk	
366	0788932		Box, Junc, Akron, 3Wire, 4-15/20A 120V Dup SB	2
			Qty, - 02	
			Connection, Electric Plug / Inlet (Male) - Pigtail, 20A, 120V TL	

Line	Option	Type	Option Description	Qty
367	0780309		Receptacle, 15/20A 120V 3-Pr 3-Wr SB Dup, 4 place, Interior Cab	1
			Qty, - 01 Location 1 - in cab TBD AC Power Source - Gen to Shoreline Transfer Switch Cover, Receptacle - Interior SS Wall Plate(s)	
368	0779701		Receptacle, 15/20A 120V 3-Pr 3-Wr SB Dup, 4 place, Interior Body	1
			Qty, - 01 Location 1 - RS1 AC Power Source - Generator Cover, Receptacle - Interior SS Wall plate	
369	0779722		Receptacle, 15/20A 120V 3-Pr 3-Wr, NEMA 5-20R SB Dup, 1st, Interior Body	8
			Qty, - 08 Location 1 - all compartments AC Power Source - Generator Cover, Receptacle - Interior SS Wall plate	
370	0510697		Breathing Air Cascade Sys. (4) 6000 UN, Storage Cyl.	1
			Location, Cascade Bottles - in hatch compartments	
371	0016855		Breathing Air System General Design	1
372	0501818		Demonstration, Breathing Air System, at Factory	1
373	0510673		Air Control Panel, SpaceSaver Integral, Breathing Air System	1
			Qty, Storage Banks - SpaceSaver 4 Bank Config, ACP Regulator - SpaceSaver, 1-HP Config, ACP Booster - b) electric operated pump Config, Compressor - a) without	
374	0090430		Fill Encl, 2 Bottle,"SpaceSaver"Model 100A,13" Wide, RSP	1
			Location - RS1 forward Qty, - 01	
375	0840373	SP	Booster Pump, Breathing Air, 110 Volt, Dual Pressure, 2216/4500 psi, 9110160-A2	1
			Location - rs1 Booster Pump, Start/Stop - Auto Start Booster Pump, Remote Operation - Without Remote Operation	
376	0519934		Not Required, Brand, Hydraulic Tool System	1
377	0649753		Not Required, PTO Driven Hydraulic Tool System	1
378	0819348	SP	Tool Mtg,Turntable (Lazy Susan),24",Flr Mtd,Slide-Out,Up to (4) E-Draulic Tools	1
			Location - LS1 Qty, - 1 Brand, Model, Age of Tool - hurst	
379	0007150		Bag of Nuts and Bolts	1
			Qty, Bag Nuts and Bolts - 1	
380	0816517		NFPA Required Loose Equipment, Special Services, NFPA/ULC 2024,Prov by Fire Dept	1
381	0796255		Not Required, Soft Suction, Rescue No Pump	1
382	0816939		Extinguisher, Dry Chemical, NFPA 2024, Provided by Fire Department	1
383	0816937		Extinguisher, 2.5 Gal. Pressurized Water, NFPA/ULC 2024, Provided by Fire Dept	1
384	0741569		Paint Process / Environmental Requirements, Appleton	1
385	0709566		Paint, Two-Tone Color, Enforcer	1
			Paint Color, Upper Area, Predefined - 2185 white Shield, Cab - Standard Shield Paint Color, Lower Area, Predefined - 71663 red Paint Break, Cab - Standard Two-Tone Cab Break	
386	0709845		Paint, Single Color, Body	1
			Paint, Body - Match Lower Cab	
387	0889799	SP	Coating, Chassis Frame Assy, With Liner, Hot Dip Galvanized, Joints Sealed	1
			Paint Color, Frame Assembly, Predefined - Lower Job Color	
388	0693797		No Paint Required, Aluminum Front Wheels	1
389	0693792		No Paint Required, Aluminum Rear Wheels	1
390	0733739		Paint, Axle Hubs	1
			Paint, Axle Hub - Lower Job Color	
391	0617551		Coating, Hot Dip Galvanized, Substructure, Bumper Extension	1
392	0007230		Compartment, Painted, Spatter Gray	1
393	0544111		Reflective Band, 10"	1
			Color, Reflect Band - A - a) white	
394	0007356		Reflective across Cab Face	1

Line	Option	Type	Option Description	Qty
395	0536955		Stripe, Chevron, Rear, Diamond Grade, Rescue	1
			Color, Rear Chevron DG - fluorescent yellow green	
396	0671876		Stripe, Diamond Grade Chevron, Slide Out Tray, Front and Sides	10
			Location - all slide out trays	
			Color, Reflect Band - A - p) fluorescent yellow green diamond grade	
			Qty, - 10	
397	0065687		Stripe, Reflective, Cab Doors Interior	1
			Color, Reflective - a) white	
398	0027372		Lettering Specifications, (GOLD STAR Process)	1
399	0686428		Lettering, Gold Leaf, 3.00", (41-60)	1
			Outline, Lettering - Outline and Shade	
400	0772003		Manual, Fire Apparatus Parts, USB Flash Drive, Custom	1
			Qty, - 01	
401	0623664		Manual, Chassis Service, (2) Hard Copy, (1) USB Flash Drive, Custom	1
402	0605803		Manual, Chassis Operation, (2) Hard Copy, (1) USB Flash Drive, Custom, English	1
403	0823416		Manuals, Service, Cummins X10 Engine	1
			Qty, - 01	
404	0030008		Warranty, Basic, 1 Year, Apparatus, WA0008	1
405	0696698		Warranty, Engine, Cummins, 5 Year, WA0181	1
406	0684952		Warranty, Steering Gear, TRW Ross TAS, 1 Year WA0202	1
407	0596017		Warranty, Frame, 50 Year, Custom Chassis, WA0013	1
408	0837819		Warranty, Axle, Steertek, 5 Year	1
409	0733306		Warranty, Single Axle, 5 Year, Meritor, General Service, WA0384	1
410	0652758		Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	1
411	0019914		Warranty, Structure, 10 Year, Custom Cab, WA0012	1
412	0744240		Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	1
413	0695416		Warranty, Pierce Camera System, WA0188	1
414	0708760		Warranty, Not Applicable, LED Strip Lights	1
415	0046369		Warranty, 5-year EVS Transmission, Standard Custom, WA0187	1
416	0685945		Warranty, Transmission Cooler, WA0216	1
417	0033401		Not Required, Tank Warranty	1
418	0596024		Warranty, Structure, 15 Year, HDR, WA0010	1
419	0693126		Warranty, AMDOR, Roll-up Door, 10 Year/5 Year Painted, WA0185	1
420	0012599		Warranty, Pump, Not Required	1
421	0046370		Not Required, Warranty, No Plumbing	1
422	0641372		Warranty, Foam System, Not Available	1
423	0595820		Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	1
424	0595421		Warranty, Goldstar, 3 Year, Apparatus, WA0018	1
425	0819254		Certification, Vehicle Stability, CD0196	1
426	0808582		Certification, Engine Installation, Saber FR/Enf, Cummins X10, 2027	1
427	0686786		Certification, Power Steering, CD0098	1
428	0892691		Certification, Cab Integrity, Saber FR/Enforcer, CD0189	1
429	0631973		Certification, Cab Door Durability, Saber FR/Enforcer, CD0137	1
430	0631978		Certification, Windshield Wiper Durability, Saber FR/Enforcer, CD0132	1
431	0631974		Certification, Electric Window Durability, Saber FR/Enforcer, CD0133	1
432	0631977		Certification, Seat Belt Anchors and Mounting, Saber FR/Enforcer, CD0134	1
433	0735949		Certification, Cab HVAC System Performance, SFR/Enf, CD0165/CD0167/CD0174/CD0175	1
434	0545073		Amp Draw Report, NFPA Current Edition	1
435	0002758		Amp Draw, NFPA/ULC Radio Allowance	1
436	0799248		Appleton/Florida BTO	1
437	0000031		HDR BODY	1
438	0000012		PIERCE CHASSIS	1
439	0004713		ENGINE, OTHER	1
440	0046396		EVS 4000 Series TRANSMISSION	1
441	0020037		NO PUMP	1
442	0020013		NO WATER TANK	1
443	0028047		NO FOAM SYSTEM	1
444	0046282		Not Required, Control Panel, No Pump	1
445	0020007		AKRON VALVES	1
446	0020015		ABS SYSTEM	1

Line	Option	Type	Option Description	Qty
447	0752883		HDR	1

Electrical Analysis

3/9/2026

Bid #: 1751
Job #:
Desc: Irvington HDR
Sales Rep: Horn, Jeff
Customer: Irvington Fire Department
Organization: Firematic Supply Co, Inc
Option: Electrical Power/Signal Protection & Control, Enforcer
Type: Hard Wired

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0000820	Moisture Ejector, Automatic, w/Heat		0.00	0.00	18.80
0001244	High Idle w/Electronic Engine, Custom		0.00	1.20	0.00
0009429	Electric Power Only, Portable Winch		0.00	4.00	0.00
0098841	Batteries, (6) Deka Grp 31, 1000 CCA each, Threaded Stud		0.00	3.00	0.00
0543751	Light, Do Not Move Apparatus		0.00	0.80	0.00
0589905	Alarm, Back-up Warning, PRECO 1040		0.00	0.50	0.00
0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber		0.00	26.00	0.00
0639727	Cab Lift, Elec/Hyd, Manual Override, Saber FR/Enforcer		0.00	180.00	0.00
0676669	Reel, Elect Cable, Hannay, 1620-17-18, (3) Wire		0.00	90.00	0.00
0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine		0.00	0.42	0.00
0693439	Lights, Engine Compt, Custom, Auto Sw, w/Fld Chk Dr Wln		0.00	0.76	0.00
0725224	Light Twr, CL KL415D-FX, 12 Volt DC LED, Cld 4lts		0.00	0.00	81.92
0727946	Lights, Wln, S30M** 30" 12VDC LED, RS Cab, Mt Fet		0.00	0.00	7.20
0727947	Lights, Wln, S30M** 30" 12VDC LED, LS Cab, Mt Fet		0.00	0.00	7.20
0763739	Lights, Wln, PCPSM1*, Pioneer, 12 VDC, 3rd		0.00	0.00	12.00
0766905	Lights, Wln, PCPSM1*, Pioneer, 12 VDC, 2nd		0.00	0.00	12.00
0766906	Lights, Wln, PCPSM1*, Pioneer, 12 VDC, 1st		0.00	0.00	12.00
0795742	Not Required, Walking Surface, Alt. Walking Surface Lights, HDR		0.00	0.00	0.00
0797301	Handlts, (6) Streamlight, Fire Vulcan, 44451, C4 LED, Tail Lts,		0.00	0.00	6.60
0806466	Lights, Backup, Wln M62BU, LED, For Tail Lt Housing		0.00	3.20	0.00
0808099	Camera, Pierce, 7" HD, R, Camera, AHD		0.00	1.20	0.00
0813095	Lights, Side, Wln M9**S, CCCo, 1st		0.00	3.60	2.40
0819994	Radio, Jensen, AM/FM/WB, Bluetooth		0.00	0.00	2.00
0820509	ESC/ABS/ATC Wabco Brake System, Single Rear Axle, NFPA		0.00	6.00	0.00
0834416	USB, Cab, 4, 12V DC, Dual USB Termination, NFPA1900/ULC		0.00	0.00	10.00
0840912	Light, Open Door - Wln, WIONSM*, DS Red, PS Amb, Upper		0.00	3.00	0.00
0895310	Siren, Federal Q2B		0.00	100.00	0.00
0895994	Lights, Door Interior Flash, 4 Dr Cab, Wln M4**		0.00	6.00	0.00
0820904	Wiring, Spare, 15 A 12V DC 1st NFPA1900/ULC	Load Managed	0.00	0.00	60.00
0891411	HVAC, Heavy-Duty, Enforcer, CARE	Load Managed	0.00	0.00	136.00
0002758	Amp Draw, NFPA/ULC Radio Allowance	NFPA	5.00	0.00	0.00
0010409	Left Forward Compt, 36" & 36" Roll, NWI	NFPA	3.60	7.20	3.60
0012908	Right Forward Compt, 36" & 36", Roll, NWI	NFPA	3.60	7.20	3.60
0018724	Left Over Wheel Compt, 57", Roll, NWI	NFPA	0.90	1.80	0.90
0018738	Left Rear Compt, 48" Roll, NWI	NFPA	0.90	0.90	0.00
0018816	Right Over Wheel Compt, 57" Roll, NWI	NFPA	0.90	1.80	0.90
0018830	Right Rear Compartment, 48" Roll, NWI	NFPA	0.90	0.90	0.00
0090566	Hitch, Receiver, Rear/Sides, Through Body, Includes Ball	NFPA	45.00	0.00	0.00
0552268	Siren, Code 3 3692, 200W w/Mic Jack and Mic	NFPA	1.40	12.60	0.00
0568012	Air Dryer, Wabco System Saver 1200, Heater, 2010	NFPA	7.81	0.00	0.00
0582182	DEF Tank, 4.5 Gallon, DS Fill, Rear of Rear Axle, Common Door	NFPA	0.60	11.40	0.00
0606068	Lights, Hatch Compt, Pierce LED Strip Lights, HDR	NFPA	1.40	1.40	0.00
0610240	Vehicle Data Recorder w/Seat Belt Monitor	NFPA	0.50	0.00	0.00
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29	NFPA	0.10	0.90	0.00
0625210	Lights, Directional, Cab Front Side, Truck-Lite 19036Y LED,	NFPA	0.12	0.00	0.00
0625650	Cab, Enforcer, 7000	NFPA	6.80	10.20	0.00
0627282	Lights, Clearance/Marker/ID, Rear, FRP LED Bar & P25 LED 4Lts	NFPA	1.75	0.00	0.00

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply

Electrical Analysis

3/9/2026

Bid #: 1751
Desc: Irvington HDR
Customer: Irvington Fire Department
Option: Electrical Power/Signal Protection & Control, Enforcer

Job #:
Sales Rep: Horn, Jeff
Organization: Firematic Supply Co, Inc
Type: Hard Wired

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0644176	Load Manager, Integrated In Electrical System, Saber FR/Enforcer	NFPA	0.56	0.56	0.00
0644187	Cab Instruments, Black Gauges, Black Bezels, Saber FR/Enforcer	NFPA	1.26	0.00	0.00
0647647	Lights, Dome, FRP Dual LED 4 Lts	NFPA	0.80	0.80	0.00
0653937	Flasher, Headlight Alternating	NFPA	0.08	0.00	0.00
0724596	Lights, Front Zone, Wln M6**S, 4Lts Q Bezel, CCCo	NFPA	1.80	5.40	1.80
0727126	Lights, Rear Zn Lwr, Wln M6**, For Tail Lt Housing CCCo	NFPA	1.80	2.70	0.00
0735474	Lights, Clearance/Marker/ID, Front, P25 LED 7 Lts, Saber	NFPA	0.35	0.00	0.00
0768217	Lights, Step, P25 at Rear & Walkway, LED Light Strips in	NFPA	0.50	0.00	0.00
0769567	Lights, Perimeter, Amdor AY-LB-12HW012 12", Brkt	NFPA	1.08	0.00	0.00
0770056	Lights, Perimeter Body, Amdor AY-LB-12HW020 LED 2lts, Rear	NFPA	0.60	0.00	0.00
0780752	Rear Stairway, 6 Steps, 2 Compts, Single Axle	NFPA	3.60	7.20	3.60
0783153	Headlights, Rect LED, JW Spkr Evo 2, AXT/Enf/Imp/Sab/Vel	NFPA	4.20	4.20	0.00
0804514	Lights, Tail, Wln M62BTT* Red Stop/Tail & M62T* Amber Dir Arw	NFPA	0.83	2.49	0.00
0810947	Engine, Cummins X10, 450 hp, HT1650 lb-ft, W/OBD, EPA 2027,	NFPA	1.00	0.00	0.00
0813791	Panel, Charger Display, Kussmaul, 091-94-12, Batt Dir	NFPA	0.03	0.00	0.00
0814164	Light, Roof Mt, Wln S86M**, 86" Cnt Feature, Mkr Lts Activated,	NFPA	0.31	0.00	21.29
0817254	Lights, Perimeter Cab, Amdor AY-LB-12HW0** LED 4Dr	NFPA	1.20	0.00	0.00
0838442	NWI, Roof	NFPA	3.10	0.00	0.00
0840415	Light, Directional, Wln 600 Cmb, Cab Crn, Wrp Bzl Out HD Lts,	NFPA	1.15	1.15	0.00
0887546	Trans, Allison 6th Gen, 4000 EVS P, w/Prognostics,	NFPA	2.00	2.00	0.00
0889577	Bracket, License Plate & Light, P25 LED, Stainless Brkt	NFPA	0.07	0.00	0.00
0892618	Not Required, Indicator Light, Pump Panel, No Pump or Skid	NFPA	0.10	0.00	0.00
0892638	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	NFPA	1.00	0.00	0.00
0893307	Lightbar, Wln, Frdm D WCX, 81",	NFPA	12.08	2.48	14.08
0898687	Compt, Saddle, Transverse C/C, Dbl Pan, Rec Tube, 70" SFR/Enf	NFPA	0.65	0.65	0.00
0647728	Alternator, 430 amp, Delco Remy 55SI	S	0.00	0.00	0.00
		Load Totals:	**121.43**	**515.61**	**417.89**

Note: Minimum Continous Load is in "Blocking Right of Way" mode.(Reference current edition of NFPA/ULC)
Note: Intermittent Load items are not factored in on any alternator load comparisons. These items are included on the report for reference only and should be looked at as amp draw exclusion items. (Reference current edition of NFPA/ULC)
Note: Total Connected Load "Demand" represents Total Connected Load minus any Load Managed items

Alternator Output at Idle: 253.00

Minimum Continuous Load	
Supply:	253.00
Demand:	121.43
Variance:	131.57

Alternator Output at Governed Speed: 371.00

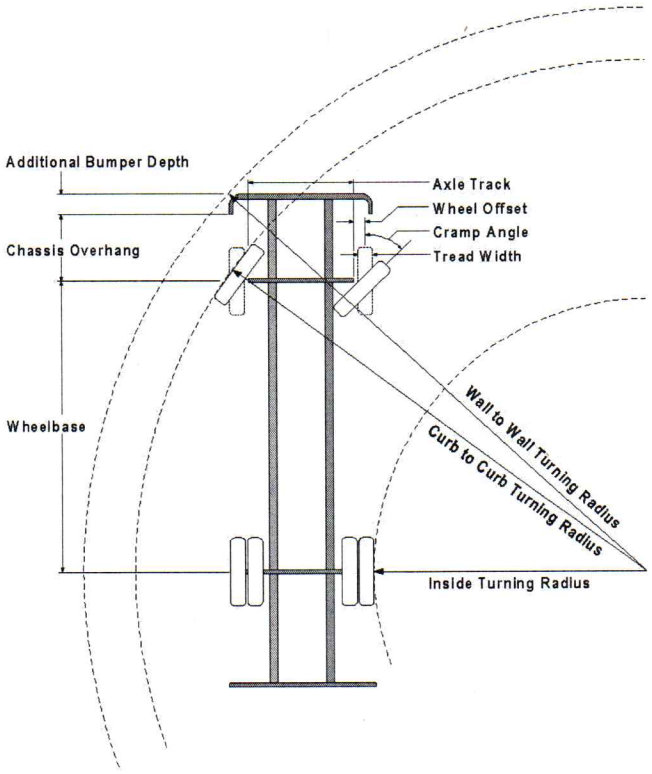
Total Connected Load	
Supply:	371.00
Demand:	343.32
Variance:	27.68

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply

Turning Performance Analysis

03/09/2026

Bid Number: 1751
Department: Irvington Fire Department
Chassis: Enforcer Chassis
Body: HDR, Non-Walk-In, Aluminum



Parameters:

*Inside Cramp Angle:	45°
Axle Track:	85.86 in.
Wheel Offset:	4.68 in.
Tread Width:	16.6 in.
Chassis Overhang:	65.95 in.
Additional Bumper Depth:	10 in.
Front Overhang:	75.95 in.
Wheelbase:	184 in.

Calculated Turning Radii:

Inside Turn:	14 ft. 3 in.
Curb to curb:	28 ft. 4 in.
Wall to wall:	32 ft. 0 in.

Category	Option	Description
Wheels, Front	0052887	Wheels, Front, Alcoa, 22.50" x 12.25", Aluminum, Dura-Bright, Hub Pilot
Bumpers	0776962	Bumper, 10" Ext, Form, Steel, Painted, SFR/Enf
Tires, Front	0078244	Tires, Front, Michelin, XZY3 (wb), 425/65R22.50, 20 ply
Axle, Front, Custom	0821544	Axle, Front, Hendrickson Steertek, 20,000 lb, Saber FR/Enforcer

Notes:

*Actual Inside cramp angle may be less than shown.

Curb to Curb turning radius calculated for 9.00 inch curb.

Definitions:	
Inside CrampAngle	Maximum turning angle of the front inside fire.
Axle Track	King-pin to King-pin distance of front axle.
Wheel Offset	Offset from the center line of the wheel to the King-pin.
Tread Width	Width of the tire tread.
Chassis Overhang	Distance of the center line of the front axle to the front edge of the cab. This does not include the bumper depth.
Additional Bumper Wheel	Depth that the bumper assembly adds to the front overhang.
Wheelbase	Distance between the center lines of the vehicles front and rear axles.
Inside Turning Radius	Radius of the smallest circle around which the vehicle can turn.
Curb to Curb Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures assumes a curb height of 9 inches.
Wall to Wall Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures takes into account any front overhang due to chassis , bumper extensions and or aerial devices.