



# Proposal Details Report

12/17/2024

**Customer:** Westlake, TX Fire Department - **Bid Number:** 1165

Denton County

**Representative** Peters, Brian

**Job Number:**

**Requirements Manager:**

**Organization:** Siddons-Martin Emergency Group

**Description:** Westlake Enforcer PUC Pumper

**Chassis:** Enforcer Chassis, PUC-NG

**Body:** Pumper, PUC, Aluminum

| OptionCode | Type | Option                    | ProposalText   |
|------------|------|---------------------------|--|
| 0766589    |      | Boiler Plates, PUC Pumper | <p>Siddons-Martin is pleased to submit a proposal to Westlake Fire Department for a <b>Pierce® multi purpose response vehicle</b> 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.</p> <p>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 75 years of experience in the fire apparatus market. Pierce Manufacturing has built and put into service more than 62,500 apparatus, including more than 33,900 on Pierce custom chassis designed and built specifically for fire and emergency applications. Our Appleton, Wisconsin facility has over 870,000 total square feet of floor space situated on approximately 105 acres of land. Our Bradenton, Florida facility has 300,000 square feet of floor space situated on approximately 38 acres of land.</p> <p>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.</p> <p>Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification.</p> <p>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.</p> <p>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.</p> <p><b>GENERAL DESIGN AND CONSTRUCTION</b></p> <p>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.</p> <p><b>QUALITY AND WORKMANSHIP</b></p> <p>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 D1.1-2004 recommendations for structural steel welding. All aluminum welding follows American Welding society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding follows American welding Society B2.1-2000 requirements for structural welding of sheet metal. Our flux core arc welding uses alloy rods, type 7000 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 and every three (3) years thereafter. Pierce also employs and American Welding Society certified welding inspector in plant during working hours to monitor weld quality.</p> <p>Pierce Manufacturing operates a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the quality systems that are established by the manufacturer for design, manufacture, installation and service. 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.</p> <p>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.</p> <p><b>DELIVERY</b></p> <p>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.</p> <p><b>MANUAL AND SERVICE INFORMATION</b></p> <p>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.</p> <p><b>SAFETY VIDEO</b></p> <p>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 on the Pierce Training website. 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.</p> <p><b>PERFORMANCE TESTS</b></p> |

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 Siddons-Martin 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 twenty five (25) 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 \$5,000,000 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](http://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 35 personnel, dedicated to customer support, which also maintains a 24 hour 7 day a week toll free hot line, four (4) on staff EVTs, and offers 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 policies 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 policies 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.

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| 0661794 | Single Source Compliance   | <b>SINGLE SOURCE MANUFACTURER</b><br>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.   |
| 0584456 | Manufacture Location, Appleton, Wisconsin  | Your apparatus will be manufactured in Appleton, Wisconsin.   |
| 0584452 | RFP Location: Appleton, Wisconsin  |   |
| 0588609 | Vehicle Destination, US  |   |
| 0764706 | SP BMP Truck - Pre-Approval at Bid - Approved Option Will Be Required at Booking |   |
| 0816491 | Comply NFPA 1900 Changes Effective Jan 1, 2024, With Exceptions                  | <b>NFPA 2024 STANDARDS</b><br>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.<br>Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus.<br>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.<br>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.<br>The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications.<br>An official of the company will designate, in writing, who is qualified to witness and certify test results. |
| 0533347 | Pumper/Pumper with Aerial Device Fire Apparatus                                  |   |
| 0588611 | Vehicle Certification, Pumper  |   |

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| 0661778 | Agency, Apparatus Certification, Pumper/Tanker, U.L. | <p><b>NFPA COMPLIANCY</b><br/>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".</p> <p><b>PUMP TEST</b><br/>Underwriters Laboratory (UL) will test, approved, and certify the pump. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the pump manufacturer's record of pump construction details will be forwarded to the Fire Department.</p> <p><b>GENERATOR TEST</b><br/>If the unit has a generator, Underwriters Laboratory (UL) will test, approved, and certify the generator. The test results will be provided to the Fire Department at the time of delivery.</p> <p><b>BREATHING AIR TEST</b><br/>If the unit has breathing air, Pierce Manufacturing will draw an air sample from the air system and have the sample certified that the air quality meets the requirements of NFPA 1989, <i>Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection</i>.</p>   |
| 0816495 | Certification, Vehicle Inspection Program, NFPA 1900 | <p><b>VEHICLE INSPECTION PROGRAM CERTIFICATION</b><br/>To assure the vehicle is built to current NFPA1900 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.<br/>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.</p>   |
| 0000114 | Inspection Trip(s)                                   | <p><b>INSPECTION TRIP(S)</b><br/>The bidder will provide two (2) factory inspection trip(s) for 3 Westlake personnel 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.</p>   |
| 0620362 | Consortium, HGAC                                     |   |
| 0537375 | Unit of Measure, US Gallons                          |   |
| 0529326 | Bid Bond, 10%, Pierce Built Chassis                  | <p><b>BID BOND</b><br/>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.<br/>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.</p> |

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| 0816569 | Performance Bond, Not Requested, PPI Terms                              | <p><b>PERFORMANCE BOND NOT REQUESTED</b></p> <p>A performance bond will not be included. If requested at a later date, one will be provided to you for an additional cost and the following will apply:</p> <p>The successful bidder will furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond will be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required.</p> <p>Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Bumper to Bumper warranty period included within this proposal. Owner agrees that the penal amount of this bond will be simultaneously amended to 25 percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type will not exceed three (3) years from the date of such satisfactory acceptance and delivery, or the actual Bumper to Bumper warranty period, whichever is shorter.</p> <p>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.</p> <p>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% 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% for each year or fractional year between the Order Month and the Evaluation Month.</p> <p>The seller will document any such updated price for the customer's approval before proceeding and provide an option to cancel the order.</p> |
| 0000007 | Approval Drawing  | <p><b>APPROVAL DRAWING</b></p> <p>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.</p> <p>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.</p>  |
| 0002928 | Electrical Diagrams   | <p><b>ELECTRICAL WIRING DIAGRAMS</b></p> <p>Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.</p>   |
| 0889378 | Enforcer Chassis, PUC-NG  | <p><b>ENFORCER CHASSIS</b></p> <p>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.</p>   |
| 0000110 | Wheelbase   | <p><b>WHEELBASE</b></p> <p>The wheelbase of the vehicle will be 194.00".</p>  |
| 0000070 | GVW Rating  | <p><b>GVW RATING</b></p> <p>The gross vehicle weight rating will be 46,500.</p>   |
| 0729280 | Frame Rails, 13.38 x 3.50 x .375, Enforcer                              | <p><b>FRAME</b></p> <p>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 have a 13.38" tall web over the front and mid sections of the chassis, with a continuous smooth taper to 10.75" over the rear axle. Each rail will have a section modulus of 25.992 cubic inches and a resisting bending moment (rbm) of 3,119,040 in-lb over the critical regions of the frame assembly, with a section modulus of 18.96 cubic inches with an rbm of 2,275,200 in-lb over the rear axle. The frame rails will be constructed of 120,000 psi yield strength heat-treated 0.38" thick steel with 3.50" wide flanges.</p>   |
| 0889469 | Frame Liner, "C/Inv L" 12.50" x 3.00" x .25", AXT/Vel/Imp/Enf, 56" QVal | <p><b>FRAME REINFORCEMENT</b></p> <p>In addition, a mainframe internal liner will be provided. The liner will be an internal "C" design that steps to an internal "L" design over the rear axle. It will be heat-treated steel measuring 12.50" x 3.00" x 0.25" through the front portion of the liner, stepping to 9.38" x 3.00" x 0.25" through the rear portion of the liner. Each liner will have a section modulus of 13.58 cubic inches, yield strength of 110,000 psi, and rbm of 1,494,042 in-lb. Total rbm at wheelbase center will be 4,391,869 in-lb.</p> <p>The frame liner will be mounted inside of the chassis frame rail and extend the full length of the frame.</p>   |

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| 0630705 | Axle, Front, Oshkosh TAK-4, Non Drive, 19,500 lb, Enforcer     | <b>FRONT NON DRIVE AXLE</b><br>The Oshkosh TAK-4® front axle will be of the independent suspension design with a ground rating of 19,500 lb.<br>Upper and lower control arms will be used on each side of the axle. Upper control arm castings will be made of 100,000-psi yield strength 8630 steel and the lower control arm casting will be made of 55,000-psi yield ductile iron.<br>The center cross members and side plates will be constructed out of 80,000-psi yield strength steel.<br>Each control arm will be mounted to the center section using elastomer bushings. These rubber bushings will rotate on low friction plain bearings and be lubricated for life. Each bushing will also have a flange end to absorb longitudinal impact loads, reducing noise and vibrations.<br>There will be nine (9) grease fittings supplied, one (1) on each control arm pivot and one (1) on the steering gear extension.<br>The upper control arm will be shorter than the lower arm so that wheel end geometry provides positive camber when deflected below rated load and negative camber above rated load.<br>Camber at load will be zero degrees for optimum tire life.<br>The ball joint bearing will be of low friction design and be maintenance free.<br>Toe links that are adjustable for alignment of the wheel to the center of the chassis will be provided.<br>The wheel ends must have little to no bump steer when the chassis encounters a hole or obstacle.<br>The steering linkage will provide proper steering angles for the inside and outside wheel, based on the vehicle wheelbase.<br>The axle will have a turning angle of up to 45 degrees. |
| 0030264 | Suspension, Front TAK-4, 19,500 lb, Qtm/AXT/Imp/Vel/Enf/SFR    | <b>FRONT SUSPENSION</b><br>Front Oshkosh TAK-4™ independent suspension will be provided with a minimum ground rating of 19,500 lb.<br>The independent suspension system will be designed to provide maximum ride comfort. The design will allow the vehicle to travel at highway speeds over improved road surfaces and at moderate speeds over rough terrain with minimal transfer of road shock and vibration to the vehicle's crew compartment.<br>Each wheel will have torsion bar type spring. In addition, each front wheel end will also have energy absorbing jounce bumpers to prevent bottoming of the suspension.<br>The suspension design will be such that there is at least 10.00" of total wheel travel and a minimum of 3.75" before suspension bottoms.<br>The torsion bar anchor lock system allows for simple lean adjustments, without the use of shims. One can adjust for a lean within 15 minutes per side. Anchor adjustment design is such that it allows for ride height adjustment on each side.<br>The independent suspension was put through a durability test that simulated 140,000 miles of inner city driving.   |
| 0087572 | Shock Absorbers, KONI, TAK-4, Qtm/AXT/Imp/Vel/DCF/Enf          | <b>FRONT SHOCK ABSORBERS</b><br>KONI heavy-duty telescoping shock absorbers will be provided on the front suspension.   |
| 0000322 | Oil Seals, Front Axle  | <b>FRONT OIL SEALS</b><br>Oil seals with viewing window will be provided on the front axle.   |
| 0899438 | Tires, Front, Goodyear, Armor MAX MSA, 425/65R22.50, 20 ply    | <b>FRONT TIRES</b><br>Front tires will be Goodyear 425/65R22.50 radials, 20 ply Armor Max MSA, rated for 22,800 lb maximum axle load and 68 mph maximum speed.  |
| 0725046 | Wheels, Front, 22.50" x 12.25", Steel, Hub Pilot, 24k          | The tires will be mounted on 22.50" x 12.25" steel disc type wheels with a ten (10)-stud, 11.25" bolt circle.   |
| 0640711 | Axle, Rear, Dana S26-190, 27,000 lb Saber/Enforcer             | <b>REAR AXLE</b><br>The rear axle will be a Dana, Model S26-190, with a capacity of 27,000 lb.  |
| 0544253 | Top Speed of Vehicle, 68 MPH /109 KPH                          | <b>TOP SPEED OF VEHICLE</b><br>A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 68 mph / 109 kph.   |
| 0565380 | Suspen, Rear, Single Slipper Spring, 27,000 lb, Saber/Enforcer | <b>REAR SUSPENSION</b><br>The rear suspension will be Standens, semi-elliptical, 3.00" wide x 52.50" long, 12-leaf pack with a ground rating of 27,000 lb. The spring hangers will be castings.<br>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.<br>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.  |
| 0000485 | Oil Seals, Rear Axle   | <b>REAR OIL SEALS</b><br>Oil seals will be provided on the rear axle(s).  |

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| 0782552 | Tires, Rear, Goodyear, Endurance RSA, 12R22.50, LRH, Single             | <b>REAR TIRES</b><br>Rear tires will be four (4) Goodyear 12R22.50 radials, load range H, Endurance RSA highway tread, rated for 27,120 lb maximum axle load and 75 mph maximum speed.   |
| 0654806 | Wheels, Rear, Accuride, 22.50" x 8.25", Steel, Hub Pilot, Single        | The tires will be mounted on Accuride® 22.50" x 8.25" steel disc type wheels with a ten (10) stud, 11.25" bolt circle.   |
| 0568081 | Tire Balancing, Counteract Beads  | <b>TIRE BALANCE</b><br>All tires will be balanced with Counteract balancing beads. The beads will be inserted into the tire and eliminate the need for wheel weights.  |
| 0620570 | Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle | <b>TIRE PRESSURE MANAGEMENT</b><br>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.<br>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.<br>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.  |
| 0801926 | Lug Nut, Covers, Black  | <b>BLACK LUG NUT COVERS</b><br>Black lug nut covers will be supplied on front and rear wheels.   |
| 0002045 | Mud Flap, Front and Rear, Pierce Logo                                   | <b>MUD FLAPS</b><br>Mud flaps with a Pierce logo will be installed behind the front and rear wheels.   |
| 0544802 | Chocks, Wheel, SAC-44-E, Folding, (Up to 44" Diameter Tires)            | <b>WHEEL CHOCKS</b><br>There will be one (1) pair of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks, with easy-grip handle provided.  |
| 0544806 | Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal                | <b>Wheel Chock Brackets</b><br>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 forward of the left side rear tire.   |
| 0820509 | ESC/ABS/ATC Wabco Brake System, Single Rear Axle, NFPA 1900/ULC         | <b>ELECTRONIC STABILITY CONTROL</b><br>A vehicle control system will be provided as an integral part of the ABS brake system from Meritor Wabco.<br>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.<br>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.<br><b>ANTI-LOCK BRAKE SYSTEM</b><br>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.<br><b>AUTOMATIC TRACTION CONTROL</b><br>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. |

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| 0030185 | Brakes, Knorr/Bendix 17", Disc, Front, TAK-4                           | <b>BRAKES</b><br>The service brake system will be full air type.<br>The front brakes will be Knorr/Bendix disc type with a 17.00" ventilated rotor for improved stopping distance.<br>The brake system will be certified, third party inspected, for improved stopping distance.  |
| 0627930 | Brakes, Bendix, Cam, Rear, 16.50 x 8.63"                               | The rear brakes will be Bendix™ 16.50" x 8.63" cam operated with automatic slack adjusters.   |
| 0735527 | Air Compressor, Brake, Wabco 26.8 CI, Paccar                           | <b>AIR COMPRESSOR, BRAKE SYSTEM</b><br>The air compressor will be a Wabco single piston compressor with a 26.8 CI displacement.   |
| 0644232 | Brake Reservoirs, 4,272 Cubic Inch Minimum Capacity, Saber FR/Enforcer | <b>BRAKE SYSTEM</b><br>The brake system will include:<br>Brake treadle valve<br>Heated automatic moisture ejector on air dryer<br>Total air system minimum capacity of 4,272 cubic inches<br>Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi<br>Spring set parking brake system<br>Parking brake operated by a push-pull style control valve<br>A parking "brake on" indicator light on instrument panel<br>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<br>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)<br>1/4 turn drain valves on each air tank<br>The air tank will be primed and painted to meet a minimum 750 hour salt spray test.<br>The air tanks will be painted black #98.<br>To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets. |
| 0568012 | Air Dryer, Wabco System Saver 1200, Heater, 2010                       | <b>BRAKE SYSTEM AIR DRYER</b><br>The air dryer will be WABCO System Saver 1200 with spin-on coalescing filter cartridge and 100 watt heater.  |
| 0000790 | Brake Lines, Nylon   | <b>BRAKE LINES</b><br>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.  |
| 0544415 | Inlet/Outlet, Air, w/Disconnect Fitting, Location                      | <b>AIR INLET/OUTLET</b><br>One (1) air inlet/outlet will be installed with the female coupling located DS Step Well. This system will tie into the "wet" tank of the brake system and include a check valve in the inlet line and an 85 psi pressure protection valve in the outlet line. The air outlet will be controlled by a needle valve.<br>A mating male fitting will be provided with the loose equipment.<br>The air inlet will allow a shoreline air hose to be connected to the vehicle. This will allow station air to be supplied to the brake system of the vehicle to insure constant air pressure.  |
| 0014130 | Air Tank, Additional for Extra Air Horn Capacity                       | <b>ADDITIONAL AIR TANK FOR AIR HORN</b><br>An additional air tank with 1,454 cubic inch displacement will be provided to increase the capacity of the air system. This tank will be dedicated for air horn use.<br>The air tank will be primed and painted to meet a minimum 750 hour salt spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.<br>The air tank(s) will be painted same as frame color.<br>The output flow of the engine air compressor varies with engine rpm. Full compressor output is only achieved at governed engine speed. Engine speed may be limited by generators, pumps and other PTO driven options.   |



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| 0808515 | Engine, Paccar MX, 510HP, 1850 lb-ftW/OBD, EPA 2027, Saber FR/Enforcer        | <b>ENGINE</b><br>The chassis will be powered by an electronically controlled engine as described below:<br>Make:<br>Paccar<br>Model:<br>MX<br>Power:<br>510 hp at 1600rpm<br>Torque:<br>1850 lb-ft at 1000rpm<br>Governed Speed:<br>1900 rpm<br>Emissions Certification:<br>EPA 2027<br>Fuel:<br>Diesel<br>Cylinders:<br>Six (6)<br>Displacement:<br>13.7L<br>Starter:<br>DP60<br>Fuel Filters:<br>Dual cartridge style with check valve, water separator, and water in fuel sensor<br>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.                               |
| 0811409 | Not Required, Engine Contingency Adjustment                                   |   |
| 0001244 | High Idle w/Electronic Engine, Custom   | <b>HIGH IDLE</b><br>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.<br>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."   |
| 0735687 | Engine Brake, Fully Integrated, Paccar MX13 Engine                            | <b>ENGINE BRAKE</b><br>The compression release brake option is a fully integrated MX engine braking system. It utilizes the turbocharger and back pressure valve, but adds in a hydraulically operated compression brake to increase overall retarding power.<br>To maximize the effectiveness of the compression brake the MX engine brake system works in conjunction with the turbocharger and back pressure valve.<br>The driver will be able to turn the engine brake system on/off and have a high, medium and low setting.   |
| 0644227 | Clutch, Fan, Air Actuated, Saber FR/Enforcer                                  | <b>CLUTCH FAN</b><br>A fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and constantly engaged when in "Pump" position.  |
| 0644573 | Air Intake, Water & Ember Screen, Saber FR/Enforcer                           | <b>ENGINE AIR INTAKE</b><br>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.<br>The ember separator is designed to prevent road dirt and recirculating hot air from entering the engine.<br>The ember separator will be easily accessible by tilting the cab.  |
| 0814375 | Exhaust System, Horizontal, Right Side  | <b>EXHAUST SYSTEM</b><br>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.<br>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 aluminized steel.<br>There will be an aluminized steel exhaust diffuser increased to 7.00" in the center to accommodate the fire department's air recovery system 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. |
| 0816167 | SP Adapter, Exhaust, Plymovent Magnetic Grabber, for 6" or 7" Diffuser Outlet | <b>EXHAUST MODIFICATION</b><br>A Plymovent Magnetic Grabber conical adapter will be provided on the end of the tail pipe.   |

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| 0788765 | Radiator, Saber FR/Enforcer  | <p><b>RADIATOR</b></p> <p>The radiator and the complete cooling system will meet or exceed the current edition of applicable NFPA and engine manufacturer cooling system standards.</p> <p>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.</p> <p>The radiator core will have a minimum front area of 1060 square inches.</p> <p>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.</p> <p>The radiator will be compatible with commercial antifreeze solutions.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.</p> |
| 0001090 | Cooling Hoses, Rubber  | <p><b>COOLANT LINES</b></p> <p>Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing.</p> <p>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.</p>  |
| 0794888 | Fuel Tank, 65 Gallon, Left Side Fill, Door Finish Feature                      | <p><b>FUEL TANK</b></p> <p>A 65 gallon fuel tank will be provided and mounted at the rear of the chassis. The tank will be constructed of 12-gauge, hot rolled steel. It will be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank will be mounted with stainless steel straps.</p> <p>A 0.75" drain plug will be located in a low point of the tank for drainage.</p> <p>A fill inlet will be located on the left hand side of the body and is covered with a hinged, spring loaded, painted job color door that is marked "Ultra Low Sulfur - Diesel Fuel Only."</p> <p>A 0.50" diameter vent will be installed from tank top to just below fuel fill inlet.</p> <p>The fuel tank will meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume.</p>   |
| 0001129 | Lines, Fuel  | All fuel lines will be provided as recommended by the engine manufacturer.   |
| 0889521 | DEF Tank, 7.3 Gallon, LS Fill, Under Cab, Paccar, Lift Up Fill Dr, Spring, ENF | <p><b>DIESEL EXHAUST FLUID TANK</b></p> <p>A 7.3 gallon diesel exhaust fluid (DEF) tank will be provided and mounted under the cab on the driver's side.</p> <p>A fill inlet will be provided on the driver's side of the cab. The lift up door will be spring loaded and be painted.</p>  |
| 0552793 | Not Required, Fuel Priming Pump  |  |
| 0552712 | Not Required, Shutoff Valve, Fuel Line   |  |
| 0699437 | Cooler, Chassis Fuel, Not Req'd.   |  |
| 0690880 | No Selection Required From This Category                                       |  |
| 0801890 | Trans, Allison 6th Gen, 4500 EVS P, w/Prognostics, Imp/Vel/Qtm/DCF/Enf         | <p><b>TRANSMISSION</b></p> <p>An Allison 6th generation, Model EVS 4500P, electronic, torque converting, automatic transmission will be provided.</p> <p>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.</p> <p>Two (2) PTO openings will be located on left side and top of converter housing (positions 8 o'clock and 1 o'clock).</p> <p>A transmission temperature gauge with amber light and buzzer will be installed on the cab instrument panel.</p>  |
| 0512762 | Transmission, Shifter, 6-Spd, Push Button, 4500, Imp/Vel/Qtm/DCF/Enf           | <p><b>TRANSMISSION SHIFTER</b></p> <p>A six (6)-speed push button shift module will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation.</p> <p>The transmission ratio will be: 1st - 4.70 to 1.00, 2nd - 2.21 to 1.00, 3rd - 1.53 to 1.00, 4th - 1.00 to 1.00, 5th - 0.76 to 1.00, 6th - 0.67 to 1.00, R - 5.55 to 1.00.</p>   |

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| 0517604 | Transmission Programming, Park to Neutral, PUC                                  | <b>TRANSMISSION PROGRAMMING</b><br>The transmission will be programmed to automatically shift the transmission to neutral when the parking brake is set to simplify operation and increase operational safety.   |
| 0684459 | Transmission Oil Cooler, Modine, External                                       | <b>TRANSMISSION COOLER</b><br>A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.  |
| 0001375 | Driveline, Spicer 1810  | <b>DRIVELINE</b><br>Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1810 universal joints. The shafts will be dynamically balanced before installation.<br>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.   |
| 0734211 | Steering, Sheppard M110 w/Tilt, TAK-4, Paccar Pump, w/Cooler, Paccar            | <b>STEERING</b><br>Dual Sheppard, Model M110, steering gears, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and Paccar hydraulic pump with integral pressure and flow control. All power steering lines will have wire braded lines with crimped fittings.<br>A tilt and telescopic steering column will be provided to improve fit for a broader range of driver configurations.   |
| 0605356 | Steering Wheel, 4 Spoke without Controls, Saber FR/Enforcer                     | <b>STEERING WHEEL</b><br>The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design.   |
| 0690274 | Logo/Emblem, on Dash  | <b>LOGO AND CUSTOMER DESIGNATION ON DASH</b><br>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.<br>The first row of text will be: Westlake<br>The second row of text will be: Fire-EMS<br>The third row of text will be: Department   |
| 0606441 | Bumper, 19" Extended, Steel Painted, Saber FR/Enforcer                          | <b>BUMPER</b><br>A one (1)-piece bumper manufactured from 0.25" formed steel with a 0.38" bend radius will be provided. The bumper will be a minimum of 10.00" high with a 1.50" top and bottom flange, and will extend 19.00" from the face of the cab. The bumper will be 95.28" wide with 45 degree corners and side plates. The bumper will be metal finished and painted job color.<br>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.<br><b>Gravel Pan</b><br>A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and the cab face. The pan will be properly supported from the underside to prevent flexing and vibration. |
| 0637813 | Tray, Hose, Center, 19" Bumper, Outside Air Horns, 15" Deep, 13" Below/2" Above | <b>CENTER HOSE TRAY</b><br>A hose tray, constructed of aluminum, will be placed in the center of the bumper extension. The tray will have a capacity of 150' of 1.75" double jacket cotton-polyester hose.<br>Black rubber grating will be provided at the bottom of the tray. Drain holes are also provided.  |
| 0630813 | Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray                     | <b>Center Hose Tray Cover</b><br>A bright aluminum treadplate cover will be provided over the center hose tray. The cover will be attached with a stainless steel hinge.<br>One (1) D-ring latch will secure the cover in the closed position and a pneumatic stay arm will hold the cover in the open position.   |
| 0778092 | Lift & Tow Package, Enforcer  | <b>LIFT AND TOW MOUNTS</b><br>Mounted to the frame extension will be lift and tow mounts. The lift and tow mounts will be designed and positioned to adapt to certain tow truck lift systems.<br>The lift and tow mounts with eyes will be painted the same color as the frame.  |

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| 0032932 | Tow Eyes, Painted, Extended Out Front of Bumper                           | <p><b>TOW EYES</b></p> <p>Two (2) tow eyes will be mounted through the front face of the bumper. The inner and outer edges of the tow eyes will have a .25" radius. The tow eyes will be mounted directly to the bumper frame. Cutouts will be provided in the front face of the stainless steel bumper to allow the tow eyes to extend out the front. The tow eyes will be designed and positioned to allow up to a 9,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow eyes will not be used for lifting of the apparatus. The tow eyes will be painted job color.</p>  |
| 0698960 | Coating, Top Flange, Front Bumper, Outside Exterior, UL-LX Coating, Black | <p><b>FRONT BUMPER UL-LX COATING</b></p> <p>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.</p>  |
| 0625646 | Cab, Enforcer, 7010, PUC  | <p><b>CAB</b></p> <p>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 0.25" thick cross-floor support providing a total thickness of 0.375" 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 forward cab section will have an overall height (from the cab roof to the ground) of approximately 99.00". The crew cab section will have a 10.00" raised roof, with an overall cab height of approximately 109.00". 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 63.50" in the forward facing outboard positions and 54.50" in the forward facing center position. 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 51.50" to the rear wall. 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.</p> <p><b>CAB ROOF DRIP RAIL</b></p> <p>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.</p> <p><b>CAB PUMP ENCLOSURE</b></p> <p>The rear of the cab will be made to house the fire pump below the forward facing crew cab seats. The cab side panels will be notched to accommodate the pump panel.</p> <p><b>FENDER LINERS</b></p> <p>Full circular inner fender liners in the wheel wells will be provided.</p> <p><b>PANORAMIC WINDSHIELD</b></p> <p>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.</p> <p><b>WINDSHIELD WIPERS</b></p> <p>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.</p> |

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| 0826074 | Engine Tunnel, X12, MX13, Foil Insulation w/Mech Fasteners, Extreme Climate, Enf       | <b>ENGINE TUNNEL</b><br>Engine tunnel 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.<br>The engine tunnel will be insulated for protection from heat and sound. Perforated foil faced insulation will be over a closed cell foam affixed with pressure sensitive adhesive and further secured with mechanical fasteners. The noise insulation keeps the dBA level within the limits stated in the current edition of applicable NFPA standards.<br>The engine tunnel will be no higher than 17.00" off the crew cab floor (no exception).   |
| 0810166 | Cab Insulation, Extreme Climate, Foil Insulation, Enforcer/Saber FR                    | <b>INSULATION PACKAGE</b><br>All insulation utilized in the cab construction will be provided for extreme climate temperatures. The insulation will be provided in the following areas:<br>Engine tunnel<br>Cab and crew cab floors<br>Cab and crew cab step wells<br>Cab and crew cab doors<br>Cab roof<br>Cab and crew cab walls   |
| 0610508 | Rear Wall, Interior, Adjustable Seating, Not Available                                 |  |
| 0632103 | Rear Wall, Exterior, Cab, Saber FR/Enforcer  | <b>CAB REAR WALL EXTERIOR COVERING</b><br>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.   |
| 0644201 | Cab Lift, Elec/Hyd, Saber FR/Enforcer  | <b>CAB LIFT</b><br>A hydraulic cab lift system will be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves.<br>Lift controls will be located on the right side pump panel or front area of the body in a convenient location.<br>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.<br>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.<br>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.<br><b>Cab Lift Interlock</b><br>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. |
| 0751129 | Grille, Painted, Bright Finished Mesh Screen, Front of Cab, Enforcer                   | <b>GRILLE</b><br>A bright finished aluminum mesh grille screen, inserted behind a grille surround, will be provided on the front center of the cab. The grille surround will be painted black #101.  |
| 0647932 | Not Required, Trim, S/S Band, Across Cab Face, AXT/Saber/Enforcer                      |  |
| 0015440 | No Chrome Molding, On side of cab  |  |
| 0829403 | SP Mirrors, Retractable, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex, Painted Blk #101 | <b>MIRRORS</b><br>A Retractable, Model 613422, dual vision, motorized, west coast style mirror will be mounted on each side of the front cab door with spring loaded retractable arms. The mirror arm and head will be painted black #101. The flat glass and convex glass will be heated and adjustable with remote control within reach of the driver.   |

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| 0648172 | Door, Full Height, Saber FR/Enforcer 4-Door Cab, Raised Roof                    | <p><b>DOORS</b></p> <p>To enhance entry and egress to the cab, the forward cab doors will be a minimum of 37.50" wide x 75.50" 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 85.50" high.</p> <p>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 black/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.</p> <p>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 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.</p> <p>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.</p> <p>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.</p> <p>A chrome grab 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.</p> <p>The cab steps at each cab door location will be located inside the cab doors to protect the steps from weather elements.</p> |
| 0655543 | Door Panel, Brushed Stainless Steel, Saber/Enforcer 4-Door Cab                  | <p><b>Door Panels</b></p> <p>The inner cab door panels will be constructed out of brushed stainless steel.</p>  |
| 0617333 | Controls, Electric Roll-Up Windows, 4dr, 2 Frt Elect, 2 Driver Control, SFR/Enf | <p><b>ELECTRIC OPERATED CAB DOOR WINDOWS</b></p> <p>The two (2) front cab doors will be equipped with electric operated windows with one (1) flush mounted automotive style switch on each of the front doors. The driver's door will have two (2) switches, one (1) to control each for the driver and officer door windows. The crew cab door windows will be controlled manually.</p> <p>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.</p>  |
| 0749512 | SP Steps, 4-Door Cab, Painted Black Step Wells, Saber FR/Enforcer               | <p><b>CAB STEPS</b></p> <p>The forward cab and crew cab access steps will be a full size two (2) step design to provide largest possible stepping surfaces for safe ingress and egress. The bottom steps will be designed with a grip pattern punched into bright aluminum treadplate material to provide support, slip resistance, and drainage. The bottom 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 10.00" minimum depth. The inside cab steps will not exceed 16.50" in height.</p> <p>The vertical surfaces of the step well will be painted # 101 black.</p>  |
| 0770198 | Handrail, Exterior, Hansen, Knurled, Alum, LED Backlit, Black, 4-Dr Cab         | <p><b>CAB EXTERIOR HANDRAILS</b></p> <p>A Hansen knurled aluminum, black anodized handrail will be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress. The handrails will be e-coated and have black powder coated stanchions. Each handrail will be provided with red LED lights. The lights will be activated when the parking brake is applied and with a separate switch on the left side in the cab. The LED lights may be load managed.</p>  |
| 0892638 | Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts                          | <p><b>STEP LIGHTS</b></p> <p>There will be six (6) white LED step lights with black housing installed for cab and crew cab access steps.</p> <p>One (1) light for the left side cab access steps.</p> <p>Two (2) lights for the left side crew cab access steps.</p> <p>Two (2) lights for the right side crew cab access steps.</p> <p>One (1) light for the right side cab access step.</p> <p>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.</p>  |
| 0057836 | Crowns, Front Fender, Rubber, TAK-4   | <p><b>FENDER CROWNS</b></p> <p>Rubber fender crowns will be provided around the cab wheel openings. Crowns will be black.</p>   |

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| 0771672 | Handrail, 10", Below Cab Windshield, Hansen Knurled, LED Backlit, Black, Pair | <b>LIGHTED HANDRAIL BELOW CAB WINDSHIELD</b><br>A 10.00" long Hansen LED backlit knurled black anodized aluminum handrail will be mounted below the front cab windshield, one (1) on each side. The handrails will have e-coated and black powder coated stanchions.<br>Each handrail will be provided with red back lighted LED lights.<br>The lights will be activated by the same means as the body handrail light controls.   |
| 0042105 | No Windows, Side of Crew Cab  |   |
| 0012090 | Not Required, Windows, Front/Side of raised roof                              |   |
| 0779033 | Not Required, Windows Rear of Crew Cab, Saber FR/Enforcer                     |   |
| 0722796 | Dash, Poly, Saber FR/Enforcer   | <b>CAB DASH</b><br>The driver side dash, switch panel located to the right of the driver, and center console will be an easily removable high impact resistant polymer cover.<br>The instrument gauge cluster will be surrounded with a high impact ABS plastic contoured to the same shape of the instrument gauge cluster.<br>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.   |
| 0773925 | SP Partition Below Shelf, Equipment Mounting, Crew Cab                        | <b>PARTITION SUPPORT FOR SHELF</b><br>There will be a partition for permanent mounting and support of the full width shelf. A quantity of one (1) will be located Mounted on forward side of the 2 shelves between the rear facing EMS cabinets. Similar to 36426.<br>Each partition will be fabricated from aluminum and will be painted to match the cab interior.  |
| 0817141 | Hook, Coat, Heavy Duty, Non-NFPA 2024   | <b>COAT HOOK(S), HEAVY DUTY</b><br>There will be two (2) coat hooks supplied and installed Above PAC TRAC on back wall of cab. These hooks will be for coat storage only and will include a warning label mounted in the crew cab.<br>NFPA 1900, 2024 edition, section 11.1.11.2 requires all equipment not required to be used during an emergency response, with the exception of SCBA units, will not be mounted in a driving or crew area unless it is contained in a fully enclosed and latched compartment capable of containing the contents when a 9G force is applied in the longitudinal axis of the vehicle or a 3G force is applied in any other direction, or the equipment is mounted in a bracket(s) that can contain the equipment when the equipment is subjected to those same forces.<br>Coat hooks can not contain the equipment when it is subjected to 9G or 3G force. Per fire department specification and request for this coat hook, this apparatus will be non-compliant to NFPA 1900 standards effective at time of contract execution. |
| 0607217 | Mounting Provisions, 3/16" Alum, Full Engine Tunnel, Saber FR/Enforcer        | <b>MOUNTING PLATE ON ENGINE TUNNEL</b><br>Equipment installation provisions will be installed on the engine tunnel.<br>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.<br>The mounting surface will be painted to match the cab interior.  |
| 0664351 | Pac Trac, Installed in Cab/Crew Cab   | <b>MOUNTING SYSTEM</b><br>There will be two (2) section(s) of Pac Trac equipment mounting systems located (1) each side of forward facing seats on back wall .<br>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.  |
| 0606282 | Shelf, Equipment Mounting, Aluminum, Lip, Size                                | <b>EQUIPMENT MOUNTING SHELF</b><br>There will be two (2) shelves for permanent mounting of equipment provided.<br>Each shelf will have a 2.00" lip around the edge. The size of the shelves will be to fit between the EMS compartments one as low as possible on engine tunnel and the other 12" above it. Similar to job #36426.<br>Each shelf will be fabricated from aluminum and will be painted to match the cab interior.<br>The shelves will be located Between rear facing EMS cabinets. Similar to 36426..<br>Not intended for storage of loose equipment. Items stored on tray will be permanently attached to meet current edition of applicable NFPA standards.  |
| 0826219 | Mounting Provisions, Computer, Tray, S/S, Straps, Slides, No Sides, Locking   | <b>COMPUTER MOUNTING</b><br>There will be one (1) computer installation provision(s) installed Officer side dash.<br>The tray will be constructed of stainless steel. The tray will be supplied with two (2) straps over the top connected to footman loops. These straps will secure the computer in place during travel.<br>The slides will be mounted vertically and lock in the in and out positions.   |

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| 0750824 | Cab Interior, Vinyl Headliner, Saber<br>FR/Enforcer, CARE         | <p><b>CAB INTERIOR</b></p> <p>The cab interior will be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service.</p> <p>The engine tunnel will be padded and covered, on the top and sides, with black 36 ounce leather grain vinyl resistant to oil, grease, and mildew.</p> <p>For durability and ease of maintenance, the cab interior side walls will be painted aluminum. The rear wall will be painted aluminum.</p> <p>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.</p> <p>The forward portion of the cab headliner will permit easy access for service of electrical wiring or other maintenance needs.</p> <p>All wiring will be placed in metal raceways.</p> <p><b>CAB INTERIOR UPHOLSTERY</b></p> <p>The cab interior upholstery will be 36 oz black vinyl.</p> |
| 0753903 | Cab Interior, Paint Color, Saber<br>FR/Enforcer                   | <p><b>CAB INTERIOR PAINT</b></p> <p>The cab interior metal surfaces, excluding the rear heater panels, will be painted red, vinyl texture paint.</p> <p>The rear heater panels will be painted black, vinyl textured paint.</p>  |
| 0888673 | Floor, Rubber Padded, Cab & Crew<br>Cab, Blister, Enforcer PUC-NG | <p><b>CAB FLOOR</b></p> <p>A small blister will be provided at the rear of the engine tunnel for chassis components.</p> <p>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.</p> <p>The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.</p>   |



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| 0819166 | HVAC, Extreme-Duty, Enforcer, Paccar, CARE                                      | <p><b>DEFROST/AIR CONDITIONING SYSTEM</b></p> <p>A ceiling mounted combination heater, defroster and air conditioning system will be installed in the cab above the engine tunnel area.</p> <p><b>Cab Defroster</b></p> <p>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:</p> <p>One (1) adjustable will be directed towards the left side cab window</p> <p>One (1) adjustable will be directed towards the right side cab window</p> <p>Six (6) fixed outlets will be directed at the windshield</p> <p>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.</p> <p><b>Cab/Crew Auxiliary Heater</b></p> <p>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.</p> <p><b>Air Conditioning</b></p> <p>A 13.10 cubic inch compressor will be installed on the engine.</p> <p>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.</p> <p>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.</p> <p>The evaporator unit will have a 80,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications.</p> <p>Adjustable air outlets will be strategically located on the forward plenum cover per the following:</p> <p>Four (4) will be directed towards the seating position on the left side of the cab</p> <p>Four (4) will be directed towards the seating position on the right side of the cab</p> <p>Adjustable air outlets will be strategically located on the rear plenum cover per the following:</p> <p>12 will be directed towards crew cab area</p> <p>A high efficiency particulate air (HEPA) filter will be included for the system. Access to the filter cover will be hinged with two (2) thumb latches.</p> <p>The air conditioner refrigerant will be R-134A and will be installed by a certified technician.</p> <p><b>Climate Control</b></p> <p>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.</p> <p>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.</p> <p>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.</p> <p>The system controller will be located within panel position #13.</p> <p><b>Gravity Drain Tubes</b></p> <p>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.</p> |
| 0677382 | Guard, Brush, Painted, For Coleman A/C Unit, Cab Roof                           | <p><b>BRUSH GUARD</b></p> <p>A protective enclosure will be provided around the roof mounted air conditioning unit. The enclosure will provide protection from tree limbs and debris.</p> <p>The enclosure will be made of aluminum and painted to match the cab exterior.</p>   |
| 0787034 | Air Conditioning, Coleman-Mach 8, Roughneck, 120V, 15K, 6K Heat, Cab Roof,Black | <p><b>HEATING AND AIR CONDITIONING</b></p> <p>There will be one (1) black, Coleman®-Mach® 8, Roughneck™, 120 volt, low profile air conditioning unit installed on the crew cab roof. The air conditioner will have cooling capacity of 15,000 BTU and heating capacity of 6000 BTU and include a condensate pump and hose to prevent accumulation of condensate on the roof.</p> <p>Ceiling unit controls will control the air conditioning unit.</p> <p>The thermostat will be wired battery direct to operate when the battery switch is off.</p> <p>This unit will be powered from the shoreline inlet.</p> <p><b>INTERIOR CAB INSULATION</b></p> <p>The walls and roof will be insulated to aid in cooling.</p>  |
| 0639675 | Sun Visor, Smoked Lexan, AXT, Imp/Vel, SFR/Enf                                  | <p><b>SUN VISORS</b></p> <p>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.</p> <p>There will be a black plastic thumb latch provided to help secure each sun visor in the stowed position.</p>   |
| 0634328 | Grab Handles, Driver and Officer Door Posts, Saber FR/Enforcer                  | <p><b>GRAB HANDLES</b></p> <p>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.</p>   |

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| 0668638 | Lights, Engine Compt, Custom, Auto & Manual Switch, WIn 3SC0CDCR, 3" LED,Trim | <p><b>ENGINE COMPARTMENT LIGHTS</b></p> <p>There will be one (1) 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.</p> <p>The light(s) will be activated with a switch located by the engine fluid level access door and automatically when the cab is raised.</p>   |
| 0631830 | Fluid Check Access, Saber FR/Enforcer, Arrow XT                               | <p><b>ACCESS TO ENGINE DIPSTICKS</b></p> <p>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.</p> <p>The engine oil dipstick will allow for checking only. The transmission dipstick will allow for both checking and filling.</p> <p>The door will have a rubber seal for thermal and acoustic insulation. One (1) Southco C2 black powder coated flush latch will be provided on the access door.</p>  |
| 0583042 | Side Roll and Frontal Impact Protection                                       | <p><b>CAB SAFETY SYSTEM</b></p> <p>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:</p> <p>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.</p> <p>A slave SRS sensor will be installed in the cab to provide capacity for eight (8) crew cab seating positions.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Air curtains will be provided in the outboard bolster of outboard seat backs to provide a cushion between occupant and the cab wall.</p> <p>Suspension seats will be provided with devices to retract them to the lowest travel position during a side roll or frontal impact event.</p> <p>Seat belts will be provided with pre-tensioners to remove slack from the seat belt during a side roll or frontal impact event.</p> <p><b>Frontal Impact Protection</b></p> <p>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.</p> <p>The SRS system will deploy the following components in the event of a frontal or oblique impact event:</p> <p>Driver side front air bag</p> <p>Passenger side knee bolster air bag</p> <p>Air curtains mounted in the outboard bolster of outboard seat backs</p> <p>Suspension seats will be retracted to the lowest travel position</p> <p>Seat belts will be pre-tensioned to firmly hold the occupant in place</p> <p><b>Side Roll Protection</b></p> <p>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.</p> <p>The SRS system will deploy the following components in the event of a side roll:</p> <p>Air curtains mounted in the outboard bolster of outboard seat backs</p> <p>Suspension seats will be retracted to the lowest travel position</p> <p>Seat belts will be pre-tensioned to firmly hold the occupant in place</p> |
| 0622619 | Seating Capacity, 4 Belted Seats  | <p><b>SEATING CAPACITY</b></p> <p>The seating capacity of the vehicle (including tiller cab and belted seat positions in the rescue body) will be four (4).</p>  |

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| 0636955 | Seat, Driver, Pierce PSV, Air Ride, High Back, Safety, PRIMARY, SFR/Enf | <p><b>DRIVER SEAT</b></p> <p>A seat will be provided in the cab for the driver. The seat design will be a cam action type, with air suspension. For increased convenience, the seat will include a manual control to adjust the horizontal position (6.00" travel). The manual horizontal control will be a towel-bar style located below the forward part of the seat cushion. To provide flexibility for multiple driver configurations, the seat will have an adjustable reclining back. The seat back will be a high back style with side bolster pads for maximum support. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control).</p> <p>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.</p> <p>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.</p> <p>The seat will be furnished with a 3-point, shoulder type seat belt.</p>   |
| 0632926 | Seat, Officer, Pierce PSV, Air Ride, SCBA, Safety, PRIMARY, SFR/Enf     | <p><b>OFFICER SEAT</b></p> <p>A seat will be provided in the cab for the passenger. The seat will be a cam action type, with air suspension. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control).</p> <p>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.</p> <p>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.</p> <p>A suspension seat safety system will be included. When activated, this system will pretension the seat belt and then retract the seat to its lowest travel position.</p> <p>The seat will be furnished with a 3-point, shoulder type seat belt.</p>   |
| 0002517 | Not Required, Radio Compartment   |  |
| 0822580 | Cabinet, Rear Facing, LS, 23 W x 39 H x 26.75 D, Web, Ext Acc, SFR/Enf  | <p><b>REAR FACING LEFT SIDE CABINET</b></p> <p>A rear facing cabinet will be provided in the crew cab at the left side outboard position.</p> <p>The cabinet will be 23.00" wide x 39.00" high x 26.75" deep. The interior door will be web netting. The netting is to be made with 1.00" wide nylon material with 2.00" openings permanently fastened on the bottom with 1.00" side release fasteners on the top to secure it. The clear door opening will be 16.00" wide x 36.00" high.</p> <p>The cabinet will also provide access from outside the cab with one (1) double pan door painted to match the cab exterior with a non-locking D-ring latch. A pneumatic stay arm will be provided as a door stop. The door will be located on the side of the cab over the wheelwell. The clear door opening will be 17.00" wide x 34.00" high.</p> <p>The cabinet will include one (1) infinitely adjustable shelf with a 0.75" up-turned lippainted to match the cab interior.</p> <p>The cabinet will include no louvers.</p> <p>The exterior access will be provided with a brushed stainless steel scuffplate on the lower door frame.</p> <p>The cabinet will be constructed of smooth aluminum and painted to match the cab interior.</p> <p><b>Cabinet Light</b></p> <p>There will be one (1) white Amdor LED strip light installed on the right side of the interior cabinet door opening. The lights will be controlled by an automatic door switch and a rocker switch on the front of the cabinet.</p>                      |
| 0102783 | Not Required, Seat, Rr Facing C/C, Center                               |  |
| 0822239 | Cabinet, Rear Facing, RS, 22 W x 39 H x 26.75 D, Web, Ext Acc, SFR/Enf  | <p><b>REAR FACING RIGHT SIDE CABINET</b></p> <p>A rear facing cabinet will be provided in the crew cab at the right side outboard position.</p> <p>The cabinet will be 22.00" wide x 39.00" high x 26.75" deep. The interior door will be web netting. The netting is to be made with 1.00" wide nylon material with 2.00" openings permanently fastened on the bottom with 1.00" side release fasteners on the top to secure it. The interior clear door opening will be 15.00" wide x 36.00" high.</p> <p>The cabinet will include one (1) infinitely adjustable shelf with a 0.75" up-turned lippainted to match the cab interior.</p> <p>The cabinet will include no louvers.</p> <p>The cabinet will also provide access from outside the cab with one (1) double pan door painted to match the cab exterior with a non-locking D-ring latch. The door will be located on the side of the cab over the wheelwell. A pneumatic stay arm will be provided as a door stop. The exterior clear door opening will be 17.00" wide x 34.00" high.</p> <p>The exterior access will be provided with a brushed stainless steel scuffplate on the lower door frame.</p> <p>The cabinet will be constructed of smooth aluminum and painted to match the cab interior.</p> <p><b>Cabinet Light</b></p> <p>There will be one (1) white Amdor LED strip light installed on the left side of the interior cabinet door opening. The lighting will be controlled by an automatic door switch and a rocker switch on the front of the cabinet.</p> |
| 0108189 | Not Required, Seat, Forward Facing C/C, LS Outboard                     |  |

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| 0819392 | Seat, Fwd Fcng C/C, Ctr, (2) Pierce PSV, SCBA, Safety, 5.5" Sp, PRIMARY, SFR/Enf | <b>FORWARD FACING CENTER SEATS</b><br>There will be two (2) forward facing seats provided at the center position in the crew cab. The seats will be spaced an additional 5.50" apart to provide more room for each occupant. For optimal comfort, the seats will be provided with 15.00" deep foam cushions designed with EVC (elastomeric vibration control).<br>The seat backs will be an SCBA style with 90 degree back. 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.<br>The seat will include the following features incorporated into the side roll protection system:<br>A seat safety system will be included. When activated, this system will pretension the seat belt.<br>The seats will be furnished with a 3-point, shoulder type seat belt. |
| 0108190 | Not Required, Seat, Forward Facing C/C, RS Outboard                              |   |
| 0042923 | Netting, Cargo, Ship Loose   | <b>CARGO NETTING</b><br>Net is to be made with 1.00" wide nylon material with 2.00" openings.<br>Net is to be fastened on all sides of a specified opening with quick-release buckles. The nets will be designed for between the 2 shelves between EMS compartments rear facing.<br>There will be one (1) nets provided.  |
| 0629833 | Compt, Storage, (2) Rear Facing, Overhead, 21 W x 10 H x 20 D, Saber FR/Enforcer | <b>REAR FACING OVERHEAD STORAGE COMPARTMENT</b><br>There will be two (2) overhead rear facing storage compartments installed at the raised roof within the crew cab, on each side of the air conditioner. The compartments will be approximately 21.00" wide x 10.00" high x 20.00" deep at the bottom.<br>Each compartment will include one (1) lift up compartment door. Locking latch, paddle handle, and gas operated stay arms will be provided.<br>The compartment will be constructed of smooth aluminum and painted to match the cab interior.<br><b>Compartment Light</b><br>The storage compartment lighting will consist of one (1) white LED strip light installed horizontally above each compartment door opening.  |
| 0761572 | SP Compt, Storage, Forward Facing, Overhead, 88 W x 10 H x 9 D, Saber FR/Enf     | <b>FORWARD FACING OVERHEAD STORAGE COMPARTMENT</b><br>There will be an overhead forward facing storage compartment installed at the raised roof within the crew cab. The compartment will be 88.00" wide x 10.00" high x 9.00" deep.<br>The compartment will include three (3) lift up compartment doors. Non-locking latch and gas operated stay arms will be provided. The compartment will be provided with a divider between each door opening.<br>The compartment will be constructed of smooth aluminum and painted to match the cab interior.<br><b>Compartment Light</b><br>There will be one (1) white LED strip light installed horizontally above each compartment door opening.   |
| 0766467 | Upholstery, Seats In Cab, All Vinyl, Seats Inc, CARE                             | <b>SEAT UPHOLSTERY</b><br>All seat upholstery will be leather grain 36 oz black vinyl resistant to oil, grease and mildew. The cab will have four (4) seating positions.  |
| 0543991 | Bracket, Air Bottle, Hands-Free II, Cab Seats                                    | <b>AIR BOTTLE HOLDERS</b><br>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.<br>There will be a quantity of three (3) SCBA brackets.  |
| 0690610 | Embroidery, Seats, Cab and Crew Cab  | <b>SEAT EMBROIDERY</b><br>The seats in the cab and crew cab will be provided with custom embroidery. The Fire Department will determine what the embroidery will be by providing pictures at the time of order.<br>The custom logo will be provided in place of the standard OEM logo.<br>The embroidery will be provided on four (4) seats.  |

|         |  |   |
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| 0603866 | Seat Belt, Dual Retractor, ReadyReach, Saber FR/Enforcer   | <p><b>SEAT BELTS</b></p> <p>All cab and tiller cab (if applicable) seating positions will have red 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.</p> <p>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.</p> <p>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.</p> <p>Any flip up seats will include a 3-point shoulder type belts only.</p> <p>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.</p>   |
| 0817557 | Helmet Storage, Provided by Fire Department, NFPA/ULC 2024 | <p><b>HELMET STORAGE PROVIDED BY FIRE DEPARTMENT</b></p> <p>NFPA 1900, 2024 edition, section 11.1.8.4.1 and CAN/ULC S515:2024 edition, section 5.2, requires a location for helmet storage be provided.</p> <p>There is no helmet storage on the apparatus as manufactured. The fire department will provide a location for storage of helmets.</p>   |
| 0647647 | Lights, Dome, FRP Dual LED 4 Lts                           | <p><b>CAB DOME LIGHTS</b></p> <p>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.</p> <p>The color of the LED's will be red and white.</p> <p>The white LED's will be controlled by the door switches and the lens switch.</p> <p>The color LED's will be controlled by the lens switch.</p> <p>In order to ensure exceptional illumination, each white LED dome light will provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat.</p>  |
| 0896451 | Enhanced Software for Cab and Crew Cab Dome Lts            | <p><b>ENHANCED SOFTWARE FOR CAB AND CREW CAB DOME LIGHTS</b></p> <p>The cab and crew cab dome lights will remain on for 10 seconds for improved visibility after the doors are closed.</p> <p>The dome lights will dim after 10 seconds or immediately if the vehicle's transmission is put into gear.</p>  |
| 0816997 | Portable Hand Light, Provided by Fire Dept, NFPA/ULC 2024  | <p><b>PORTABLE HAND LIGHTS PROVIDED BY FIRE DEPARTMENT</b></p> <p>The hand lights are not on the apparatus as manufactured. The fire department will provide and mount these hand lights.</p>   |
| 0622803 | Cab Instruments, Black Gauges, Black Bezels, Enforcer MUX  | <p><b>CAB INSTRUMENTATION</b></p> <p>The cab instrument panel include gauges, an LCD display, 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.</p> <p><b>Gauges</b></p> <p>The gauge panel will include the following ten (10) black faced gauges with black bezels to monitor vehicle performance:</p> <p>Voltmeter gauge (volts):</p> <p>Low volts (11.8 VDC)</p> <p>Amber caution indicator on the information center with intermittent alarm</p> <p>Amber caution light on gauge assembly</p> <p>High volts (15.5 VDC)</p> <p>Amber caution indicator on the information center with intermittent alarm</p> <p>Amber caution light on gauge assembly</p> <p>Very low volts (11.3 VDC)</p> <p>Red warning indicator on the information center with a steady alarm</p> <p>Amber caution light on gauge assembly</p> <p>Very high volts (16.0 VDC)</p> <p>Red warning indicator on the information center with a steady alarm</p> <p>Amber caution light on gauge assembly</p> <p>Engine Tachometer (RPM)</p> <p>Speedometer MPH (Major Scale), KM/H (Minor Scale)</p> <p>Fuel level gauge (Empty - Full in fractions):</p> <p>Low fuel (1/8 full)</p> <p>Amber caution indicator on the information center with intermittent alarm</p> <p>Amber caution light on gauge assembly</p> <p>Very low fuel (1/32 full)</p> <p>Red caution indicator on the information center with steady alarm</p> <p>Amber caution light on gauge assembly</p> <p>Engine Oil pressure Gauge (PSI):</p> <p>Low oil pressure to activate engine warning lights and alarms</p> <p>Red caution indicator on the information center with steady alarm</p> <p>Amber caution light on gauge assembly</p> <p>Front Air Pressure Gauges (PSI):</p> |

Low air pressure to activate warning lights and alarm  
Red warning indicator on the information center with a steady alarm  
Amber caution light on gauge assembly  
Rear Air Pressure Gauges (PSI):  
Low air pressure to activate warning lights and alarm  
Red warning indicator on the information center with a steady alarm  
Amber caution light on gauge assembly  
Transmission Oil Temperature Gauge (Fahrenheit):  
High transmission oil temperature activates warning lights and alarm  
Amber caution indicator on the information center with intermittent alarm  
Amber caution light on gauge assembly  
Engine Coolant Temperature Gauge (Fahrenheit):  
High engine temperature activates an engine warning light and alarms  
Amber caution indicator on the information center with intermittent alarm  
Amber caution light on gauge assembly  
Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions):  
Low fluid (1/8 full)  
Amber indicator light in gauge dial  
All gauges will perform prove out at initial power-up to ensure proper performance.

#### **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)  
Aux brake overheat (Auxiliary brake overheat)  
Air rest (air restriction)  
Caution (triangle symbol)  
Water in fuel  
DPF (engine diesel particulate filter regeneration)  
Trailer ABS (where applicable)  
Wait to start (where applicable)  
HET (engine high exhaust temperature) (where applicable)  
ABS (antilock brake system)  
MIL (engine emissions system malfunction indicator lamp) (where applicable)  
Side roll fault (where applicable)  
Front air bag fault (where applicable)

The following red telltale lamps will be present:

Warning (stop sign symbol)

Seat belt

Parking brake

Stop engine

Rack down

The following green telltale lamps will be provided:

Left turn

Right turn

Battery on

The following blue telltale lamp will be provided:

High beam

#### **Alarms**

Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning message is present.

Audible pulsing tone caution alarm: A pulsing audible tone alarm (chime/chirp) will be provided whenever a caution message is present without a warning message being present.

Alarm silence: Any active audible alarm will be able to be silenced by holding the ignition switch at the top position for three (3) to five (5) seconds. For improved safety, silenced audible alarms will intermittently chirp every 30 seconds until the alarm condition no longer exists. The intermittent chirp will act as a reminder to the operator that a caution or warning condition still exists. Any new warning or caution condition will enable the steady or pulsing tones respectively.

#### **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 at initial power-up to ensure proper performance.

#### **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, defroster, and air conditioning control panel.

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

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

Parking brake control: An air actuated push/pull park brake control valve will be provided.

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

High idle engagement switch: A momentary 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 accessible while standing on the ground and 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 diagnostic port
- Transmission diagnostic port
- ABS diagnostic port
- Roll sensor diagnostic port
- Command Zone USB diagnostic port
- ABS diagnostic switch (blink codes flashed on ABS telltale indicator)
- Diesel particulate filter regeneration switch (where applicable)
- Diesel particulate filter regeneration inhibit switch (where applicable)

**Cab LCD Display**

A digital four (4)-row by 20-character dot matrix display will be integral to the gauge panel. The display will be capable of showing simple graphical images as well as text. The display will be split into three (3) sections. Each section will have a dedicated function. The upper left section will display the outside ambient temperature. The upper right section will display the following, along with other configuration specific information:

- Odometer
- Trip mileage
- PTO hours
- Fuel consumption
- Engine hours

The bottom section will display INFO, CAUTION, and WARNING messages. Text messages will automatically activate to describe the cause of an audible caution or warning alarm. The LCD will be capable of displaying multiple text messages should more than one caution or warning condition exist.

0509511      Air Restriction Indicator, Imp/Vel,  
AXT, Dash CF, Enf MUX

**AIR RESTRICTION INDICATOR**

A high air restriction warning indicator light LCD message with amber warning indicator and audible alarm will be provided.

0543751      Light, Do Not Move Apparatus

**"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.

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| 0509042 | Messages, Open Dr/DNMT, Color Dsply,   | <p><b>DO NOT MOVE TRUCK MESSAGES</b></p> <p>Messages will be displayed on the Command Zone™, color display located within sight of the driver whenever the Do Not Move Truck light is active. The messages will designate the item or items not in the stowed for vehicle travel position (parking brake disengaged).</p> <p>The following messages will be displayed (where applicable):</p> <p>Do Not Move Truck</p> <p>DS Cab Door Open (Driver Side Cab Door Open)</p> <p>PS Cab Door Open (Passenger's Side Cab Door Open)</p> <p>DS Crew Cab Door Open (Driver Side Crew Cab Door Open)</p> <p>PS Crew Cab Door Open (Passenger's Side Crew Cab Door Open)</p> <p>DS Body Door Open (Driver Side Body Door Open)</p> <p>PS Body Door Open (Passenger's Side Body Door Open)</p> <p>Rear Body Door Open</p> <p>DS Ladder Rack Down (Driver Side Ladder Rack Down)</p> <p>PS Ladder Rack Down (Passenger Side Ladder Rack Down)</p> <p>Deck Gun Not Stowed</p> <p>Lt Tower Not Stowed (Light Tower Not Stowed)</p> <p>Fold Tank Not Stowed (Fold-A-Tank Not Stowed)</p> <p>Aerial Not Stowed (Aerial Device Not Stowed)</p> <p>Stabilizer Not Stowed</p> <p>Steps Not Stowed</p> <p>Handrail Not Stowed</p> <p>Any other device that is opened, extended, or deployed that creates a hazard or is likely to cause major damage to the apparatus if the apparatus is moved will be displayed as a caution message after the parking brake is disengaged.</p> |
| 0622798 | Switching, Cab Instrument Lower Console & Overhead, Rocker MUX, Enforcer       | <p><b>SWITCH PANELS</b></p> <p>The built-in switch panels will be located in the lower console or overhead console of the cab. The switches will be rocker-type and include an integral indicator light. For quick, visual indication the switch will be illuminated whenever the switch is active. A 2-ply, scratch resistant laser engraved Gravoply label indicating the use of each switch will be placed below the switches. The label will allow light to pass through the letters for improved visibility in low light conditions. Switches and light source are integral to the switch panel assembly.</p>  |
| 0802940 | Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer                    | <p><b>WIPER CONTROL</b></p> <p>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.</p>  |
| 0820904 | Wiring, Spare, 15 A 12V DC 1st NFPA1900/ULC                                    | <p><b>SPARE CIRCUIT</b></p> <p>There will be two (2) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features:</p> <p>The positive wire will be connected directly to the ignition switched power.</p> <p>The negative wire will be connected to ground.</p> <p>Wires will be protected to 15 amps at 12 volts DC.</p> <p>Power and ground will terminate officer side dash area and in the center console.</p> <p>Termination will be with heat shrinkable butt splicing.</p> <p>Wires will be sized to 125 percent of the protection.</p> <p>The circuit(s) may be load managed when the parking brake is set.</p>  |
| 0821263 | Wiring, Spare, 20 A 12V DC, 12 Ckt FB, Blue Sea 5026 Batt Dir 1st NFPA1900/ULC | <p><b>SPARE CIRCUIT</b></p> <p>There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features:</p> <p>The positive wire will be connected directly to the battery power.</p> <p>The negative wire will be connected to ground.</p> <p>Wires will be protected to 20 amps at 12 volts DC.</p> <p>Power and ground will terminate Exterior forward wall of EMS cabinet behind officer, mounted as low as possible..</p> <p>Termination will be to a Blue Sea System, Model 5026, 12 circuit with negative bus bar, straight blade fuse block. The terminal block will include a cover with circuit labels.</p> <p>Wires will be sized to 125% of the protection.</p> <p>Battery direct loads cannot be Load Managed</p>   |
| 0821266 | Wiring, Spare, 20 A 12V DC, 12 Ckt FB, Blue Sea 5026 Batt Dir 2nd NFPA1900/ULC | <p><b>SPARE CIRCUIT</b></p> <p>There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features:</p> <p>The positive wire will be connected directly to the battery power.</p> <p>The negative wire will be connected to ground.</p> <p>Wires will be protected to 20 amps at 12 volts DC.</p> <p>Power and ground will terminate Mounted as low as possible between the forward facing seats..</p> <p>Termination will be to a Blue Sea System, Model 5026, 12 circuit with negative bus bar, straight blade fuse block. The terminal block will include a cover with circuit labels.</p> <p>Wires will be sized to 125% of the protection.</p> <p>Battery Direct loads cannot be Load Managed</p>   |



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| 0821298 | Wiring, Spare, 12V DC, USB-A, USB-C AlfredDireck Batt Dir 1st NFPA1900/ULC | <p><b>SPARE CIRCUIT</b></p> <p>There will be two (2) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features:<br/> The positive wire will be connected directly to the battery power.<br/> The negative wire will be connected to ground.<br/> Power and ground will terminate in the switch panel LOC #12.<br/> Termination will be a AlfredDireck QC4.0 PD &amp; QC3.0 with the 60W PD USB-C port and 36W Quick Charge 3.0 USB-A port.<br/> Wires will be sized to 125 percent of the protection.<br/> Battery direct loads cannot be Load Managed</p>  |
| 0821325 | Wiring, Spare, 10 A 12V DC 1st NFPA1900/ULC                                | <p><b>SPARE CIRCUIT</b></p> <p>There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features:<br/> The positive wire will be connected directly to the ignition switched power.<br/> The negative wire will be connected to ground.<br/> Wires will be protected to 10 amps at 12 volts DC.<br/> Power and ground will terminate LOC #4.<br/> Termination will be with heat shrinkable butt splicing.<br/> Wires will be sized to 125 percent of the protection.<br/> This circuit(s) may be load managed when the parking brake is applied.</p>  |
| 0814201 | Vehicle Information Center, 7" Color Display, Touchscreen, MUX, CL714      | <p><b>INFORMATION CENTER</b></p> <p>An information center employing a 7.00" diagonal touch screen color LCD display will be encased in an ABS plastic housing.<br/> The information center will have the following specifications:<br/> Operate in temperatures from -40 to 158 degrees Fahrenheit<br/> LCD optically bonded to hardened AR glass lens<br/> Five weather resistant user interface switches<br/> Grey with black accents<br/> Sunlight Readable<br/> Linux operating system<br/> Minimum of 1000nits rated display<br/> Display can be changed to an available foreign language<br/> A LCD display integral to the cab gauge panel will be included as outlined in the cab instrumentation area.<br/> Programmed to read US Customary</p> <p><b>General Screen Design</b></p> <p>Where possible, background colors will be used to provide "At a Glance" vehicle information. If information provided on a screen is within acceptable limits, a green background will be used. If a caution or warning situation arises the following will occur:<br/> An amber background/text color will indicate a caution condition<br/> A red background/text color will indicate a warning condition<br/> The information center will utilize an "Alert Center" to display text messages for audible alarm tones. The text messages will be written to identify the item(s) causing the audible alarm to sound. If more than one (1) text message occurs, the messages will cycle every second until the problem(s) have been resolved. The background color for the "Alert Center" will change to indicate the severity of the "warning" message. If a warning and a caution condition occur simultaneously, the red background color will be shown for all alert center messages.<br/> A label for each button will exist. The label will indicate the function for each active button for each screen. Buttons that are not utilized on specific screens will have a button label with no text or symbol.</p> <p><b>Home/Transit Screen</b></p> <p>This screen will display the following:<br/> Vehicle Mitigation (if equipped)<br/> Water Level (if the water level system includes compatible communications to the information center)<br/> Foam Level (if the foam level system includes compatible communications to the information center)<br/> Seat Belt Monitoring Screen<br/> Tire Pressure Monitoring (if equipped)<br/> Digital Speedometer<br/> Active Alarms</p> <p><b>On Scene Screen</b></p> <p>This screen will display the following and will be auto activated with pump engaged (if equipped):<br/> Battery Voltage<br/> Fuel<br/> Oil Pressure<br/> Coolant Temperature<br/> RPM<br/> Water Level (if equipped)<br/> Foam Level (if equipped)<br/> Foam Concentration (if equipped)<br/> Water Flow Rate (if equipped)<br/> Water Used (if equipped)<br/> Active Alarms</p> <p><b>Virtual Buttons</b></p> <p>There will be four (4) virtual switch panel screens that match the overhead and lower lighting and HVAC switch panels.</p> <p><b>Page Screen</b></p> <p>The page screen will display the following and allow the user to progress into other screens for further functionality:<br/> Diagnostics<br/> Faults</p> |

Listed by order of occurrence

Allows to sort by system

Interlock

Throttle Interlocks

Pump Interlocks (if equipped)

Aerial Interlocks (if equipped)

PTO Interlocks (if equipped)

Load Manager

A list of items to be load managed will be provided. The list will provide a description of the load. The lower the priority numbers the earlier the device will be shed should a low voltage condition occur.

The screen will indicate if a load has been shed (disabled) or not shed.

"At a glance" color features are utilized on this screen.

Systems

Command Zone

Module type and ID number

Module Version

Input or output number

Circuit number connected to that input or output

Status of the input or output

Power and Constant Current module diagnostic information

Foam (if equipped)

Pressure Controller (if equipped)

Generator Frequency (if equipped)

Live Data

General Truck Data

Maintenance

Engine oil and filter

Transmission oil and filter

Pump oil (if equipped)

Foam (if equipped)

Aerial (if equipped)

Setup

Clock Setup

Date & Time

12 or 24 hour format

Set time and date

Backlight

Daytime

Night time

Sensitivity

Unit Selection

Home Screen

Virtual Button Setup

On Scene Screen Setup

Configure Video Mode

Set Video Contrast

Set Video Color

Set Video Tint

Do Not Move

The screen will indicate the approximate location and type of item that is open or is not stowed for travel. The actual status of the following devices will be indicated

Driver Side Cab Door

Passenger's Side Cab Door

Driver Side Crew Cab Door

Passenger's Side Crew Cab Door

Driver Side Body Doors

Passenger's Side Body Doors

Rear Body Door(s)

Ladder Rack (if applicable)

Deck Gun (if applicable)

Light Tower (if applicable)

Hatch Door (if applicable)

Stabilizers (if applicable)

Steps (if applicable)

Notifications

View Active Alarms

Shows a list of all active alarms including date and time of the occurrence is shown with each alarm

Silence Alarms - All alarms are silenced

Timer Screen

HVAC (if equipped)

Tire Information (if equipped)

Ascendant Set Up Confirmation (if equipped)

Button functions and button labels may change with each screen.

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| 0816633 | Collision Mitigation, HAAS Alert (R2V), HA7                                    | <p><b>COLLISION MITIGATION</b></p> <p>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.</p> <p>The transponder will be connected to the vehicle's emergency master circuit and battery direct power and ground.</p> <p>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.</p> <p>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.</p> <p>The HA7 Responder-to-Vehicle (R2V) collision avoidance system will include the transponder and a 5 year cellular plan subscription.</p> <p>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.</p>  |
| 0820299 | Seat Belt Monitor w/CZ Display, NFPA1900/ULC                                   | <p><b>Seat Belt Monitoring System</b></p> <p>A seat belt monitoring system (SBMS) will be provided on the Command Zone™ color display. The SBMS will be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following:</p> <p>Seat Occupied &amp; Buckled = Green LED indicator illuminated</p> <p>Seat Occupied &amp; Unbuckled = Red LED indicator with audible alarm</p> <p>No Occupant &amp; Buckled = Red LED indicator with audible alarm</p> <p>No Occupant &amp; Unbuckled = No indicator and no alarm</p> <p>The seat belt monitoring screen will become active on the Command Zone color display when:</p> <p>The home screen is active:</p> <p>and there is any occupant seated but not buckled or any belt buckled with an occupant.</p> <p>and there are no other Do Not Move Apparatus conditions present. As soon as all Do Not Move Apparatus conditions are cleared, the SBMS will be activated.</p> <p>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.</p>  |
| 0696439 | Antenna Mount, Custom Chassis, Cable Routed to Instrument Panel Area           | <p><b>RADIO ANTENNA MOUNT</b></p> <p>There will be one (1) standard 1.125", 18 thread antenna-mounting base(s) installed on the right side on the cab roof with high efficiency, low loss, coaxial cable(s) routed to the instrument panel area. A weatherproof cap will be installed on the mount.</p>   |
| 0817058 | Camera, Pierce, LS Mux, R Camera, SD, CL714                                    | <p><b>VEHICLE CAMERA SYSTEM</b></p> <p>There will be a color vehicle camera system provided with the following:</p> <p>One (1) Standard Definition (SD) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse.</p> <p>The camera images will be displayed on the left side vehicle information center display. Audio from the microphone on the rear camera will be not provided.</p> <p>The following components will be included:</p> <p>One (1) SV-CW134639CAI Camera</p> <p>All necessary cables</p>  |
| 0814831 | Not Required, Camera Switcher  | <p><b>Camera Switcher</b></p> <p>A camera switcher is not required.</p>   |
| 0677933 | Camera System, CSS, Body to Waterproof Pump Panel 7" LCD Display               | <p><b>OBSERVATION CAMERA SYSTEM</b></p> <p>There will be a, Model SM07F, color video camera system provided. The IP69, heated, camera will be located on the apparatus body Right side of body above crosslays . Images will be viewed on a waterproof, IP69 rated, 7.00" LCD display monitor located at the pump operators panel.</p>  |
| 0523921 | Recess, Rear Vision Camera   | <p><b>RECESS REAR CAMERA</b></p> <p>A rear camera recess will be provided in the center at the rear.</p>  |
| 0890416 | Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT | <p><b>ELECTRICAL POWER CONTROL SYSTEM</b></p> <p>The primary power distribution will be located forward of the officer's seating position and be easily accessible while standing on the ground for simplified maintenance and troubleshooting. Additional electrical distribution centers will be provided throughout the vehicle to house the vehicle's electrical power, circuit protection, and control components. The electrical distribution centers will be located strategically throughout the vehicle to minimize wire length. For ease of maintenance, all electrical distribution centers will be easily accessible. All distribution centers containing fuses, circuit breakers and/or relays will be easily accessible.</p> <p>Distribution centers located throughout the vehicle will contain battery powered studs for supplying customer installed equipment thus providing a lower cost of ownership.</p> <p>Circuit protection devices, which conform to SAE standards, will be utilized to protect electrical circuits. All circuit protection devices will be rated per NFPA requirements to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting). When required, automotive type fuses will be utilized to protect electronic equipment. Control relays and solenoid will have a direct current rating of 125 percent of the maximum current for which the circuit is protected per NFPA.</p> <p><b>Solid-State Control System</b></p> |

A solid-state electronics based control system will be utilized to achieve advanced operation and control of the vehicle components. A fully computerized vehicle network will consist of electronic modules, electronic control modules to include black housings, a power indicator and status indicator located near their point of use to reduce harness lengths and improve reliability. The control system will comply with SAE J1939-11 recommended practices.

The control system will operate as a master-slave system whereas the main control module instructs all other system components. The system will contain patented Mission Critical software that maintains critical vehicle operations in the unlikely event of a main controller error. The system will utilize a Real Time Operating System (RTOS) fully compliant with OSEK/VDX™ specifications providing a lower cost of ownership.

For increased reliability and simplified use the control system modules will include the following attributes:

- Green LED indicator light for module power

- Red LED indicator light for network communication stability status

- Control system self test at activation and continually throughout vehicle operation

- No moving parts due to transistor logic

- Software logic control for NFPA mandated safety interlocks and indicators

- Integrated electrical system load management without additional components

- Integrated electrical load sequencing system without additional components

- Customized control software to the vehicle's configuration

- Factory and field programmable to accommodate changes to the vehicle's operating parameters

- To assure long life and operation in a broad range of environmental conditions, the solid-state control system modules will meet the following specifications:

- Module circuit board will meet SAE J771 specifications

- Operating temperature from -40 degrees Celsius to +70 degrees Celsius

- Storage temperature from -40 degrees Celsius to +70 degrees Celsius

- Vibration to 50g

- IP67 rated enclosure (Totally protected against dust and also protected against the effect of temporary immersion between 15 centimeters and one (1) meter)

- Operating voltage from eight (8) volts to 32 volts DC

- The main controller will activate status indicators and audible alarms designed to provide warning of problems before they become critical.

#### **Circuit Protection and Control Diagram**

Copies of all job-specific, computer network input and output (I/O) connections will be provided with each chassis. The sheets will indicate the function of each module connection point, circuit protection information (where applicable), wire numbers, wire colors and load management information.

#### **On-Board Electrical System Diagnostics**

The on-board information center will include the following diagnostic information:

- Text description of active warning or caution alarms

- Simplified warning indicators

- Amber caution indication with intermittent alarm

- Red warning indication with steady tone alarm

Advanced diagnostic feature will be provided in this control system. From the Command Zone display or connected wireless device, these features allow the user to monitor the real-time status of every input or output on the vehicle. It also allows users logged in as an administrator to force on inputs or outputs to assist the troubleshooting process.

#### **TCU Module with WiFi**

An in cab module will provide WiFi wireless interface and data logging capability. The WiFi interface will comply with IEEE 802.11 b/g/n capabilities while communicating at 2.4 Gigahertz. The module will communicate through a black WiFi antenna allowing a line of site communication range of up to 300 feet with a roof mounted antenna.

The module will transmit a password protected web page to a WiFi enabled device (i.e. most smart phones, tablets or laptops) allowing two levels of user interaction. The firefighter level will allow vehicle monitoring of the vehicle and firefighting systems on the apparatus. The technician level will allow diagnostic access to inputs and outputs installed on the Command Zone™, control and information system.

The TCU capability will record faults from the engine, transmission, ABS and Command Zone™, control and information systems as they occur. No other data will be recorded at the time the fault occurs. The data TCU will provide up to 2 Gigabytes of data storage.

The TCU will provide a means to download the TCU information and update software in the device.

#### **Indicator Light and Alarm Prove-Out System**

A system will be provided which automatically tests basic indicator lights and alarms located on the cab instrument panel.

#### **Voltage Monitor System**

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

The alarm will activate if the system falls below 11.8 volts DC for more than two (2) minutes.

#### **Dedicated Radio Equipment Connection Points**

There will be three (3) studs provided in the primary power distribution center located in front of the officer for two-way radio equipment. The studs will consist of the following:

- 12-volt 40-amp battery switched power

- 12-volt 60-amp ignition switched power

- 12-volt 60-amp direct battery power

There will also be a 12-volt 100-amp ground stud located in or adjacent to the power distribution center.

#### **EMI/RFI Protection**

To prevent erroneous signals from crosstalk contamination and interference, the electrical system will meet, at a minimum, SAE J551/2, thus reducing undesired electromagnetic and radio frequency emissions. An advanced electrical system will be used to ensure radiated and conducted electromagnetic interference (EMI) or radio frequency interference (RFI) emissions are suppressed at their source.

The apparatus will have the ability to operate in the electromagnetic environment typically found in fire ground operations to ensure clean operations. The electrical system will meet, without exceptions, electromagnetic susceptibility conforming to SAE J1113/25 Region 1, Class C EMR

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|         |  | <p>for 10KHz-1GHz to 100 Volts/Meter. The vehicle OEM, upon request, will provide EMC testing reports from testing conducted on an entire apparatus and will certify that the vehicle meets SAE J551/2 and SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter requirements. Component and partial (incomplete) vehicle testing is not adequate as overall vehicle design can impact test results and thus is not acceptable by itself. EMI/RFI susceptibility will be controlled by applying appropriate circuit designs and shielding. 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.</p>  |
| 0896456 | Prognostics, Electrical System                                   | <p><b>ELECTRICAL SYSTEM PROGNOSTICS</b></p> <p>There will be a software based vehicle tool provided to predict remaining life of the vehicles critical fluid and events.</p> <p>The system will send automatic indications to the Command Zone™ information center and/or wireless enabled devices to proactively alert of upcoming service intervals.</p> <p>Prognostics will include the following:</p> <ul style="list-style-type: none"> <li>Engine oil and filter</li> <li>Transmission oil and filter</li> </ul>  |
| 0624253 | Electrical System, Enforcer MUX                                  | <p><b>ELECTRICAL</b></p> <p>All 12-volt electrical equipment installed by the apparatus manufacturer 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.</p> <p>Electrical wiring and equipment will be installed utilizing the following guidelines:</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> <li>Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug).</li> <li>All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area.</li> <li>All electrical terminals in exposed areas will have silicon applied completely over the metal portion of the terminal.</li> <li>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.</li> <li>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.</li> <li>The results of the tests will be recorded and provided to the purchaser at time of delivery.</li> </ul> |
| 0079211 | Batteries, (6) Stryten/Exide Grp 31, 950 CCA each, Threaded Stud | <p><b>BATTERY SYSTEM</b></p> <p>There will be six (6) 12 volt Stryten/Exide®, Model 31S950X3W, batteries that include the following features will be provided:</p> <ul style="list-style-type: none"> <li>950 CCA, cold cranking amps</li> <li>190 amp reserve capacity</li> <li>High cycle</li> <li>Group 31</li> <li>Rating of 5700 CCA at 0 degrees Fahrenheit</li> <li>1140 minutes of reserve capacity</li> <li>Threaded stainless steel studs</li> </ul> <p>Each battery case will be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover will be manifold vented with a central venting location to allow a 45 degree tilt capacity.</p> <p>The inside of each battery will consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.</p>  |
| 0008621 | Battery System, Single Start, All Custom Chassis                 | <p><b>BATTERY SYSTEM</b></p> <p>There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel.</p> <p><b>MASTER BATTERY SWITCH</b></p> <p>There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system.</p> <p>An indicator light will be provided on the instrument panel to notify the driver of the status of the battery system.</p>   |

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| 0002698 | Battery Compartment, Saber/Enforcer                            | <p><b>BATTERY COMPARTMENTS</b></p> <p>Batteries will be placed on non-corrosive mats and be stored in well ventilated compartments located under the cab and bolted directly to the chassis frame. The battery boxes will have reinforced sides. The battery compartments will be constructed of 0.188" steel plate and be 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, 2/0 gauge, color coded battery cables will be provided. Battery terminal connections will be coated with anti-corrosion compound. Battery solenoid terminal connections will be encapsulated with semi-permanent rubberized compound.</p> <p><b>JUMPER STUDS</b></p> <p>One (1) set of battery jumper studs with plastic color-coded covers will be included on the battery compartments.</p>  |
| 0813848 | Charger, Sngl Sys, IOTA, DLS-75, 75 amp, IQ4 Controller        | <p><b>BATTERY CHARGER</b></p> <p>There will be an IOTA, Model DLS 75, 75 amp battery charger with IQ4 controller provided. The battery charger will be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.</p>  |
| 0814869 | Location, Cab, Charger, Behind Driver Seat                     | The battery charger will be located in the cab behind the driver seat.   |
| 0813791 | Panel, Charger Display, Kussmaul, 091-94-12, Batt Dir          | <p><b>REMOTE CONTROL PANEL - BATTERY CHARGER</b></p> <p>There will be a Kussmaul™, Model 091-94-12 universal display panel included. It will be wired directly to the chassis batteries.</p>   |
| 0814939 | Location, Cab, Ind/Remote, Driver's Seat Riser                 | The battery charger indicator will be located on the driver's seat riser.  |
| 0816871 | Inverter, Xantrex Freedom X, 817-1000, Non-NFPA 2024 Batt Sw   | <p><b>INVERTER</b></p> <p>There will be a Xantrex Model 817-1000, 1000W, 12 volt DC to 120 volt AC inverter with a built in LCD display, on/off switch and internal 30A transfer relay provided. The inverter will be connected battery direct through proper fusing. A load management solenoid will be installed between the battery and the inverter. The inverter will be connected to power when the battery switch is on and system voltage is above the low voltage threshold. When the shoreline is connected to the truck, the internal auto transfer switch will allow AC shoreline power to pass through the inverter to the AC loads connected to the inverter. Per NFPA 1900, 2024 Edition, Section 21.5.5.2, the alternator and/or battery system will be adequate to provide power for continuous operation for a minimum of 2 hours at full output. Per the fire department specifications, if all DC loads on the NFPA required electrical analysis report are active, the alternator cannot provide adequate power for continuous operation for 2 hours. The apparatus will be non-compliant to NFPA 1900 standards at time of contract execution. The load management system will activate in low voltage situations, and the inverter will be de-energized until chassis electrical system voltage recovers.</p> |
| 0814953 | Location, Body, Inverter, LS Forward Compartment               | <p><b>INVERTER LOCATION</b></p> <p>The Inverter will be located in the left side forward body compartment located on the back wall as high as practical.</p>   |
| 0016857 | Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super | <p><b>AUTO EJECT FOR SHORELINE</b></p> <p>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:</p> <p>Line Voltage<br/>Current Rating (amps)<br/>Phase<br/>Frequency</p>   |
| 0026800 | Shoreline Location   | The shoreline receptacle will be located on the driver side of cab, to the front of cab door.  |

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| 0097486 | Shoreline Inlet, 20A 120V Kussmaul Auto Eject, "Super"                 | <p><b>KUSSMAUL AUTO EJECT FOR SHORELINE</b></p> <p>Quantity of one (1) additional shorelines will be provided to operate the dedicated 120-volt circuits on the truck without the use of the generator.</p> <p>The shoreline receptacle (s) will be provided with a NEMA 5-20, 120 volt, 20 amp, straight blade Kussmaul Super auto eject plug with a red weatherproof cover. The cover is spring loaded to close, preventing water from entering when the shoreline is not connected.</p> <p>The unit is completely sealed to prevent road dirt contamination.</p> <p>A solenoid wired to the vehicle's starter is energized when the engine is started. This instantaneously drives the plug from the receptacle.</p> <p>An internal switch arrangement will be provided to disconnect the load prior to ejection to eliminate arcing of the connector contacts.</p> <p>The shoreline(s) will be connected to Coleman AC .</p> <p>The shoreline(s) will be located DS front cab corner.</p> <p>Mating connector bodies will also be supplied with the loose equipment.</p>   |
| 0647728 | Alternator, 430 amp, Delco Remy 55SI                                   | <p><b>ALTERNATOR</b></p> <p>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.</p>  |
| 0092582 | Load Manager/Sequencer, MUX  | <p><b>ELECTRONIC LOAD MANAGER</b></p> <p>An electronic load management (ELM) system will be provided that monitors the vehicles 12-volt electrical system, automatically reducing the electrical load in the event of a low voltage condition, and automatically restoring the shed electrical loads when a low voltage condition expires. This ensures the integrity of the electrical system.</p> <p>For improved reliability and ease of use, the load manager system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load management tasks. Load management systems which require additional components will not be allowed.</p> <p>The system will include the following features:</p> <p>System voltage monitoring.</p> <p>A shed load will remain inactive for a minimum of five minutes to prevent the load from cycling on and off.</p> <p>Sixteen available electronic load shedding levels.</p> <p>Priority levels can be set for individual outputs.</p> <p>High Idle to activate before any electric loads are shed and deactivate with the service brake.</p> <p>If enabled:</p> <p>"Load Man Hi-Idle On" will display on the information center.</p> <p>Hi-Idle will not activate until 30 seconds after engine start up.</p> <p>Individual switch "on" indicator to flash when the particular load has been shed.</p> <p>The information center indicates system voltage.</p> <p>The information center, where applicable, includes a "Load Manager" screen indicating the following:</p> <p>Load managed items list, with priority levels and item condition.</p> <p>Individual load managed item condition:</p> <p>ON = not shed</p> <p>SHED = shed</p> <p><b>SEQUENCER</b></p> <p>A sequencer will be provided that automatically activates and deactivates vehicle loads in a preset sequence thereby protecting the alternator from power surges. This sequencer operation will allow a gradual increase or decrease in alternator output, rather than loading or dumping the entire 12 volt load to prolong the life of the alternator.</p> <p>For improved reliability and ease of use, the load sequencing system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load sequencing tasks. Load sequencing systems which require additional components will not be allowed.</p> <p>Emergency light sequencing will operate in conjunction with the emergency master light switch.</p> <p>When the emergency master switch is activated, the emergency lights will be activated one by one at half-second intervals. Sequenced emergency light switch indicators will flash while waiting for activation.</p> <p>When the emergency master switch is deactivated, the sequencer will deactivate the warning light loads in the reverse order.</p> <p>Sequencing of the following items will also occur, in conjunction with the ignition switch, at half-second intervals:</p> <p>Cab Heater and Air Conditioning</p> <p>Crew Cab Heater (if applicable)</p> <p>Crew Cab Air Conditioning (if applicable)</p> <p>Exhaust Fans (if applicable)</p> <p>Third Evaporator (if applicable)</p> |
| 0724853 | Headlights, Rect LED, HiViz FT-4X6-4KIT, AXT/DCF/Enf/Imp/Sab/Vel, Trim | <p><b>HEADLIGHTS</b></p> <p>There will be a HiViz part number FT-4X6-4KIT, that includes four (4) 4.00" high x 6.00" long rectangular LED lights with parking lamp illumination around the outside of the lamps mounted in the front quad style housings on each side of the cab grille:</p> <p>the outside lamp on each side will contain a part number FT-4X6-HL with low beam LEDs</p> <p>the inside lamp on each side will contain a part number FT-4X6-H with high beam LEDs</p> <p>the lights will be controlled through the headlight switch</p> <p>The headlight housing and headlight trim to be painted black.</p>   |

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| 0625953 | Light, Directional, WIn 600 Cmb, Cab Crn, Wrp Bzl Out HD Lts, Enf/Sab  | <b>DIRECTIONAL LIGHTS</b><br>There will be two (2) Whelen 600 series, LED combination directional/marker lights provided. The lights will be located on the outside cab corners, next to the headlights.<br>The color of the lenses will be clear.  |
| 0620054 | Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts  | <b>INTERMEDIATE LIGHT</b><br>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.   |
| 0735474 | Lights, Clearance/Marker/ID, Front, P25 LED 7 Lts, Saber FR/Enforcer   | <b>CAB CLEARANCE/MARKER/ID LIGHTS</b><br>There will be seven (7) amber LED lights provided per the following:<br>Three (3) amber LED identification lights will be installed in the center of the cab above the windshield.<br>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.<br>Two (2) amber LED clearance lights will be installed, one (1) on each side of the cab as high and far forward as practical.<br>The lights will be installed without guards.  |
| 0625210 | Lights, Directional, Cab Front Side, Truck-Lite 19036Y LED, AXT/Enf    | <b>FRONT CAB SIDE CLEARANCE/MARKER LIGHTS</b><br>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.<br>The lights will activate as additional directional lights with the corresponding directional circuit.  |
| 0088869 | Lights, Clearance/Marker/ID, Rear, Truck-Lite 26250R LED 7Lts          | <b>REAR CLEARANCE/MARKER/ID LIGHTING</b><br>There will be three (3) Truck-Lite®, Model 26250R, LED lights used as identification lights located at the rear of the apparatus per the following:<br>As close as practical to the vertical centerline<br>Centers spaced not less than 6.00" or more than 12.00" apart<br>Red in color<br>All at the same height<br>There will be two (2) Truck-Lite, Model 26250R, LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following:<br>To indicate the overall width of the vehicle<br>One (1) each side of the vertical centerline<br>As near the top as practical<br>Red in color<br>To be visible from the rear<br>All at the same height<br>There will be two (2) Truck-Lite, Model 26250R, LED lights installed on the side of the apparatus as marker lights as close to the rear as practical per the following:<br>To indicate the overall length of the vehicle<br>One (1) each side of the vertical centerline<br>As near the top as practical<br>Red in color<br>To be visible from the side<br>All at the same height<br>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.<br>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.<br><br>Per FMVSS 108 and CMVSS 108 requirements. |
| 0804519 | Lights, Tail, WIn M62BTT* Red Stop/Tail & M62T* Amber Dir Arw w/Flange | <b>REAR FMVSS LIGHTING</b><br>The rear stop/tail and directional lighting will include the following:<br>Two (2) Whelen®, Model M62BTT, 4.30" high x 6.70" wide x 1.40" deep brake/tail lights with red LEDs<br>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.<br>The lens color(s) to be clear.<br>The lights to include black trim.  |
| 0806466 | Lights, Backup, WIn M62BU, LED, For Tail Lt Housing                    | There will be two (2) Whelen Model M62BU, LED backup lights provided in the tail light housing.   |
| 0889577 | Bracket, License Plate & Light, P25 LED, Stainless Brkt                | <b>LICENSE PLATE BRACKET</b><br>One (1) license plate bracket constructed of stainless steel will be provided at the rear of the apparatus.<br>One (1) white LED light with black 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.  |



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| 0589905 |    | Alarm, Back-up Warning, PRECO 1040                                | <b>BACK-UP ALARM</b><br>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.  |
| 0626588 |    | Lights, Perimeter Cab, TecNiq T10-LC00-1 15" LED 4Dr              | <b>CAB PERIMETER SCENE LIGHTS</b><br>There will be four (4) TecNiq, Model T10-LC00-1, 15.00" lights with white LEDs and 45 degree stainless steel brackets provided per the following:<br>one (1) under the driver's side cab access step<br>one (1) under the passenger's side cab access step<br>one (1) under the passenger's side crew cab access step<br>one (1) under the driver's side crew cab access step<br>The lights will be activated when the battery switch is on, when the respective door is open and by the same control selected for the body perimeter lights.   |
| 0617901 |    | Lights, Perimeter Pump House, TecNiq T10-LC00-1 15" LED 2lts      | <b>PUMP HOUSE PERIMETER LIGHTS</b><br>There will be two (2) TecNiq, Model T10-LC00-1, 15.00" white 12 volt DC LED weatherproof strip lights provided under the pump panel running boards, one (1) each side.<br>The lights will be controlled by the same means as the body perimeter lights.  |
| 0626579 |    | Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 2lts, Rear Step | <b>BODY PERIMETER SCENE LIGHTS</b><br>There will be two (2) TecNiq, Model T10-LC00-1, 15.00" 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear.<br>The perimeter scene lights will be activated when the parking brake is applied, the reverse signal activated, activating all the side facing perimeter lights, the driver's side directional is activated, activating only the driver side facing perimeter lights and the passenger's side directional is activated, activating only the passenger side facing perimeter lights.   |
| 0896454 |    | Enhanced Software for Perimeter Lts                               | <b>ENHANCED SOFTWARE FOR PERIMETER LIGHTS</b><br>All perimeter lights will be deactivated when the parking brake is released unless alternate control is selected.<br>The cab and crew cab perimeter lights will remain on for ten (10) seconds for improved visibility after the doors closed.  |
| 0729151 | SP | Lights, Step, P25 at Rear Tailboard, PUC, 4lts Perm Lts, Blk Trim | <b>STEP LIGHTS</b><br>There will be four (4) white LED step lights provided at the rear to illuminate the tailboard/step area. The housing for these lights will be painted black.<br>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.<br>These step lights will be actuated with the perimeter scene lights.<br>All other steps on the apparatus will be illuminated per the current edition of applicable NFPA standards. |
| 0760447 |    | Light, Roof Mt, HiViz, FT-B-72-*, Cnt Feature, Mux                | <b>12 VOLT LIGHTING</b><br>There will be a HiViz Model FT-B-72-*, 2.56" high x 72.69" long x 3.31" deep 21,067 effective lumens 12 volt DC light with white LEDs configured with a combination of flood and spot optics mounted, as far forward on the cab roof as practical.<br>The painted parts of the light housing and brackets to be black.<br>The light will be activated by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel.<br>The light may be load managed when the parking brake is applied.   |
| 0736729 |    | Lights, HiViz FT-GESM LED 2nd                                     | <b>12 VOLT LIGHTING</b><br>There will be one (1) HiViz®, Model FT-GESM, 20,500 equivalent lumens 8.65" high x 10.61" wide x 2.78" deep light(s) with white LEDs installed on the cab Above PS EMS cabinet door. The light(s) to include black optic holders, black bezels and black fixture body.<br>The light(s) will be activated by a switch at the driver's side switch panel, by a switch at the left side pump panel and by a switch at the passenger's side switch panel.<br>The light(s) may be load managed when the parking brake is applied.  |
| 0736731 |    | Lights, HiViz FT-GESM LED 1st                                     | <b>12 VOLT LIGHTING</b><br>There will be one (1) HiViz®, Model FT-GESM, 20,500 equivalent lumens 8.65" high x 10.61" wide x 2.78" deep light(s) with white LEDs installed on the cab Above DS EMS cabinet door. The light(s) to include black optic holders, black bezels and black fixture body.<br>The light(s) will be activated by a switch at the driver's side switch panel, by a switch at the left side pump panel and by a switch at the passenger's side switch panel.<br>The light(s) may be load managed when the parking brake is applied.  |

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| 0733336 | Lights, HiViz FT-GESM* LED 2nd  | <b>12 VOLT LIGHTING - BODY</b><br>There will be two (2) HiViz®, Model FT-GESM, surface mount, 20,500 equivalent lumens, 8.65" high x 10.61" wide x 2.78" deep with white LED's installed on the body PS front upper body corner and rear upper body corner. The light(s) to include black optic holders, black bezels and black fixture body.<br>The light(s) will be activated by the same control that has been selected for the right side scene light(s).<br>The light(s) may be load managed when the parking brake is applied.   |
| 0733343 | Lights, HiViz FT-GESM* LED 1st  | <b>12 VOLT LIGHTING - BODY</b><br>There will be two (2) HiViz®, Model FT-GESM, surface mount, 20,500 equivalent lumens, 8.65" high x 10.61" wide x 2.78" deep with white LED's installed on the body DS front upper body corner and rear upper body corner. The light(s) to include black optic holders, black bezels and black fixture body. The light(s) will be activated by the same control that has been selected for the left side scene light(s).<br>The light(s) may be load managed when the parking brake is applied.   |
| 0532358 | Not Required, Deck Lights, Other<br>Hose Bed & Rear Lighting                    |  |
| 0893593 | Lights, Hose Bed, Below Alum Cvr,<br>Dual LED Light Strips                      | <b>HOSE BED LIGHTS</b><br>There will be white 12 volt DC LED light strips provided to light the hose bed area. Hose bed lights will meet the photometric levels listed in the current edition of applicable NFPA standards for Hose Bed lighting requirements.<br>Light strip(s) will be installed below lower support tube on the left side of the hose bed cover. Light strip(s) will be installed below lower support tube on the right side of the hose bed cover. The lights will be activated by a stainless steel cup switch located at the rear no more than 72.00" from the ground. |
| 0645677 | Lights, Not Required, Rear Work, Alt.<br>12 Volt Lights At Rear Body            |  |
| 0743346 | Lights, Rear Scene, HiViz FT-<br>GSMJR-*, Surface Mt                            | <b>REAR SCENE LIGHT(S)</b><br>There will be two (2) HiViz, Model FT-GSMJR-*, 5.04" high x 7.40" wide x 1.54" deep 5,000 raw lumens light(s) with white LEDs black trim and black optic holder(s) surface mounted at the rear of the apparatus, DS and PS rear bulkheads as high as possible.<br>The light(s) will be controlled by a switch at the driver's side switch panel and by a stainless steel cup switch at the driver's side rear bulkhead.<br>The light(s) may be load managed when the parking brake is applied.   |
| 0892704 | Lights, Walk Surf, 8-P25 LED, Hose<br>Bed Cover, Overall Height<br>Restrictions | <b>WALKING SURFACE LIGHT</b><br>There will be eight (8) P25 12 volt DC LED lights with chrome housing provided on the hose bed cover to illuminate the walking surface. The lights will be located near the hose bed cover hinges evenly spaced four (4) on each side. The lights will be activated when the body step lights are on.  |
| 0518282 | Pumper, PUC, Aluminum   |  |
| 0554271 | Body Skirt Height, 20"  |  |

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| 0682617 | Tank, Water, 750 Gallon, Poly, 67 LHB, PUC                           | <p><b>WATER TANK</b></p> <p>Booster tank will have a capacity of 750 gallons and be constructed of UV stabilized ultra high impact polypropylene plastic by a manufacturer with a minimum of 20 years experience building tanks, is ISO 9001:2000 certified in all its manufacturing facilities, and has over 50,000 tanks in service.</p> <p>Tank joints and seams will be nitrogen welded inside and out.</p> <p>Tank will be baffled in accordance with the current edition of applicable NFPA standards.</p> <p>Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments.</p> <p>Longitudinal partitions will be constructed of .38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding.</p> <p>Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover.</p> <p>All partitions will interlock and will be welded to the tank bottom and sides.</p> <p>Tank top will be constructed of .50" polypropylene. It will be recessed .38" and will be welded to the tank sides and the longitudinal partitions.</p> <p>Tank top will be sufficiently supported to keep it rigid during fast filling conditions.</p> <p>Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels will be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes.</p> <p>A sump that will be sized dependent on the tank to pump plumbing will be provided at the bottom of the water tank.</p> <p>Sump will include a drain plug and the tank outlet.</p> <p>Tank will be installed in a fabricated cradle assembly constructed of structural steel.</p> <p>Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel bar channel or rectangular tubing.</p> <p>Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on.</p> <p>Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle.</p> <p>Mounting system will be approved by the tank manufacturer.</p> |
| 0003405 | Overflow, 4.00" Water Tank, Poly                                     | <p>Fill tower will be constructed of 0.50" polypropylene and will be a minimum of 8.00" wide x 14.00" long.</p> <p>Fill tower will be furnished with a 0.25" thick polypropylene screen and a hinged cover.</p> <p>An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.</p>  |
| 0028107 | Not Required, Foam Cell Modification                                 |  |
| 0633066 | Sleeve, Through Tank   | <p><b>SLEEVE PLUMBING THROUGH TANK</b></p> <p>Three (3) sleeves will be provided in the water tank for a 2.50" pipe to the rear.</p>   |
| 0553725 | Restraint, Water Tank, Heavy Duty, Special Type Tank, 4x4, or Export | <p><b>WATER TANK RESTRAINT</b></p> <p>A heavy-duty water tank restraint will be provided.</p>  |
| 0003429 | Not Required, Direct Tank Fill                                       |  |
| 0003424 | Not Required, Dump Valve   |  |
| 0048710 | Not Required, Jet Assist   |  |
| 0030007 | Not Required, Dump Valve Chute                                       |  |
| 0514778 | Not Required, Switch, Tank Dump Master                               |  |
| 0597043 | Body Height, PUC/HDRP  | <p><b>BODY HEIGHT</b></p> <p>The height of the body will be 92.00" from the bottom of the body to the top of the body.</p>   |

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| 0683290 | Hose Bed, Aluminum, Pumper, PUC, 67 LHB  | <b>HOSE BED</b><br>The hose bed will be fabricated of .125"-5052 aluminum with a nominal 38,000 psi tensile strength.<br>Flooring of the hose bed will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.<br>A cross divider will be provided at the point the tank transitions from the lower section to the upper section. The divider will run from the top of the side sheet down below the hose bed grating.<br>The hose bed will be directly above the rear compartment door. The dimension from the ground will be approximately 67.00" depending on the suspension and equipment load.<br>The hose bed will be at a minimum 85.00" long.  |
| 0723340 | Unpainted/Brush Finished, Hose Bed, 3G PUC/HDRP                                  | The hose bed walls will be unpainted and with a brushed finish.   |
| 0003481 | Hose Bed Capacity, Special   | Hose bed will accommodate Bay 1: 400' of 3" Bay 2: 800' of 5" Bay 3: 300' of 1.75" Bay 4: 300' of 2" Bay 5: 400' of 2" .  |
| 0003488 | Divider, Hose Bed, Unpainted   | <b>HOSE BED DIVIDER</b><br>Two (2) hosebed dividers will be furnished for separating hose.<br>Each divider will be constructed of a .125" brushed aluminum sheet fitted and fastened into a slotted, 1.50" diameter radiused extrusion along the top, bottom, and rear edge.<br>Divider will be fully adjustable by sliding in tracks, located at the front and rear of the hose bed.<br>Divider will be held in place by tightening bolts, at each end.<br>Acorn nuts will be installed on all bolts in the hose bed which have exposed threads.   |
| 0805760 | Cover, Hose Bed, Alum Treadplate   | <b>HOSE BED COVER</b><br>A two (2) section hose bed cover, constructed of .125" bright aluminum treadplate will be furnished. The cover will be hinged with full length stainless steel piano hinge. The sides will be slanted down. A stationary bridgework support assembly will be provided at the rear to support the cover.<br>The cover will be reinforced so that it can support the weight of a man walking on the cover.<br>The cover is designed with the left cover opening first.<br>If access to the water tank fill tower is blocked by the hose bed cover, then a hinged door will be provided in it so that the tank may be filled without raising cover doors.<br>Chrome grab handles and four (4) gas filled cylinders will be provided to assist in opening and closing the cover. A handrail is to be provided at the rear, in the center of the support, to assist in opening the cover.<br>The hose bed cover will be connected to the Do Not Move Truck indicator. The light will be activated if the cover is not in the stowed position and the parking brake is released. |
| 0807414 | Hose Restraint, Hose Bed, Vinyl, Rear, Separate From Top, Split 2-Sec, Seat Belt | <b>HOSE RESTRAINT REAR</b><br>At the rear of the hose bed, a black vinyl flap will be provided. The vinyl flap will be split into two sections between bay 1 and bay 2. The vinyl flap will be provided with permanent strap footman loop at the bottom of the hose bed. The top of the vinyl flap will be attached to the top of the hosebed with seat belt buckles. The seat belt buckles will be provided with a metal bar, to connect each set of two buckles, and attached to a web strap, to allow a single pull release per set of two buckles. The vinyl flap will be provided with no fasteners between each section. The bottom of the flap will be not weighted.<br>If a strap is provided, the color of the strap will be red.  |
| 0518191 | Hose Tray, Poly, Removable, Hose Bed, Basic                                      | <b>REMOVABLE HOSE TRAY(S) IN HOSE BED</b><br>There will be two (2) removable U-shaped poly hose tray(s) provided inside the hose bed.<br>Tray will be sized Full length of hose bed and 7" wide inside tray. Bay 3 - Build for 350' of 1.75" hose double stacked Bay 4 - Build for 350'of 2.0" hose double stacked.<br>Tray will be located far right side of hose bed, bay 3 and bay 4. See job #37591.  |
| 0097958 | Shelf, Permanent, Hose Bed   | <b>SHELF, IN HOSE BED</b><br>A permanent shelf will be provided for hose storage inside the hose bed 2" above poly trays at right side of hose bed.. The shelf will be constructed out of aluminum hose bed grating. The shelf will be mounted between two (2) hose bed dividers.   |
| 0611509 | Running Boards, Flip Out, PUC  | <b>RUNNING BOARDS</b><br>A running board will be provided on each side of the front body to allow access to the backboard/crosslay storage area. The running boards will be designed with a grip pattern punched into .125" bright aluminum treadplate material providing support, slip resistance, and drainage.<br>The runningboard will have a flip out section design that allows easier access to the full width equipment area above. The flip out section will be tied to the "do not move truck indicator" with a sensor when it is flipped out. There will be a latch provided that secures the flip out section when not in use.  |

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| 0683043 | Tailboard, 12" Deep, Full Width, Angled Corners, PUC/HDRP | <p><b>TAILBOARD</b></p> <p>The tailboard will be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly.</p> <p>The tailboard area will be 12.00" deep and full width of the body. The outboard sides of the tailboard will be angled at 45 degrees beginning at the point where the body meets the tailboard at the outboard edge angling rearward to the rear edge of the tailboard.</p> <p>The exterior side will be flanged down and in for increased rigidity of tailboard structure.</p>   |
| 0690029 | Wall, Rear, Body Material, PUC/HDRP                       | <p><b>REAR WALL, BODY MATERIAL, PUC</b></p> <p>The rear wall will be smooth and the same material as the body.</p> <p>The rear wall body material will be painted. Unpainted aluminum overlays will be provided to allow for chevron application and to provide continuously smooth rear wall panels.</p> <p>The outboard edges of the rear wall will be trimmed in polished stainless steel.</p>  |
| 0003531 | Tow Bar, Under Tailboard                                  | <p><b>TOW BAR</b></p> <p>A tow bar will be installed under the tailboard at center of truck.</p> <p>Tow bar will be fabricated of 1.00" CRS bar rolled into a 3.00" radius.</p> <p>Tow bar assembly will be constructed of .38" structural angle. When force is applied to the bar, it will be transmitted to the frame rail.</p> <p>Tow bar assembly will be designed and positioned to allow up to a 30-degree upward angled pull of 17,000 lb, or a 20,000 lb straight horizontal pull in line with the centerline of the vehicle.</p> <p>Tow bar design will have been fully tested and evaluated using strain gauge testing and finite element analysis techniques.</p> |

**COMPARTMENTATION**

The apparatus body will be built of aluminum construction using a minimum of 0.125" thick, 5052-H32 aluminum.

The body panel assembly will be constructed in a fixture and consist of formed sheet metal for the front and rear bulkheads, door frames, floors, ceilings, and back walls. These parts will be welded together to ensure greatest longevity with no visible welds in compartment interior. Welded construction will consist of 1.00" x 0.38" engineered plug weld holes that control the size, location, and the amount of weld required. The bodies will be assembled and welded from engineered prints that call out the size, location, and type of weld required.

In structural areas the sheet metal components will have flanges for welding. No butt joints will be allowed. Gussets and support posts will be provided for additional strength where needed.

The fender panel will be an integral part of the complete welded body assembly. All light and compartment holes are pre punched prior to construction to provide accuracy and rounded corners to prevent stress risers in the material.

Circular fender liners will be provided. For prevention of paint chips and ease of suspension maintenance the fender liners will be formed from brush finished 304L stainless steel, be unpainted, and removable for suspension maintenance.

Side compartment flooring will be of the sweep out design with the floor minimum of 1.00" higher than the compartment door lip.

Drip protection will be provided above the doors by means of aluminum extrusion, or formed bright aluminum treadplate.

The top of the compartment will be sheet metal and covered with bright aluminum treadplate rolled over the edges on the front, and rear. These covers will have the corners welded.

The aluminum treadplate covers will not make up the ceiling of the compartment.

All screws and bolts, which are not Grade 8, will be stainless steel and where they protrude into a compartment will have acorn nuts on the ends to prevent injury.

**UNDERBODY SUPPORT SYSTEM**

Due to the severe loading requirements of this pumper a method of body and compartment support suitable for the intended load will be provided.

The backbone of the body support system will begin with the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads. The support system will include lateral frame rail extensions that are formed from 0.375" 80k high strength steel and bolted to the chassis frame rails with 0.625" diameter Grade 8 bolts.

The vertical and horizontal members of the frame rail extensions are to be reinforced with welded gussets and extend to the outside edge of the body. The lateral frame extensions will be electro-coated for superior corrosion resistance.

The floating substructure will be separated from the lateral frame extensions with neoprene elastomer isolators. These isolators will reduce the natural flex stress of the chassis from being transmitted to the body, and absorb road shock and vibration.

The isolators will have a broad load range, proven viability in vehicular applications, be of a fail safe design and allow for all necessary movement in three (3) transitional and rotational modes.

The neoprene isolators will be installed in a modified V three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body. Two (2) 3.50" diameter isolators are provided at the front of the body near the centerline of the vehicle above the chassis frame. A minimum of eight (8) - 2.55" diameter isolators will be provided, two (2) under each front compartment and two (2) under each rear side compartment. A minimum of four (4) 3.50" diameter isolators will be provided under the rear compartment.

**AGGRESSIVE WALKING SURFACE**

All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards. Documentation of the material meeting the standard will be provided at time of delivery.

**LOUVERS**

All body compartments will have a minimum of one (1) set of automotive style, dust resistant louvers pressed into a wall. The louvers will incorporate a one (1)-way rubber valve that provides airflow out of the compartment and prevents water and dirt from gaining access to the compartment. Compartments over the wheel will not have louvers.

**TESTING OF BODY DESIGN**

Body structural analysis will be fully tested. Proven engineering and test techniques such as finite element analysis and strain gauging have been performed with special attention given to fatigue life and structural integrity of the body and substructure.

The body will be tested while loaded to its greatest in-service weight.

The criteria used during the testing procedure will include:

Raising opposite corners of the vehicle tires 9.00" to simulate the twisting a truck may experience when driving over a curb.

Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions.

Driving the vehicle on at 35 mph on a washboard road.

Driving the vehicle at 55 mph on a smooth road.

Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement.

Evidence of the actual testing techniques will be made available upon request.

FEA will have been performed on all substructure components.

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| 0503804 | LS 189" Rollup, (1) 62" Fwd, (1) 52" Rr, Full Height & Depth Front & Rear, PUC | <b>LEFT SIDE COMPARTMENTATION</b><br><p>The left side compartmentation will consist of three rollup door compartments. A full height, rollup door compartment ahead of the rear wheels will be provided. The pump operator's panel will be located in this compartment. The partition to the right of the pump operator's panel will be 2.50" in width. The interior dimensions of the remaining space in this compartment will be 25.25" wide x 53.63" high x 26.00" deep. The clear door opening will be a minimum of 59.25" wide x 53.63" high.</p> <p>A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 60.00" wide x 22.88" high x 26.00" deep. The clear door opening will be a minimum of 57.25" wide x 22.88" high.</p> <p>A full height, rollup door compartment behind the rear wheels will be provided. <b>The interior dimensions of this compartment will be 51.75" wide x 54.63" high x 26.00" deep. The clear door opening will be a minimum of 49.25" wide x 54.63" high.</b></p> <p><b>The roll up door spool will be installed in a recess above the compartment ceiling. All compartments will include a drip pan below the roll of the door. The drip pan will be installed level with the compartment ceiling. The interior height of the compartments will be measured from the compartment floor to the ceiling. The depth of the compartments will be measured from the back wall to the inside of the door frame.</b></p> <p><b>Closing of the doors will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.</b></p>  |
| 0503803 | RS 189" Rollup, (1) 62" Fwd, (1) 52" Rr, Full Height & Depth Front & Rear, PUC | <b>RIGHT SIDE COMPARTMENTATION</b><br><p>A full height, jump off compartment with a roll-up door ahead of the rear wheels will be provided, as convenient large storage compartment for often used items for the crew. The interior dimensions of this compartment will be 62.00" wide x 54.50" high x 25.88" deep. The area behind the roll up door spool will be notched for exterior storage or larger capacity water tank tee. The depth of the compartment will be calculated with the compartment door closed. The compartment interior will be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment will be 59.00" wide x 54.50" high.</p> <p>Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.</p> <p>A roll-up door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 60.00" wide x 23.00" high x 25.88" deep. The area behind the roll up door spool will be notched for exterior storage or larger capacity water tank tee. The depth of the compartment will be calculated with the compartment door closed. The clear door opening of this compartment will be 57.00" wide x 23.00" high.</p> <p>Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.</p> <p>A full height, roll-up door compartment behind the rear wheels will be provided. <b>The interior dimensions of this compartment will be 52.00" wide x 54.50" high x 25.88" deep. The area behind the roll up door spool will be notched for exterior storage or larger capacity water tank tee. The depth of the compartment will be calculated with the compartment door closed. The compartment interior will be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment will be 49.00" wide x 54.50" high.</b></p> <p><b>Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.</b></p> <p><b>All compartments will include a drip pan below the roll of the door.</b></p> |
| 0594005 | Doors, Rollup, Amdor, Side Compartments  | <b>SIDE COMPARTMENT ROLLUP DOOR(S)</b><br><p>There will be six (6) compartment doors installed on the side compartments, double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand rollup doors.</p> <p>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.</p> <p>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 will serve as a wiping seal which will also allow for compression to prevent water ingress.</p> <p>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.</p> <p>Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.</p> <p>A polished stainless steel lift bar to be provided for each roll-up 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.</p> <p>All injection molded rollup door wear components will be constructed of Type 6 nylon.</p> <p>Each rollup door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door.</p> <p>The header for the rollup door assembly will not exceed 4.00".</p> <p>A heavy-duty magnetic switch will be used for control of open compartment door warning lights.</p>   |

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| 0599445 | Compt, Rear, Rollup, 33.50" FF, w/Tailboard, PUC/HDRP | <p><b>REAR COMPARTMENTATION</b></p> <p>A roll-up door compartment above the rear tailboard will be provided. the interior dimensions of this compartment will be 37.00" wide x 36.50" high x 25.88" deep in the lower 27.00" of the compartment and 15.00" deep in the remaining upper portion. The clear door opening will be a minimum of 33.88" wide x 26.63" high.</p> <p>A removable access panel will be furnished on the back wall of the compartment.</p> <p>The rear compartment will be open into the rear side compartments. The transverse opening will be a minimum of 22.00" wide x 27.50" high.</p> <p>A drip pan will be installed below the roll of the door. A guard will be installed behind the roll of the door. The interior height of the compartment will be measured from the floor to the ceiling. The depth of the compartment will be measured from the back wall to the inside of the door frame. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.</p>  |
| 0593958 | Door, Amdor, Rollup, Rear Compartment, PUC            | <p><b>ROLL-UP REAR COMPARTMENT DOOR</b></p> <p>The rear compartment will have a roll-up door.</p> <p>The door will be double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand roll-up doors.</p> <p>The door 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.</p> <p>The slats will be mounted in reusable slat shoes with positive snap-lock securement.</p> <p>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 will serve as a wiping seal which will also allow for compression to prevent water ingress.</p> <p>The door 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.</p> <p>Bottom panel flange of roll-up door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.</p> <p>A stainless steel lift bar to be provided for opening the door and located at the bottom of each door with latches on the outer extrusion of the door frame. A ledge to be supplied over lift bar for additional area to aid in closing the door. The lift bar 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.</p> <p>All injection molded roll-up door wear components will be constructed of Type 6 nylon.</p> <p>The door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door.</p> <p>The header for the roll-up door assembly will not exceed 4.00".</p> <p>A heavy-duty magnetic switch will be used for control of open compartment door warning lights.</p> |
| 0611794 | Trim, Rollup Door, Painted Door Color, Amdor          | <p><b>ROLL-UP DOOR TRIM</b></p> <p>The exterior of the aluminum trim around the door opening will be painted to match the color of the applicable door.</p> <p>There will be eight (8) compartments located All body compartments and crosslay doors with the trim painted.</p>   |
| 0768509 | Lights, Compt, Amdor AY-LB-12HW0** LED, Dual Lt Strip | <p><b>COMPARTMENT LIGHTING</b></p> <p>There will be seven (7) compartments that include Amdor, Model AY-LB12HW0**, white 12 volt DC LED compartment light strips with 45 degree brackets. The light manufacturers electrical connectors will be included in the circuit. The lights will be mounted with mechanical fasteners.</p> <p>There will be two (2) strip lights installed vertically in each compartment opening per the latest NFPA requirements.</p> <p>The lights will be activated when the battery switch is on and the respective compartment door is opened.</p>  |
| 0594766 | 189" Hatch, (2) Lift-up, 21" Wide, RS Only, PUC/HDRP  | <p><b>HATCH COMPARTMENTS</b></p> <p>A hatch compartment 189.00" long x 21.00" wide x 22.00" maximum depth will be provided above the right side body compartments, with two (2) lift-up top opening hatch doors.</p> <p>The compartment will extend the full length of the side body compartmentation except for a 20.00" recessed step area at the rear of the compartment on the access side.</p> <p>Sides of the compartment will be constructed of the same material as the body and painted job color on the outside panels. A 2.00" tall formed painted aluminum trim will be provided to cover the seam between the top of the body panel and the bottom of the hatch compartment. The vertical outboard seam at the center of the compartment will have a 1.00" wide painted aluminum extrusion.</p> <p>Top of the compartment will be constructed of bright aluminum treadplate.</p> <p>Two (2) lift-up, bright aluminum treadplate doors will be provided on the top of the compartment, each door with a slam style latch with lever handle to hold the doors in the closed position.</p> <p>Double pan doors will have lipped edges with a rubber seal for weather resistance.</p> <p>Doors will be hinged on the outboard side and will be held open with pneumatic stay arms.</p> <p>Compartment will have a 3/4" drain that extends to below the body.</p> <p>Black rubber matting shall be provided to help prevent stored equipment in pooled water.</p>   |



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| 0732644 | Handrails, (3), Hatch Step Area, Straight, Hansen Knurled Alum LED Backlit, Black | <p>There will be three (3) separate straight handrails provided for the step landing at the rear of the hatch compartment. The handrails will be 1.25" diameter black anodized aluminum extrusion. The handrails will be Hansen LED backlit. The handrails will be lit with a red LED light. The handrails will be activated by the same means as the cab handrail light controls.</p> <p>E-coated and black powder coated stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces.</p> <p>Drain holes will be provided in the bottom of all vertically mounted handrails.</p>  |
| 0893291 | Lights, Pump Cargo/Dunnage Forward Over Tank, Dual LED Light Strips, Each Side    | <p><b>PUMP CARGO/DUNNAGE AREA FORWARD OVER TANK LIGHTING</b></p> <p>There will be four (4), 12 volt DC strips lights, with white LEDs and stainless steel protective covers, provided to illuminate both the cargo area over the pump and forward over the water tank.</p> <p>One (1) light strip will be installed the entire length of the left side of the pump cargo area.</p> <p>One (1) light strip will be installed the entire length of the right side of the pump cargo area.</p> <p>One (1) light strip will be installed the entire length of the left side of the cargo area forward over the water tank.</p> <p>One (1) light strip will be installed the entire length of the right side of the cargo area forward over the water tank.</p> <p>The light(s) will be activated by the same switch control that has been selected for the hose bed light(s).</p>  |
| 0687145 | Shelf Tracks, Recessed, PUC/3rd Generation  | <p><b>MOUNTING TRACKS</b></p> <p>There will be recessed tracks installed vertically to support the adjustable shelf(s).</p> <p>Tracks will not protrude into any compartment in order to provide the greatest compartment space and widest shelves possible.</p> <p>The tracks will be provided in each compartment except for the one that contains the pump operator's panel.</p>  |
| 0600350 | Shelves, Adj, 500 lb Capacity, Full Width/Depth, Predefined Locations             | <p><b>ADJUSTABLE SHELVES</b></p> <p>There will be four (4) shelves with a capacity of 500 lb provided.</p> <p>The shelf construction will consist of .188" aluminum painted spatter gray with 2.00" sides.</p> <p>Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track.</p> <p>The shelves will be held in place by .12" thick stamped plated brackets and bolts.</p> <p>The location(s) will be in RS1 centered between the floor and the ceiling to the right of the partition, in RS1 in the upper third to the right of the partition, in LS1 centered between the floor and ceiling and in LS3 in the upper third.</p>   |
| 0601834 | Tray, 215 lb, Tilt/Slide-Out, 30 Deg, Adj, Max Width/Depth, 3G                    | <p><b>SLIDE-OUT/TILT-DOWN TRAY</b></p> <p>There will be three (3) slide-out trays provided.</p> <p>The bottom of each tray will constructed of 0.188" thick aluminum while special aluminum extrusions will be utilized for the tray sides, ends, and tracks. The corners will be welded to form a rigid unit.</p> <p>Each tray will be as wide and as deep as the compartment space will allow. The shelf will be aluminum painted spatter gray to match compartment interior .</p> <p>A spring loaded lock will be provided on each side at the front of the tray. Releasing the locks will allow the tray to slide out approximately two-thirds (2/3) of its length from the stowed position and tip 30 degrees down from horizontal. The tray will be equipped with ball bearing rollers for smooth operation.</p> <p>Rubber padded stops will be provided for the tray in the extended positions.</p> <p>The capacity rating of the tray will be a minimum of 215 lb in the extended position.</p> <p>The vertical position of the tray within the compartment will be adjustable.</p> <p>The tray(s) will be located RS2 - Centered LS2 - Upper Third LS2 - as close to the floor as possible .</p>  |
| 0667235 | Cable, Single Hand Operation, Tilt/Slide Out, Utility Trays                       | <p><b>SINGLE HANDED CABLE LATCH</b></p> <p>A cable will be provided to tie together the two (2) spring loaded locks that are provided as standard at the front of a slide-out/tilt tray in order to provide single hand operation of the tray.</p> <p>The single hand operation cable will be provided on a total of three (3) slide-out trays located Tilt-out trays in LS2 and RS2.</p>  |
| 0647091 | Tray, Floor Mounted, Slide-Out, 500lb, 2.00" Sides                                | <p><b>SLIDE-OUT FLOOR MOUNTED TRAY</b></p> <p>There will be two (2) floor mounted slide-out tray(s) provided.</p> <p>Each tray will have 2.00" high sides and a minimum capacity rating of 500 lb in the extended position.</p> <p>Each tray will be constructed of aluminum painted spatter gray.</p> <p>There will be two undermount-roller bearing type slides rated at 250 lb each provided. The pair of slides will have a safety factor rating of 2.</p> <p>To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.</p> <p>To ensure years of easy operation, the slides will require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition.</p> <p>Proof of compliance will be provided upon request.</p> <p>Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand.</p> <p>The location(s) will be RS1 and LS1.</p> |

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| 0725644 | Cabinet, Drawer Assembly, CTECH, Three Drawers, Up To 24" Wide, 24" Deep         | <b>DRAWER ASSEMBLY</b><br>A slide-out drawer assembly will be installed Floor of LS3.<br>The clear dimensions of the first drawer starting at the top will be 3.00" with a face plate that is 4.00" high x 21.00" deep. The clear dimensions of the second drawer will be 6.75" with a face plate that is 7.00" high x 21.00" deep. The clear dimensions of the third drawer will be 8.75" with a face plate that is 9.00" high x 21.00" deep. Each drawer will be the same width and not exceed 24.00".<br>The drawers will have a capacity of 250 pounds.<br>The drawers will be mounted in a cabinet housing constructed of light gray powder coated aluminum with anodized aluminum frames. The housing will be 24.00" deep, and completely enclose the drawer.<br>A full-length aluminum extruded rail will be provided at the top edge of each drawer. This rail will act as the latching mechanism as well as the handle for each drawer.<br>There will be a total of one (1) provided.   |
| 0617454 | Toolboard, Slide-out, Alum, .188", Peg Board, Painted, 3G, Slides Top and Bottom | <b>SLIDE-OUT TOOLBOARD</b><br>A slide-out aluminum toolboard will be provided. It will have a painted finish to match the compartment interior.<br>It will be a minimum of 0.188" thick with 0.203" diameter holes in a pegboard pattern with 1.00" centers between holes.<br>A 1.00" x 1.00" aluminum tube frame will be welded to the edge of the pegboard. A handhold cutout will be provided on the outboard edge of the toolboard.<br>The board will be mounted on an undermount-roller bearing type slide rated at 250 lb with a factor of safety of 2 at the bottom.<br>To ensure years of dependable service the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.<br>To ensure years of easy operation, the slides will require no more than a 50 pound force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request.<br>The toolboard will have positive lock in the stowed and extended position.<br>The board will also have a non locking roller bearing slide at the top.<br>The toolboard will be mounted on adjustable tracks side to side within the compartment.<br>There will be Two (2) provided.<br>The toolboard(s) will be located RS3. |
| 0654369 | Recess, Partition, Right of Pump Operator's Panel, PUC                           | <b>RECESS FOR MOUNTING</b><br>There will be a recess in the partition of the pump operator's panel compartment just rearward of the pump panel. The recess will be full height starting 3.00" off the floor of the compartment and ending where the pump panel angles toward the outside of the body.  |
| 0797957 | Pac Trac, Installed on Compartment Wall, Back Wall Only                          | <b>EQUIPMENT MOUNTING SYSTEM</b><br>Pac Trac equipment mounting system will be installed on the back wall of one (1) compartment (s), Upper wall of LS3.   |
| 0695412 | Rack, Air Bags Inside Compartment, 2-Slot  | <b>AIR BAG STORAGE</b><br>There will be a rack installed for storing two (2) air bags in the RS1 Compartment to serve as a divider between Little Giant and remaining compartment. compartment.<br>The rack will be fabricated from painted spatter gray .125" aluminum. The fire department will provide exact sizes of air bags prior to construction. The size of the air bags will be Full height of compartment from floor to ceiling and 12" from left wall. Rack will be 3" wide (outside width). Each slot will be evenly in size vertically (27.25" tall)..   |
| 0775959 | Strap, Nylon w/Velcro Hook & Loop, 2" wide                                       | <b>STRAP</b><br>There will be two (2) black 2.00" wide nylon strap(s) that will provide positive restraint by hooking through a footman loop, similar to what is used with a hose bed flap. The strap(s) will be located (1) for each air bag slot . The strap(s) will have a Velcro® fastener.  |
| 0899067 | Rub Rail, Black Plastic w/.50" Spacer, Body Sides, Light Cut Outs                | <b>RUB RAILS</b><br>The bottom edge of the side body compartments will be trimmed with a black 1.00" thick x 2.63" high UHMW plastic rub rail. There will be 0.50" rubber spacers included between the rub rail and the body.<br>The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.<br>Cut outs will be provided in the rub rail for lighting.  |
| 0653982 | Fender Crowns, Rear, Rubber, w/Removable Fender Liner, Pumper, 3G                | <b>BODY FENDER CROWNS</b><br>Rubber fender crowns will be provided around the rear wheel openings.<br>A fender liner constructed of aluminum painted to match the lower body color will be provided to avoid paint chipping. The liners will be removable to aid in the maintenance of rear suspension components.   |

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| 0519849 | Not Required, Hose, Hard Suction  | <b>HARD SUCTION HOSE</b><br>Hard suction hose will not be required.  |
| 0759459 | Handrails Located @ Front Body, Hansen Knurled Alum LED Backlit, Black              | <b>HANDRAILS</b><br>Hansen handrails will be located on the front of the body in positions needed to meet NFPA requirements.<br>The handrails will be Hansen LED black anodized backlit knurled aluminum. The handrails will be lit with a red LED light. The handrail lighting will be activated by the same means as the cab handrail light controls.<br>E-coated and black powder coated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces.<br>Drain holes will be provided in the bottom of all vertically mounted handrails.   |
| 0759458 | Handrails, Rear, Hansen Tubing, Knurled Aluminum, LED Backlit, Black, PUC           | Two (2) vertical Hansen handrails will be located at the rear, one on each side of the rear compartment. The handrail will be black anodized knurled aluminum and backlit with a red LED light. E-coated and black powder coated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces. The hand rail will be activated by the same means as the cab handrail light controls.   |
| 0764331 | Handrail, Rear, Below Hose Bed, Full Width, Hansen, Knurled Alum LED Backlit, Black | One (1) full width horizontal handrail will be provided below the hose bed at the rear of the apparatus.<br>The handrail will be Hansen LED backlit black anodized knurled aluminum. E-coated and black powder coated end stanchions will support the handrail. The handrail will be lit with a red LED light. The handrail will be activated with the application of the parking brake.   |
| 0753717 | Handrail, Extra - 15-20" Long, Hansen Tubing, Knurled Alum LED Backlit, Black       | - One (1) handrail, will be provided mounted DS upper rear bulkhead, left of the hose bed.<br>The handrail will be 1.25" diameter black anodized aluminum extrusion, with a ribbed design, to provide a positive gripping surface.<br>E-coated and black powder coated stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces.<br>The handrails will be Hansen LED backlit. The handrails will be lit with a red LED light. The handrails will be activated by the same means as the cab handrail light controls.<br>Drain holes will be provided in the bottom of all vertically mounted handrails.   |
| 0816729 | Compt, Extinguisher (2) Fender Panel, Triangular Door, 8"/8.5"Dia                   | <b>EXTINGUISHER/AIR BOTTLE/ STORAGE (Triangular)</b><br>A total of one (1) extinguisher/air bottle/storage compartments will be provided RS rear of wheels. The triangular shaped compartment will be sized to fit a 8.00" diameter extinguisher in the lower area and a 8.50" diameter extinguisher in the upper area. The compartment will be approximately 25.50" deep. A partition will be provided to separate the compartment. Also inside the compartment, black Dura-Surf friction reducing material will be provided. The compartment will be furnished with a drain hole. A painted stainless steel, triangular shaped door with a Southco raised trigger C2 black lever latch will be provided to contain the air bottles. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.<br><b>AIR BOTTLE COMPARTMENT STRAP</b><br>A strap will be provided in the air bottle compartment(s) to help contain the bottles when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment. |
| 0657522 | Compt, Air Bottle, Triple, Fender Panel   | <b>AIR BOTTLE STORAGE (Triple)</b><br>A quantity of two (2) air bottle compartments designed to hold (3) air bottles up to 7.25" in diameter x 26.00" deep will be provided on the left side forward of the rear wheels and on the right side forward of the rear wheels. A painted stainless steel door with a Southco raised trigger C2 black lever 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.<br>Inside the compartment, black Dura-Surf friction reducing material will be provided.<br><b>AIR BOTTLE COMPARTMENT STRAP</b><br>A strap will be provided in the air bottle compartment(s) to help contain the air bottles when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.   |
| 0004225 | Ladder, 24' Duo-Safety 900A 2-Section   | <b>EXTENSION LADDER</b><br>There will be a 24' two-section aluminum Duo-Safety Series 900-A extension ladder provided.   |
| 0004230 | Ladder, 14' Duo-Safety 775A Roof  | <b>ROOF LADDER</b><br>There will be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.   |

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| 0638382 | Rack, Ladders, LS Full Depth Body, PUC/HDRP                               | <b>LADDER STORAGE</b><br>The ladders will be stored inside the upper section of the left side compartments. This ladder rack will reduce the depth of the upper section in the side compartments.<br>A partition will be installed inside the compartment on the side of the rack to allow for equipment storage and to conceal the ladders.<br>The ladders will be banked in separate storage troughs.<br>The ladder storage assembly will be fabricated of stainless steel track channels to aid in loading and removal of ladders.<br>Rear of the ladder storage area will have a vertically hinged smooth aluminum door with a D-handle latch to contain the ladders. The door will be vertically hinged. |
| 0733387 | Ladder, 10' Duo-Safety Folding 585A                                       | <b>FOLDING LADDER</b><br>One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder will be installed.  |
| 0733005 | Compt w/Trough, Folding Ladder, In Upper Body, LS                         | <b>FOLDING LADDER/LONG TOOL COMPARTMENT</b><br>A compartment will be provided, recessed in the upper, inside part of body compartment on the left side. The compartment will be equipped with a stainless steel trough for the folding ladder and storage for long handle tools.<br>A door constructed of smooth aluminum and hinged along the outboard edge will be provided at the rear with a Southco C2 black powder coated raised trigger latch.   |
| 0802284 | Little Giant/Werner Ladder Storage, Vertical In Compartment               | <b>LITTLE GIANT LADDER STORAGE</b><br>Storage will be provided in RS1 compartment for a Little Giant ladder. The ladder will be stored vertically in the compartment left of the air bag rack partition. A Velcro® strap will be provided to aid in restraint and removal of the Little Giant ladder. The ladder will be a Little Giant Revolution 2.0 Model 17 - 13117.  |
| 0816920 | Pike Pole, Provided by Fire Department, NFPA/ULC 2024                     | <b>PIKE POLE PROVIDED BY FIRE DEPARTMENT</b><br>The pike poles are not on the apparatus as manufactured. The fire department will provide and mount the pike poles.<br>There will be two (2) pike pole(s) provided. The pike pole(s) will be a Fire Hooks Unlimited 8' roof hook RH-8.  |
| 0816918 | Pike Pole, 6', Provided by Fire Department, NFPA/ULC 2024                 | <b>6' PIKE POLE PROVIDED BY FIRE DEPARTMENT</b><br>The pike pole is not on the apparatus as manufactured. The fire department will provide and mount the pike poles.<br>There will be two (2) 6' pike pole(s) provided. The pike pole(s) will be a Fire Hooks Unlimited 6 foot roof hook.   |
| 0732992 | Tube, Pike Pole 6', In Upper Body Long Tool Storage Compt                 | <b>PIKE POLE STORAGE</b><br>A aluminum tube for a 6' pike pole with 1.38" notch, to accommodate a New York style pike pole will be provided in the upper body compartment on the left side. Two (2) pike poles will require a tube provided in this location.   |
| 0768409 | Compt, Long Tools, Thru Body Compts, Right Side                           | <b>LONG TOOL STORAGE</b><br>One (1) compartment will be provided recessed in the upper section of the right side compartments. The compartment will be roughly 14" wide in size. A door will be provided at the rear of the compartment for access. The door will be made of smooth aluminum with a Southco C2 black powder coated raised trigger latch. The door will be hinged along the outboard edge.   |
| 0521734 | No Steps Required, Front Of Body, PUC                                     |   |
| 0724124 | Steps, Folding, Rear of Body, w/LED, Trident, Black Powder Coat, PUC/HDRP | <b>REAR FOLDING STEPS</b><br>Black powder coat finished, non-skid folding steps with a a black tread coating on the stepping surface will be provided at the rear. Each step will incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.  |
| 0724149 | Step, Folding - Extra, Body Only, w/LED, Trident, Black Powder Coat       | Two (2) additional folding steps will be located DS rear bulkhead to access upper long tool storage . The step(s) will be black powder coat finished, non-skid with a a black tread coating on the stepping surface. Each step will incorporate an LED light to illuminate the stepping surface. The step(s) can be used as a hand hold with two openings wide enough for a gloved hand.  |

**PUMP CONTROL PANELS (Left Side Control)**

Pump controls and gauges will be located midship at the left side of the apparatus and properly identified.

The main pump operator's control panel will be completely enclosed and located in the forward section of the body compartment, to protect against road debris and weather elements. The pump operator's panels will be no more than 31.00" wide, and made in four (4) sections with the center section easily removable with simple hand tools. For the safety of the pump operator, there will be no discharge outlets or pump inlets located on the main pump operators panel.

Layout of the pump control panel will be ergonomically efficient and systematically organized. The upper section will contain the master gauges. This section will be angled down for easy visibility. The center section will contain the pump controls aligned in two horizontal rows. The pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable) will be located on or adjacent to the center panel, on the side walls for easy operation and visibility. The lower section will contain the outlet drains.

Manual controls will be easy moving 8" long lever style controls that operate in a vertical, up and down swing motion. These handles will have a 2.25" diameter knob and be able to lock in place to prevent valve creep under any pressure. Bright finish bezels will encompass the opening, be securely mounted to the pump operator's panel, and will incorporate the discharge gauge bezel. Bezel will be bolted to the panel for easy removal and gauge service. The left side discharges will be controlled directly at the valve. There will be no push-pull style control handles.

Identification tags for the discharge controls will be recessed within the same bezel. The discharge identification tags will be color coded, with each discharge having its own unique color. All remaining identification tags will be mounted on the pump panel in chrome-plated bezels. All discharge outlets will be color coded and labeled to correspond with the discharge identification tag.

The pump panels for the midship discharge and intake ports will be located ahead of the body compartments with no side discharge or intake higher than the frame rail. The pump panels will be easily removable with simple hand tools.

A recessed cargo area will be provided at the front of the body, ahead of the water tank above the plumbing.

0520016

Not Required, Pumphouse Structure, PUC

0889383

Pump, Pierce, 2000 GPM, Single Stage, PUC-NG

**PUMP**

Pump will be a Pierce, low profile, 2000 gpm single stage midship mounted centrifugal type, mounted below the cab. The pump will have a 15 percent reserve capacity to allow for extended time between pump rebuild. To ensure efficient pump/vehicle design the capacity to weight ratio will not be less than 1.5:1.

The pump casing will consist of three (3) discharge outlets, one (1) to each side in line with the impeller and one (1) to the rear. The pump casing will incorporate two (2) water strippers to maintain radial balance.

Pump will be the Class A type.

Pump will be certified to deliver the percentage of rated discharge from draft at pressure indicated below:

100 percent of rated capacity at 150 psi net pump pressure

70 percent of rated capacity at 200 psi net pump pressure

50 percent of rated capacity at 250 psi net pump pressure

The pump will have the capacity to deliver the percentage of rated discharge from a pressurized source as indicated below:

135 percent of rated capacity at 100 psi net pump pressure from a 5 psi source

Pump body will be fine-grained gray iron. Pump will incorporate a heater/cooling jacket integral to the pump housing.

The impeller will be high strength vacuum cast bronze alloy accurately machine balanced and splined to a ten (10) spline stainless steel pump shaft for precision fit, exceptional durability, and efficiency. Double replaceable reverse flow labyrinth type bronze wear ring design will help to minimize end thrust. The impeller will be a twisted vane design to create higher lift. No keyed shafts will be acceptable.

The pump will include o-ring gaskets throughout the pump.

Deep groove radial type oversize ball bearings will be provided. The bearings will be protected at the openings from road dirt and water with an oil seal and water slinger.

The pump will have a flat, patterned area on the top of the pump intake wye to allow standing for plumbing maintenance. The main inlet manifold will be 6.00" in diameter and will have a low profile design to facilitate low crosslays and high flows.

For ease of service, the pump housing, intake wye, impeller, mechanical seal, and gear case will be accessible from above the chassis frame by tilting the cab. Removal of the main inlet wyers will provide access to the impeller, mechanical seal, and wear ring.

The tank to pump line and the primary discharge line will be the only piping required to be removed for overhaul.

For ease of service and overhaul there will be no piping or manifolding located directly over the pump.

**PUMP MOUNTING**

Pump will be mounted to the chassis frame rails directly below the crew cab, to minimize wheelbase and facilitate service, using rubber isolators in a modified V pattern that include one (1) central mounted isolator located between the frame rails and one (1) on each side outside the frame rails. The mounting will allow chassis frame rails to flex independently without damage to the fire pump. Each isolator will be 2.55" in total outside diameter and will be rated at 490 lb. The pump will be completely accessible by tilting the cab with no piping located directly above the pump.

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| 0515822 | Seal, Mechanical, Silicon Carbide, PUC Pump                 | <b>MECHANICAL SEALS</b><br>Silicon carbide mechanical seals will be provided. The seals will be spring loaded and self-adjusting. The seals will have a minimum thermal conductivity of 126 W/m*K to run cooler. Seals will have a minimum hardness of 2800 kg/mm2 to be more resistant to wear, and have thermal expansion characteristics of no more than 4.0 X106mm/mm*K to be more resistant to thermal shock.  |
| 0889382 | Gear Case, Integrated Pump Transmission, PUC-NG, Paccar     | <b>PUMP GEAR CASE</b><br>The integrated pump transmission gear case will use a pressure-lubricated system to cool, lubricate, and filter the oil. The gear case will be constructed of lightweight aluminum, and impregnated with resin in accordance to MIL Spec MIL-I-17563. A sight glass, accessible by tilting the cab, will be provided for easy fluid level checks.<br>The gear case will consist of three (3) gears to drive the pump.<br><b>CLUTCH</b><br>There will be a heavy-duty hydraulic clutch mounted directly to the integrated pump transmission to engage and disengage the pump without gear clash. The clutch will be a multiple disc design for maximum torque. The clutch will be fully self-adjusting to provide automatic wear compensation, and consistent torque throughout the life of the clutch. Positive engagement and disengagement will be provided through a high efficient and dependable hydraulic system to assure superior performance.<br><b>LOW PRESSURE/HIGH TEMPERATURE LIGHTS</b><br>Lights will be provided to indicate when a high temperature or low pressure situation occurs. Lights will be provided next to the master gauges at the pump panel as well as on the control panel in the cab. A pair of lights will be provided in each location. One light will be provided to indicate high temperature. The second light will be provided to indicate a low pressure. All lights will be labelled accordingly.   |
| 0721196 | Pumping Mode, Pump and Roll/Stationary, Basic, MUX, PUC     | <b>PUMPING MODE</b><br>Pump will provide for both pump and roll mode and stationary pumping mode.<br>Stationary pumping mode will be accomplished by stopping the vehicle, setting the parking brake and engaging the water pump switch on the cab switch panel. The transmission will shift to "Neutral" range automatically when the parking brake is set. The "OK to Stationary Pump" indicator will also illuminate when the parking brake is set.<br>If the vehicle is equipped with a suitable Husky foam system or Hercules CAFS system, these systems will be engaged from the cab switch panel as well.<br>pump and roll mode will be accomplished by the use of the main pump and will not require the use of a secondary pump. pump and roll mode will use the same operation sequence as stationary pumping mode with a few additional steps. After the vehicle is setup for stationary pumping, the operator will leave the cab and setup the pump panel to discharge at the desired outlet(s). Upon returning to the cab, the operator will disengage the parking brake. An "OK to pump and roll" indicator will illuminate on the cab switch panel. First gear on the transmission gear selector will be selected by the operator for pump and roll operations. The operator as needed will apply the foot throttle. pump and roll mode will be maintained unless the transmission shifts out of first gear.<br>Stopping either stationary pumping mode or pump and roll mode will be accomplished by pressing the "Water Pump" switch down to disengage the pump.<br>A pump pressure reading will be displayed in view of the driver. |
| 0515829 | Pump Shift, Sure-Shift                                      | <b>PUMP SHIFT</b><br>Pump will be engaged in not more than two steps, by simply setting the parking brake, which will automatically put the transmission into neutral, and activating a rocker switch in the cab. Switches in the cab will also allow for water, foam, or CAFS if equipped, and activate the appropriate system to preset parameters. The engagement will provide simple two-step operation, enhance reliability, and completely eliminate gear clash. The shift will include the indicator lights as mandated by NFPA. A direct override switch will be located behind a door in the lower pump operator's panel. The switch will automatically disengage when the door is closed.<br>As the parking brake is applied, the pump panel throttle will be activated and deactivate the chassis foot throttle for stationary operation.  |
| 0515833 | Transmission Lock-up, Not Req'd, Park to Neutral, Pump, PUC | <b>TRANSMISSION LOCK UP</b><br>Transmission lock up is not required as transmission will automatically shift to neutral as soon as the parking brake is set.  |
| 0515835 | Auxiliary Cooling System, PUC                               | <b>AUXILIARY COOLING SYSTEM</b><br>A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. A water-to-coolant heat exchanger will be used.  |
| 0014486 | Not Required, Transfer Valve, Single Stage Pump             |   |

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| 0746508 | Valve(s), Relief Intake, Trident Air Max, Control Location   | <p><b>INTAKE RELIEF VALVE</b></p> <p>One (1) Trident Air Max intake relief valve(s) will be installed on the suction side of the pump preset at 125 psig.</p> <p>The relief valve will have a working range of 50 psi to 350 psi.</p> <p>The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag.</p> <p>One (1) adjustable air regulator and pressure indicating gauge will be located on a common bezel on the left side pump panel to control the intake valve(s).</p>   |
| 0724463 | Controller, Pressure, Pierce LCD , PUC                       | <p><b>PIERCE PRESSURE CONTROLLER</b></p> <p>A Pierce electronic pressure controller will be provided.</p> <p>A pressure transducer will be installed in the discharge side of the water pump. The transducer continuously monitors pump pressure sending a signal to the electronic pressure controller.</p> <p>The pressure controller can be used in two (2) modes of operation, RPM mode and pressure modes. The controller will be programmed to turn on/default to No Mode/Default Press Setting mode.</p> <p>In the RPM mode, the controller can be activated after vehicle parking brake has been set. When in this mode, the controller will maintain the set engine speed, regardless of engine load (within engine operation capabilities).</p> <p>In the pressure mode, the controller can be activated after vehicle parking brake has been set. When in this mode, the controller will automatically maintain the discharge pressure set by the operator (within the discharge capabilities of the pump and water supply) regardless of flow.</p> <p>A 2.00" diameter throttle control knob with no mechanical stops, a serrated grip, and a red idle push button in the center will be a integrated/part of the pressure controller. The throttle control knob will be programmed for Clockwise rotation to increase engine speed.</p> <p>Individual LED indicators for ok to pump, throttle ready, pressure mode and rpm mode will be located on the pressure controller for easy viewing.</p> <p>A pump cavitation protection feature will also be provided which will return the engine to idle should the pump cavitate. Cavitation is sensed by the combination of pump pressure below 30 psi and engine speed above 2000 rpm for more than five (5) seconds.</p> <p>Other safety features include recognition of low water and no water conditions with an automatic programmed response and a push button to return the engine to idle.</p> <p>The pressure controller LCD screen will be 4.20" in size with a minimum brightness of 750 nits.</p> <p>The LCD screen and LED intensity will automatically adjust for day and nighttime operation. The LCD screen intensity can also be manually adjusted if needed.</p> <p>The following information will be provided/displayed on the LCD screen:</p> <p>Engine RPM</p> <p>Check engine and stop engine warning indicators</p> <p>Engine oil pressure</p> <p>Engine coolant temperature</p> <p>Water pump transmission temperature</p> <p>Fuel Level</p> <p>Water tank level</p> <p>Battery voltage</p> <p>Operating mode (RPM or pressure)</p> <p>Pressure or RPM setting</p> <p>On screen messaging show diagnostic and warning messages as they occur. It will show apparatus information, stored data, and program options when selected by the operator. It will monitor inputs outputs and support audible and visual warning alarms for the following conditions:</p> <p>High battery voltage</p> <p>Low battery voltage/engine off</p> <p>Low battery voltage/engine running</p> <p>High water pump temperature</p> <p>Low fuel</p> <p>Low engine oil pressure</p> <p>High engine coolant temperature</p> <p>Water tank out of water (visual alarm only)</p> <p>No engine response (visual alarm only)</p> <p>The pressure controller will store the accumulated operating hours for the pump and engine. These items are to be displayed within the pressure controller menu.</p> <p>The pressure controller will include a USB port on the back of the controller for easy software upgrades if needed.</p> |
| 0072153 | Primer, Trident, Air Prime, Air Operated                     | <p><b>PRIMING PUMP</b></p> <p>The priming pump will be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of applicable NFPA standards.</p> <p>All wetted metallic parts of the priming system are to be of brass and stainless steel construction.</p> <p>One (1) priming control will open the priming valve and start the pump primer.</p>  |
| 0780359 | Manuals, Pump, (2) Total, Electronic Copies, Pierce PUC Pump | <p><b>PUMP MANUALS</b></p> <p>There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.</p>  |

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| 0602496 | Plumbing, Stainless Steel and Hose, Single Stage Pump, PUC | <b>PLUMBING, STAINLESS STEEL AND HOSE</b><br>All inlet and outlet lines will be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness.<br>Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings.<br>Plumbing manifold bodies will be ductile cast iron or stainless steel.<br>All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame.<br>All water carrying gauge lines will be of flexible polypropylene tubing.<br>All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating. |
| 0089437 | Plumbing Without Foam System                               |   |
| 0517852 | Inlets, 6.00" - 1250-2000 GPM, Pierce PUC Pump             | <b>MAIN PUMP INLETS</b><br>A 6.00" pump manifold inlet will be provided on each side of the vehicle. The suction inlets will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.<br>Main pump inlets will not be located on the main operator's panel and will maintain a low connection height by terminating below the top of the chassis frame rail.   |
| 0014650 | Pump Suction Tube(s), Short, All                           | <b>SHORT SUCTION TUBE(S)</b><br>The suction tube(s) on the water pump will have short suction tube(s) installed to allow for installation of adapters, elbows or intake valves without excessive overhang.  |
| 0004646 | Cap, Main Pump Inlet, Long Handle, NST, VLH                | <b>MAIN PUMP INLET CAP</b><br>The main pump inlets will have National Standard Threads with a long handle chrome cap. The cap will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.   |
| 0084610 | Valves, Akron 8000 series- All                             | <b>VALVES</b><br>All ball valves will be Akron® Brass. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve.<br>Valves will have a <b>ten (10) year</b> warranty.   |
| 0520002 | Valve, Inlet(s) Recessed, Side Cntrl, PUC                  | The location of the valve for the one (1) inlet will be recessed behind the pump panel.   |
| 0004700 | Control, Inlet, at Valve                                   | <b>INLET CONTROL</b><br>The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.  |
| 0004660 | Inlet (1), Left Side, 2.50"                                | <b>LEFT SIDE INLET</b><br>There will be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter.<br>The auxiliary inlet will be provided with a strainer, chrome swivel and plug.  |
| 0029147 | Not Required, Inlet, Right Side                            |   |
| 0521137 | Anode, Zinc, Pair, Pump Inlets, PUC                        | <b>ANODE, INLET</b><br>A pair of sacrificial zinc anodes will be provided in the water pump inlets to protect the pump from corrosion.  |
| 0092569 | No Rear Inlet (Large Dia) Requested                        |   |
| 0064116 | No Rear Inlet Actuation Required                           |   |
| 0092696 | Not Required, Cap, Rear Inlet                              |   |
| 0009648 | No Rear Intake Relief Valve Required on Rear Inlet         |   |



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| 0092568 | No Rear Auxiliary Inlet Requested   |  |
| 0723049 | Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle                          | <b>INLET BLEEDER VALVE</b><br>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.<br>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.<br>The water discharged by the bleeders will be routed below the chassis frame rails.  |
| 0520277 | Tank to Pump, (1) 3.00" Valve, 4.00" Plumbing, PUC                              | <b>TANK TO PUMP</b><br>The booster tank will be connected to the intake side of the pump with heavy duty 4.00" piping and a quarter turn 3.00" full flow line valve with the control located at the operator's panel. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing. A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.   |
| 0595508 | Outlet, Tank Fill, 1.50", PUC   | <b>TANK REFILL</b><br>A 1.50" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.  |
| 0766941 | Control, Outlets, Swing Handle, Elec Right Outlets Akron 9335 w/Press Disp, PUC | <b>DISCHARGE OUTLET CONTROLS</b><br>The right side discharges will incorporate a quarter-turn ball valve and be controlled by Akron 9335 electric valve controllers provided on the pump operators panel. The electric controls must be of a true position feedback design, requiring no clutches in the motor or current limiting. The units must be completely sealed with momentary open, close as well and an optional one touch full open feature to operate their corresponding valve actuator. The controllers will provide position indication on a full color, backlit LCD display. They will have manual adjustment of the brightness as well as an auto dimming option. In addition to the valve controls, the electric valve controllers will include a pressure display<br>All other outlets will have manual swing handles that operate in a vertical up and down motion. These handles will be able to lock in place to prevent valve creep under pressure. |
| 0516755 | Outlet, Left Side, 2.50" (2), PUC   | <b>LEFT SIDE DISCHARGE OUTLETS</b><br>There will be two (2) discharges with a 2.50" valves on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter. Discharges will be located below the cab, and will be no higher than the top of the chassis frame rail. Discharges will not be located on the pump operator's panel. Lever controls will be provided at the valve.   |
| 0055095 | Not Required, Elbow, Left Side Outlets, 2.50"                                   |  |
| 0092570 | Not Required, Outlets, Left Side Additional                                     |  |
| 0035094 | Not Required, Elbow, Left Side Outlets, Additional                              |  |
| 0766761 | Outlet, Right Side, 2.50", (1), Electric Akron 9335 Controller, PUC             | <b>RIGHT SIDE DISCHARGE OUTLETS</b><br>There will be One (1) discharge outlet with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" MNST adapter. The discharge(s) will be located below the crew cab and will be no higher than the top of the chassis frame rail.<br>There will be Akron 9335 electric valve controller(s) provided on the pump operators panel. The electric control(s) must be of a true position feedback design, requiring no clutches in the motor or current limiting. The unit(s) must be completely sealed with momentary open, close as well and an optional one touch full open feature to operate the valve actuator. The controller(s) will provide position indication on a full color, backlit LCD display. They will have manual adjustment of the brightness as well as an auto dimming option.<br>In addition to valve position, each controller will include a pressure display.                             |
| 0021134 | Not Required, Elbow, Right Side Outlets, 2.50"                                  |  |
| 0092571 | Not Required, Outlets, Right Side Additional                                    |  |
| 0089584 | Not Required, Elbow, Right Side Outlets, Additional                             |  |

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| 0818640 | Outlet, Large Diameter, Right Side, Akron Valve, PUC                          | <b>LARGE DIAMETER DISCHARGE OUTLET</b><br>There will be an Akron 8800 4.00" flat ball valve with 4.00" plumbing terminating with a 4.00" MNST chrome adapter on the right side pump panel.<br>The valve will be controlled with a(n) Akron 9335 with pressure located at the pump operator's panel.   |
| 0699320 | Adapter, 4.00" FNST x 5.00" Storz, w/Cap and Chain, PUC                       | <b>LARGE DIAMETER OUTLET ADAPTER</b><br>one (1) 4.00" outlet will be furnished with a 4.00" (F) National Standard hose thread x 5.00" Storz adapter. A 5.00" Storz cap and chain will be provided with the adapter.   |
| 0649939 | Outlet, Front, 1.50" w/2" Plumbing  | <b>FRONT DISCHARGE OUTLET</b><br>There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located in the center bumper tray.<br>Plumbing will consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe will be used in the plumbing where appropriate. The piping will terminate with a 1.50" NST with 90 degree stainless steel swivel.<br>There will be automatic drains provided at all low points of the piping.   |
| 0516777 | Outlet, Rear, 2.50", (1), Thru Tank, PUC                                      | <b>REAR DISCHARGE OUTLET</b><br>There will be One (1) discharge outlet piped to the rear of the hose bed on left side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel. Discharge will terminate with 2.50" NST thread. Discharge piping will be schedule 10 304L welded or formed stainless steel and routed through the water tank.   |
| 0045091 | Elbow, Rear Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH                  | <b>REAR OUTLET ELBOWS</b><br>The 2.50" discharge outlets located at the rear of the apparatus will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.<br>The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.  |
| 0516782 | Outlet, Rear, 2.50" w/2.50" Plumbing, Thru Tank, PUC, Additional              | <b>REAR DISCHARGE OUTLET</b><br>There will be Two (2) discharge outlets piped to the rear of the hose bed, on two (2) on the right side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel. Discharge will terminate with 2.50" NST thread. Discharge piping will be schedule 10 304L welded or formed stainless steel and routed through the water tank.   |
| 0536635 | Elbow, Rear Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH, PUC, Additional | <b>ADDITIONAL REAR OUTLET ELBOWS</b><br>Two (2) discharge outlets 2.50" discharge outlets, located at the rear of the apparatus, will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.<br>The elbow will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.   |
| 0752097 | Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain                        | <b>DISCHARGE CAPS/ INLET PLUGS</b><br>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.<br>Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size.<br>The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.   |
| 0723042 | Valve, 0.75" Bleeder, Discharges, "T" Swing Handle                            | <b>OUTLET BLEEDER VALVE</b><br>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.<br>The valves will be located behind the panel with a T swing style handle control extended to the outside of the side pump panel.<br>The handles will be chrome plated and provide a visual indication of valve position.<br>The T swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage.<br>Bleeders will be located at the bottom of the pump panel. They will be properly labeled identifying the discharge they are plumbed in to.<br>The water discharged by the bleeders will be routed below the chassis frame rails. |

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| 0753335 | Outlet, 3.00" Deluge w/2.50" Valve, Dual Control, LG HW's, PUC | <p><b>DELUGE RISER</b><br/>A 3.00" deluge riser will be installed above the pump in such a manner that a monitor can be mounted and used effectively. 3.00" piping will be installed securely so no movement develops when the line is charged. The riser will be gated and controlled at the pump operator's panel by a large handwheel control. A 2.50" valve will be provided. The deluge riser will allow flow for 1000 GPM.</p> <p><b>DUAL CONTROL</b><br/>There will be a second large handwheel control, within reach of the deluge appliance operator.</p>  |
| 0770359 | No Monitor Requested, Customer/Dealer Furnished and Installed  | <p><b>MONITOR</b><br/>A customer/dealer supplied and installed make and model TFT Crossfire monitor will be properly installed on the deluge riser.</p>   |
| 0029304 | No Nozzle Req'd  |   |
| 0005070 | Deluge Mount, NPT  | The deluge riser will have male National Pipe Threads for mounting the monitor.   |
| 0750982 | Crosslay Module, Full Width, Roll Up Doors, PUC                | <p><b>CROSSLAY MODULE</b><br/>The crosslay module will be full width of the rear body.<br/>The forward, upper corners of the module will have full body corners.<br/>The crosslay module will be manufactured for installation of roll up doors on each side.</p>   |
| 0750897 | Doors, Crosslay, Roll-up Amdor, Each End, Full Height, PUC     | <p><b>ROLL-UP DOOR, CROSSLAY ENDS, PUC</b><br/>All compartment doors will be roll-up style double faced, aluminum construction, painted two (2) colors to match the rear body paint break and manufactured by AMDOR™. The crosslay enclosure will be full width of the body.<br/>The track will be the flanged track with the screws installed to the rear of the track guide.<br/>The slats will be double wall box frame extrusion. The exterior surface will be flat and the interior surface will be concave to help loose equipment fall to the ground and prevent it from jamming the door.<br/>Between each slat will be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments.<br/>Each door will have a 4.00" counter balance to assist in lifting.<br/>A polished stainless steel lift bar to be provided for each roll-up 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.<br/>The crosslays will have a drip pan below the roll of the door.</p>   |
| 0747660 | Lights, Crosslay Compt, Forward LED, 2Lts                      | <p><b>CROSSLAY COMPARTMENT LIGHTING</b><br/>There will be two (2) 12 volt DC light strips with white LEDs and mechanical fasteners, provide behind the front door frame on the crosslay compartments per the following:<br/>One (1) strip light for the left side crosslay compartment door<br/>One (1) strip light for the right side crosslay compartment door<br/>The lights will be activated when the battery switch is on and the respective door is opened.</p>  |
| 0737370 | Crosslays, (1) 2.50", W/Poly Trays, PUC                        | <p><b>CROSSLAY(S), LOWER</b><br/>There will be one (1) lower crosslays provided.<br/><b>2.50" Crosslays</b><br/>There will be one (1) 2.50" crosslays plumbed with 2.50" welded or formed schedule 10 304L stainless steel pipe.<br/>The crosslays will be low mounted with the bottom of both crosslay trays no more than 11.00" above the frame rails for simple, safe reloading and deployment (no exception).<br/>There will be a 2.50" National Standard hose thread 90-degree swivel provided in each hose bed, so that the hose may be removed from either side of apparatus. The swivel will be as far outbound as possible for ease of changing hose.<br/>Each crosslay will be gated with a 2.50" quarter turn ball valve with the controls located at the pump operator's panel.<br/>Each hose bed will be capable of carrying 200' of 3" DJ Hose .<br/><b>Crosslay Hose Trays</b><br/>A removable tray will be provided for each crosslay hose bed. The crosslay tray will be constructed of black poly to provide a lightweight sturdy tray. Two (2) hand holes will be in the floor and additional hand holes will be provided in the sides for easy removal and installation from the compartment. The floor of the trays will be perforated to allow for drainage and hose drying. Trays will be held in place by a mechanical spring-loaded stainless-steel latch that automatically deploys upon loading the trays to hold the trays in place during transit.</p> |

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| 0749435 | Crosslays, (2) 1.50", W/Poly Trays, PUC                                       | <p><b>CROSSLAY(S), UPPER</b><br/>There will be two (2) upper crosslays provided.</p> <p><b>1.50" Crosslays</b><br/>There will be two (2) 1.50" crosslays plumbed with 2.00" welded or formed schedule 10 304L stainless steel pipe.<br/>There will be a 1.50" National Standard hose thread 90-degree swivel provided in each hose bed, so that the hose may be removed from either side of apparatus. The swivel will be as far outbound as possible for ease of changing hose.<br/>Each crosslay will be gated with a 2.00" quarter turn ball valve with the controls located at the pump operator's panel.<br/>Each hose bed will be capable of carrying 200' of 1.75" double jacket hose .</p> <p><b>Crosslay Hose Trays</b><br/>A removable tray will be provided for each crosslay hose bed. The crosslay tray will be constructed of black poly to provide a lightweight sturdy tray. Two (2) hand holes will be in the floor and additional hand holes will be provided in the sides for easy removal and installation from the compartment. The floor of the trays will be perforated to allow for drainage and hose drying. Trays will be held in place by a mechanical spring-loaded stainless-steel latch that automatically deploys upon loading the trays to hold the trays in place during transit.</p> |
| 0729571 | Tube, Aluminum, Pike Pole, Special Ny Style Notch, Upper Crosslay Module, PUC | <p><b>PIKE POLE STORAGE</b><br/>A quantity of two (2) pike poles aluminum tubes will be provided and located (1) deployed out DS and (1) deployed out PS in the upper crosslay module. The pike pole tube(s) will be notched to allow a New York style pike pole to fit in the tube.<br/>If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate will be provided.</p>   |
| 0653355 | Reel, Booster, Steel, Rear Tailboard Compartment, PUC/HDRP                    | <p><b>BOOSTER HOSE REEL</b><br/>A Hannay electric rewind steel booster hose will be installed in the rear tailboard compartment. The exterior finish of the reel will be painted #269 gray from the reel manufacturer.<br/>Roll-up door for this compartment will not interfere with the hose reel.<br/>A polished stainless steel roller and guide assembly will be provided so the booster hose does not rub against a painted surface.<br/>Discharge control will be provided at the pump operator's panel. Plumbing to the reel will consist of 1.50" or larger Aeroquip hose, stainless steel pipe and a 2.00" valve.</p> <p><b>HOSE REEL BLOWOUT</b><br/>A hose reel blowout will be furnished to blow out any remaining water from the hose reel. The blowout will be piped from the wet tank of the brake system to the hose reel and will be controlled at the pump operator's panel.</p>   |
| 0005279 | Switch, Reel Rewind - One at Reel   | Reel motor will be protected from overload with a circuit breaker rated to match the motor.<br>An electric rewind control switch will be installed adjacent to the reel.   |
| 0005300 | Hose, Booster - 150' of 1.00"/800 PSI   | Booster hose, 1.00" diameter and 150 feet, with chrome plated Barway, or equal couplings will be provided.<br>Working pressure of the booster hose will be a minimum of 800 psi.   |
| 0005244 | Capacity, Hose Reel 200' of 1"  | Capacity of the hose reel will be 200 feet of 1.00" booster hose.  |
| 0007428 | Nozzle for Booster Reel Not Req'd   |  |
| 0044333 | Not Required, Foam System   | <p><b>FOAM SYSTEM</b><br/>A foam system will not be required on this apparatus.</p>  |
| 0012126 | Not Required, CAF Compressor  |  |
| 0552517 | Not Required, Refill, Foam Tank   |  |
| 0042573 | Not Required, Foam System Demonstration                                       |  |
| 0045465 | Not Required, Foam Tanks  |  |
| 0091110 | Not Required, Foam Tank Drain   |  |
| 0091079 | Not Required, Foam Tank #2  |  |

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| 0091112 | Not Required, Foam Tank #2 Drain   |  |
| 0738072 | Approval Dwg, Pump Panel(s), Not Required  |  |
| 0032479 | Pump Panel Configuration, Control Zone   | <b>PUMP PANEL CONFIGURATION</b><br>The pump panel configuration will be arranged and installed in an organized manner that will provide user-friendly operation.   |
| 0686774 | Material, Pump Panels, Operators Black UL-LX, Sides Black UL-LX, PUC             | <b>PUMP AND GAUGE PANEL</b><br>The pump operators panel and gauge panels will be constructed of stainless steel. The pump panels on the left and right side will be constructed of stainless steel.<br>All of the panels will be covered with black UL-LX® spray-on polyurethane/polyurea material finish.   |
| 0516978 | Pump and Plumbing Access, Simple Tilt Service, PUC                               | <b>PUMP AND PLUMBING ACCESS</b><br>Simple access to the plumbing will be provided through the front of the body area by raising the cab for complete plumbing service and valve maintenance. Access to valves will not require removal of operator panels or pump panels. Access for rebuilding of the pump will not require removal of more than the tank to pump line and a single discharge line. This access will allow for fast, easy valve or pump rebuilding, making for reduced out of service times. Steps will be provided for access to the top of the pump.<br>Access to the pump will be provided by raising the cab. The pump will be positioned such that all maintenance and overhaul work can be performed above the frame and under the tilted cab. The service and overhaul work on the pump will not require the removal of operator panels or pump panels. Complete pump casing and gear case removal will require no more than removal of the intake and discharge manifolds, driveline, coolers and a single discharge line. The pump case and gear case will be able to be removed by lifting upward without interference from piping and be removable in less than 3 hours. |
| 0618458 | Light, Pump Compt, Wln 3SC0CDCR LED White, PUC                                   | <b>PUMP COMPARTMENT LIGHT</b><br>There will be one (1) Whelen®, Model 3SC0CDCR, 3.00" white 12 volt DC LED light(s) with Whelen, Model 3FLANGEC, flange(s) installed in the plumbing area.<br>The light(s) will be activated by a toggle switch located in the pump compartment area.  |
| 0516983 | Gauges, Engine, Included With Pressure Controller, PUC                           | Engine monitoring graduated LED indicators will be incorporated with the pressure controller.  |
| 0005601 | Throttle, Engine, Incl'd w/Press Controller                                      |  |
| 0739224 | Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green | <b>THROTTLE READY GREEN INDICATOR LIGHT</b><br>There will be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.   |
| 0549333 | Indicators, Engine, Included with Pressure Controller                            |  |
| 0511078 | Gauges, 4.00" Master, Class 1, 30"-0-600psi                                      | <b>VACUUM AND PRESSURE GAUGES</b><br>The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated.<br>The gauges will be a minimum of 4.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#.<br>Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.<br>The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel.<br>Test port connections will be provided at the pump operator's panel. One (1) will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They will be marked with a label.<br>This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.  |
| 0511100 | Gauge, 2.00" Pressure, Class 1, 30"-0-400psi                                     | <b>PRESSURE GAUGES</b><br>The individual "line" pressure gauges for the discharges will be Class 1 interlube filled. They will be a minimum of 2.00" in diameter and have white faces with black lettering.<br>Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.<br>Gauges will have a pressure range of 30"-0-400#.<br>The individual pressure gauge will be installed as close to the outlet control as practical.<br>This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.   |

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| 0750526 |    | Gauge, Water Level, Pierce, In pressure Controller, Lt Driver                 | <b>WATER LEVEL GAUGE</b><br>An electric water level gauge will be incorporated in the pressure controller that registers water level by means of nine (9) LEDs. They will be at 1/8 level increments with a tank empty LED. The LEDs will be a bright type that is readable in sunlight and have a full 180-degree of clear viewing. To further alert the pump operator, the gauge will have a warning flash when the tank volume is less than 25 percent. The gauge will have down chasing LEDs when the tank is almost empty. The level measurement will be ascertained by sensing the head pressure of the fluid in the tank or cell. There will be a light driver module with this installation to power additional water level gauge(s) included on the apparatus.   |
| 0604028 |    | Water Level Gauge, FRC, MaxVision WLA280-A00 Programmable Remote Display      | <b>ADDITIONAL WATER LEVEL GAUGE</b><br>There will be two (2) additional Fire Research MaxVision, model WLA280-A00, water tank remote indicator(s) provided and installed Each side of cab behind crew doors up high. The indicators will show the volume of water in the tank on 96 easy to see super bright Tri-color LEDs. The indicator case will be waterproof and manufactured of Polycarbonate material with an integrated lens. The remote indicator will indicate the level as a single color:<br>Red for 25 percent or less<br>Amber for up to 50 percent volume<br>Blue for up to 75 percent volume<br>Green for up to 100 percent volume<br>When the level reaches 25 percent, the red LEDs will begin flashing. When the level is empty, the red LEDs will scroll in a down-chasing motion and then flash three (3) times. The flash rate will be determined by the main water tank sensor. It will have the program capability to adjust the brightness level for day time and night time viewing. The LEDs can also be programmed for different colors.<br><br>This module will be activated when the battery switch is on. |
| 0006774 |    | Not Required, Foam Level Gauge  |   |
| 0653081 |    | Light, Pump Operator & Panel, Side Ctrl, PUC, 60354C LED Cab & LED OH Chr Cvr | <b>SIDE CONTROL PUMP OPERATOR'S/PUMP PANEL LIGHTING</b><br>Illumination will be provided for controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus and the equipment provided on it. External illumination will be a minimum of five (5) foot-candles on the face of the device. Internal illumination will be a minimum of four (4) footlamberts. The pump panels will be illuminated by two (2) Truck-Lite, Model 60354C, 6.00" x 2.00" oval white LED lights with Model 60700, grommets and chrome covers installed on the back of the cab, one (1) on the driver's side and one (1) on the passenger's side. The pump operator's panel will utilize the same LED strip lighting at the forward doorframe as all other compartment lighting. There will be a small white LED pump engaged indicator light installed overhead.   |
| 0828301 | SP | Air Horn, (2) Hadley, 6" Round, 21.00", eTone, Black, In Bumper               | <b>AIR HORN SYSTEM</b><br>Two (2) Hadley®, eTone, 21.00" long black air horns will be recessed in the front bumper. 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.   |
| 0606834 |    | Location, Air Horns, Bumper, Each Side, Outside Frame, Inboard (Pos #2 & #6)  | <b>Air Horn Location</b><br>The air horns will be located on each side of the bumper, just outside of the frame rails.  |
| 0757092 |    | Control, Air Horn, Multi Select   | <b>Air Horn Control</b><br>The air horn(s) will be activated by the following:  |
| 0757076 |    | Control, Air Horn, Lanyard, RS  | Right side lanyard. The lanyard to be a link chain inside vinyl tubing.   |
| 0757077 |    | Control, Air Horn, Lanyard, LS  | Left side lanyard. The lanyard to be a link chain inside vinyl tubing.  |
| 0525667 |    | Siren, Wln 295SLSA1, 100 or 200 Watt  | <b>ELECTRONIC SIREN</b><br>A Whelen®, Model 295SLSA1, electronic siren with noise canceling microphone will be provided. This siren to be active when the battery switch is on and that emergency master switch is on.  |
| 0510206 |    | Location, Elect Siren, Recessed Overhead In Console                           | Electronic siren head will be recessed in the driver side center switch panel.  |
| 0748306 |    | Control, Elec Siren, Multi Select   | <b>ELECTRONIC SIREN CONTROL</b><br>The electronic siren will be activated by the following:   |

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| 0748287 | Control, Elec Siren, Rocker/Membrane Sw, RS                                  | The right side momentary switch.  |
| 0805709 | Control, Elec Siren, Horn Ring, Interlock                                    | The steering wheel horn ring with siren/horn selector switch.<br>The control to be available when the parking brake is released.  |
| 0783670 | Speaker, (2) WIn, SA315P, w/Pierce Black Painted Grille, 100 watt            | <b>SPEAKERS</b><br>There will be two (2) Whelen®, Model SA315P, black nylon composite, 100-watt, speakers with through bumper mounting brackets and black steel grilles provided. Each speaker will be connected to the siren amplifier.  |
| 0601559 | Location, Speaker, Frt Bumper, Recessed, Each Side, Inside Frame (Pos 3 & 5) | The speakers will be recessed in each side of the front bumper, inside of the frame rails.  |
| 0895310 | Siren, Federal Q2B   | <b>AUXILIARY MECHANICAL SIREN</b><br>There will be a Federal Signal Model Q2B mechanical siren furnished and installed in the front of the apparatus.<br>The Q2B will be black chrome finish.<br>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.<br>The siren will have a 2-gauge ground wire connected to the chassis battery stud. The cable will be labeled Q2B- at the battery. |
| 0006095 | Siren, Mechanical, Mounted Above Deckplate                                   | The mechanical siren will be mounted on the bumper deck plate. It will be mounted on the left side. A reinforcement plate will be furnished to support the siren.   |
| 0748305 | Control, Mech Siren, Multi Select  | <b>MECHANICAL SIREN CONTROL</b><br>The mechanical siren will be activated by the following:   |
| 0748282 | Control, Mech Siren, Ft Sw LS  | Left side foot switch.  |
| 0729537 | Control Mech Siren, Rocker Momentary On, Brake RS                            | The siren will be controlled by a 3-position rocker switch located in the cab on the right side switch panel. The switch will control the siren per the following:<br>The momentary top position will activate the mechanical siren.<br>The home middle position will be neutral.<br>The momentary bottom position will apply the mechanical siren brake.   |
| 0737437 | Sw, Siren Brake, Momentary Red, Pnl 9, Saber FR/Enf                          | A momentary red switch will be included in switch panel #9 to activate the siren brake.   |
| 0734674 | Sw, Siren Brake, Mom Rocker, Red Outline, RS Overhead Sw Pnl, Mux            | A momentary rocker switch will be included in the right side overhead switch panel to activate the siren brake.<br>There will be a red outline decal around the black rocker switch.  |
| 0746353 | Not Required, Warning Lights Intensity                                       |   |

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| 0807805 | Lightbar, Wln, Freedom IV-D, 72",<br>RRRRWRRROptRRRWRRRR                               | <p><b>FRONT ZONE UPPER WARNING LIGHTS</b></p> <p>There will be one (1) 72.00" Whelen® Freedom™ IV LED lightbar mounted on the cab roof. The lightbar will include the following:</p> <p>One (1) photocell to dim the lightbar LED modules when the parking brake is applied and in low light conditions.</p> <p>One (1) red flashing LED module in the left side rear corner position.</p> <p>One (1) red flashing LED module in the left side end position.</p> <p>One (1) red flashing LED module in the left side front corner position.</p> <p>One (1) red flashing LED module in the left side first front position.</p> <p>One (1) white flashing LED module in the left side second front position.</p> <p>One (1) red flashing LED module in the left side third front position.</p> <p>One (1) red flashing LED module in the left side fourth front position.</p> <p>One (1) red flashing LED module in the left side fifth front position.</p> <p>One (1) 795 LED traffic light controller set to national standard high priority in the center positions.</p> <p>One (1) red flashing LED module in the right side fifth front position.</p> <p>One (1) red flashing LED module in the right side fourth front position.</p> <p>One (1) red flashing LED module in the right side third front position.</p> <p>One (1) white flashing LED module in the right side second front position.</p> <p>One (1) red flashing LED module in the right side first front position.</p> <p>One (1) red flashing LED module in the right side front corner position.</p> <p>One (1) red flashing LED module in the right side end position.</p> <p>One (1) red flashing LED module in the right side rear corner position.</p> <p>There will be clear lenses included on the lightbar.</p> <p>The following switches may be installed in the cab on the switch panel to control the lightbar:</p> <p>a switch to control the flashing LED modules.</p> <p>the traffic light controller will be activated by a cab switch with emergency master control, and there will be a driver's side momentary cab switch with no emergency master control to activate the traffic light controller.</p> <p>The two (2) white flashing LED modules and the traffic light controller will be disabled when the parking brake is applied.</p> <p>The eight (8) red flashing LED modules in the front positions, and the two red (2) flashing LED modules in the end positions may be load managed when the parking brake is applied.</p> |
| 0016380 | No Additional Lights Req'd, Side<br>Zone Upper   |   |
| 0734071 | Lights, Front Zone, Wln M6** M6**<br>M6** M6** LED, Q Bzl, 4lts                        | <p><b>LIGHTS, FRONT ZONE LOWER</b></p> <p>There will be four (4), Whelen® Model M6** 4.32" high x 6.75" wide x 1.37" deep flashing LED warning lights installed on the cab face above the headlights in twin bezels.</p> <p>The left side outside warning light to include red LEDs</p> <p>The left side inside warning light to include red LEDs</p> <p>The right side inside warning light to include red LEDs</p> <p>The right side outside warning light to include red LEDs</p> <p>The warning light lens color(s) to be clear</p> <p>The housing and trim shall be painted black</p> <p>The lights may be controlled per the following:</p> <p>A switch on the cab instrument panel will control the lights</p> <p>White LEDs will be deactivated when the parking brake is applied</p> <p>Amber LEDs will be activated when the parking brake is applied</p> <p>Amber, blue green or red LEDs in the inside positions may be load managed when the parking brake is applied</p>  |
| 0826917 | Light, Front, Roto Ray 4000W,<br>PAR46 LED, 2-R, 1-W,Hdn Mt Tp Sct<br>Grl Blk,VoidWrnt | <p><b>ROTO RAY LIGHT</b></p> <p>There will be one (1) Roto Ray, Model 4000W rotating warning light provided on the front of the cab mounted through the top section of the front grille.</p> <p>This warning light will include the following:</p> <p>Two (2) PAR46 lights with red LEDs and clear lenses</p> <p>One (1) PAR46 light with white LEDs and a clear lens</p> <p>There will be a switch in the cab on the switch panel to control this light.</p> <p>The rotation motor and the warning lights will be deactivated when the parking brake is applied.</p> <p>The exterior parts of this assembly will be painted black.</p> <p>Portions painted in house will void the warranty.</p>  |
| 0653937 | Flasher, Headlight Alternating   | <p><b>HEADLIGHT FLASHER</b></p> <p>The high beam headlights will flash alternately between the left and right side.</p> <p>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.</p> <p>The flashing will automatically cancel when the hi-beam headlight switch is activated or when the parking brake is set.</p>  |



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| 0747228 | Lights, Side Zone Lower, Wln M6**, M6**, M6**, 6Lts                    | <b>SIDE ZONE LOWER LIGHTING</b><br>There will be six (6) Whelen®, Model M6**, 4.31" high x 6.75" long x 1.37" deep flashing LED warning lights with black trim installed per the following:<br>Two (2) lights located, one (1) each side on the bumper extension. The driver's side, side front light to include red warning LEDs and the passenger's side, side front light to include red warning LEDs.<br>Two (2) lights located, one (1) each side of cab rearward of crew cab doors. The driver's side, side middle light to include red warning LEDs and the passenger's side, side middle light to include red warning LEDs.<br>Two (2) lights located, one (1) each side above rear wheels. The driver's side, side rear light to include red warning LEDs and the passenger's side, side rear light to include red warning LEDs.<br>The warning light lens color(s) to be clear.<br>There will be a switch in the cab on the switch panel to control the lights.  |
| 0896616 | Lights, Door Interior Flash, 4 Dr Cab, Weldon 8401-0000-20 Strip Light | <b>INTERIOR CAB DOOR WARNING LIGHTS</b><br>There will be four (4) Weldon, Model 8401-0000-20, 16" long x 3/4" High x 5/8" deep amber 12 volt DC LED flashing strip lights provided.<br>One (1) light on the left side cab door.<br>One (1) light on the right side cab door.<br>One (1) light on the right side crew cab door.<br>One (1) light on the left side crew cab door.<br>Each light will be located over the door window..<br>Each light will be activated when the battery switch is on, respective door is opened and the ignition switch is on.<br>Each light will be installed so the flash pattern directs traffic away from the doors.   |
| 0815847 | Connectors, Door Interior Flash, All Cabs, Weatherproof                | <b>ELECTRICAL CONNECTORS FOR WARNING LIGHTS</b><br>The lights will be installed with a weatherproof insulated crimped connectors in order to provide ease of connection/disconnection of the circuit applied to.   |
| 0745867 | Lights, Side, Wln M9** LED, Trm Fet 1st                                | <b>SIDE WARNING LIGHTS</b><br>There will be two (2) Whelen®, Model M9**, 6.50" high x 10.37" wide x 1.37" deep flashing LED warning light(s) with black trim provided, DS and PS front upper body corners.<br>The light(s) to include green LEDs. The warning light lens color(s) to be clear.<br>These lights will be activated with the side warning switch.<br>White LEDs will be deactivated when the parking brake is applied.<br>Amber, blue, green or red LEDs may be load managed when the parking brake is applied.   |
| 0827630 | Lights, Side, Wln WION* LED, Recessed in Cab Steps, 4lts               | <b>SIDE WARNING LIGHTS</b><br>There will be four (4) Whelen®, Model WION* wide angle flashing LED warning lights with universal mounting brackets provided and mounted as follows:<br>One (1) recessed in the driver's side cab step on the front, vertical surface, below bottom of door.<br>The left side, side front light to include red LEDs.<br>One (1) recessed in the driver's side crew cab step on the front, vertical surface, below bottom of door. The left side, side rear light to include red LEDs.<br>One (1) recessed in the passenger's side crew cab on the front, vertical surface, below bottom of door. The right side, side rear light to include red LEDs.<br>One (1) recessed in the passenger's side cab step on the front, vertical surface, below bottom of door. The right side, side front light to include red LEDs.<br>The lenses for these lights will be clear.<br>These lights will be activated with the side warning switch.<br>These lights may be load managed when the parking brake is applied.<br>White LEDs will be deactivated when the parking brake is applied. |
| 0804023 | Lights, Side, Wln WIONSM** LED, Mounted Behind Poly Rub Rail, 1st      | <b>SIDE WARNING LIGHTS</b><br>There will be four (4) Whelen®, Model WIONSM** LED light(s) provided and located behind the body poly rub rails Centered below LS1, LS3, RS1, RS3. The poly rub rails will be cut out to allow the light(s) to shine through the poly rub rails.<br>The color of each light will be red LED with a clear lens.<br>Each light will be provided with black trim and mounting gasket.<br>Any white light(s) will be disabled when the park brake is set.  |
| 0894842 | Lights, Rear Zn Lwr, Wln M6*, For Tail Lt Housings                     | <b>REAR ZONE LOWER WARNING LIGHTS</b><br>There will be two (2) Whelen®, Model M6**, 4.31" high x 6.75" wide x 1.37" deep flashing LED warning lights located in the rear tail light housings of the apparatus per the following:<br>The driver's side rear light to be red.<br>The passenger's side rear light to be red.<br>The lens color(s) to be clear.<br>There will be a switch located in the cab on the switch panel to control the lights.  |
| 0747386 | Lights, Rear, Wln 6RB** LED, Features 1st                              | <b>REAR WARNING LIGHTS</b><br>There will be two (2) Whelen®, Model 6RB**, LED flashing warning light(s) with Whelen, black trim provided DS and PS rear bulkheads below M9 warning lights.<br>The color of the lights will be red.<br>The color of the lens of the light(s) will be clear.<br>These lights will be activated with the rear upper warning switch.   |

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| 0725515 | Lights, Rear/Side Up Zone, WIn M9°C LED, Clear Lens, Flange Kit, 4lts         | <b>WARNING LIGHTS (Rear and Side upper zones)</b><br>Four (4) Whelen, model M9°C LED flashing warning lights will be provided at the rear of the apparatus.<br>The side rear upper light(s) on the driver's side to be red.<br>The rear upper light(s) on the driver's side to be red.<br>The rear upper light(s) on the passenger's side to be red.<br>The side rear upper light(s) on the passenger's side to be red.<br>These lights will include a lens that is clear.<br>These lights will include a black trim .<br>There will be a switch located in the cab on the switch panel to control the lights. |
| 0006551 | Not Required, Lights, Rear Upper Zone Blocking                                |  |
| 0590000 | No Hose Bed Warn Lts Brkts Required, Lts On Hatch/Body Compts,PUC             |  |
| 0751112 | Lights, Traffic Directing, WIn TLIA Amber LED, 8 Lts, TACTL5                  | <b>TRAFFIC DIRECTING LIGHT</b><br>There will be eight (8) Whelen® Model TLIA, 1.50" high x 5.14" long x 0.50" deep lights with amber LEDs, clear lenses and black trim installed at the rear of the apparatus as a traffic directing light.<br>There will be one (1) Whelen, Model TACTL5 control head energized when the battery switch is on, included with this installation.<br>The auxiliary flash to be activated when the emergency master switch is on.  |
| 0791018 | Location, TDL, Surface Mounted, Hose Bed Cover Rear Flange                    | The lights used as traffic directing will be surface mounted on the rear vertical flange of the hose bed cover as close to the center as practical.  |
| 0530288 | Location, Traf Dir Lt Controller, Overhead Recessed Console, above Eng Tnl DS | The traffic directing light controller will be located within the overhead recessed console above the engine tunnel on the driver's side.  |
| 0772909 | Light Twr, W-B Chf NS2.3-600 WHL, 4-P*H2, 12VDC Lts Cld 7.5'                  | <b>LIGHT TOWER</b><br>There will be one (1) Will-Burt, Model NS2.3-600 WHL, light tower provided.<br>There will be four (4) Whelen, Model P*H2, 150 watt 12 volt LED DC light heads included on this tower.<br>The light tower will have with a combination of flood and spot optics lights.<br>The painted parts of the light tower and the light heads to be white.<br>This tower will be connected to the Do Not Move Truck Indicator in the cab.<br>The lights included on this tower may be load managed when the parking brake is applied.   |
| 0664471 | Location, Light Tower, Cargo Area   | <b>Light Tower Location</b><br>The light tower will be installed in the cargo area.  |
| 0617750 | Controller, Lt Twr, W-B, Wired Hndhld, E-STOP Chf, Chf Pr, Pow Pr             | <b>Light Tower Controller</b><br>There will be one (1) handheld wired controller included.   |
| 0782222 | Location, Light Tower Controller, PUC Pump Panel Area, Recess Rear Wall       | <b>Light Tower Controller Location</b><br>The light tower controller will be recessed in the partition wall just rearward of the pump panel. An open top bin at the base of the recess will be provided in this recessed location to help retain the controller cord.  |
| 0779707 | Receptacle Strip, 20A 120V 6-Place, Interior Body                             | <b>POWER OUTLET STRIP</b><br>There will be one (1) receptacle strip(s) with six (6) 20 amp 120 volt AC straight blade receptacles provided RS1 on right wall centered from floor to ceiling.<br>The strip(s) selected will be powered from the shoreline to 120 volt AC power inverter internal transfer sw through a receptacle located adjacent to the strip(s).<br>There will be a label installed near the strip(s) that state the following:<br>Line Voltage<br>Current Rating (amps)<br>Phase<br>Frequency   |

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| 0783678 | Receptacle, 15/20A 120V 3-Pr 3-Wr, NEMA 5-20R SB Dup, 1st                      | <b>120 VOLT RECEPTACLE</b><br>There will be two (2), 15/20 amp 120 volt AC three (3) wire straight blade duplex receptacle(s) with interior stainless steel wall plate(s), installed Interior on inboard wall, up high of LS/RS rear facing EMS cabinets. The NEMA configuration for the receptacle(s) will be 5-20R.<br>The receptacle(s) will be powered from the shoreline to 120 volt AC power inverter internal transfer sw.<br>There will be a label installed near the receptacle(s) that state the following:<br>Line Voltage<br>Current Rating (amps)<br>Phase<br>Frequency  |
| 0519934 | Not Required, Brand, Hydraulic Tool System                                     |   |
| 0649753 | Not Required, PTO Driven Hydraulic Tool System                                 |   |
| 0816508 | NFPA Required Loose Equipment, Pumper, NFPA/ULC 2024, Provided by Fire Dept    | <b>NFPA LOOSE EQUIPMENT</b><br><b>NFPA Required Loose Equipment Provided by Fire Department</b><br>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:<br>One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, <i>Standard for High Visibility Public Safety Vests</i> , and have a five-point breakaway feature that includes two (2) at the shoulders, two (2) at the sides, and one (1) at the front.<br>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.<br>Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities.<br><b>NFPA Loose Equipment That Should be Considered</b><br>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:<br>800 ft (60 m) of 2.50" (65 mm) or larger fire hose.<br>400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose.<br>One (1) handline nozzle, 200 gpm (750 L/min) minimum.<br>Two (2) handline nozzles, 95 gpm (360 L/min) minimum.<br>One (1) smooth bore or combination nozzle with shutoff and with 2.50" (65 mm) inlet that flows a minimum of 250 gpm (950 L/min).<br>Four (4) SCBA apparatus<br>Four (4) SCBA spare cylinders<br>One (1) first aid kit.<br>Four (4) combination spanner wrenches.<br>Two (2) hydrant wrenches.<br>One (1) double female 2.50" (65 mm) adapter with national hose (NH) threads.<br>One (1) double male 2.50" (65 mm) adapter with national hose (NH) threads.<br>One (1) rubber mallet, for use on suction hose connections.<br>Two (2) salvage covers each a minimum size of 12 ft × 18 ft (3.7 m × 5.5 m).<br>One (1) automatic external defibrillator (AED). |
| 0816941 | Soft Suction Hose, Provided by Fire Department, NFPA/ULC 2024                  | <b>SOFT SUCTION HOSE PROVIDED BY FIRE DEPARTMENT</b><br>Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose.  |
| 0027023 | No Strainer Required   |   |
| 0816939 | Extinguisher, Dry Chemical, NFPA 2024, Provided by Fire Department             | <b>DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</b><br>The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.  |
| 0816937 | Extinguisher, 2.5 Gal. Pressurized Water, NFPA/ULC 2024, Provided by Fire Dept | <b>WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</b><br>The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.   |
| 0816998 | Axe, Flathead, Provided by Fire Department                                     | <b>FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT</b><br>The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.   |
| 0817000 | Axe, Pickhead, Provided by Fire Department                                     | <b>PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT</b><br>The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.   |

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| 0741569 | Paint Process / Environmental Requirements, Appleton | <p><b>PAINT PROCESS</b></p> <p>The exterior custom cab and body painting procedure will consist of a seven (7) step finishing process as follows:</p> <p><u>Manual Surface Preparation</u> - 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.</p> <p><u>Chemical Cleaning and Pretreatment</u> - 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.</p> <p><u>Surfacer Primer</u> - 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.</p> <p><u>Finish Sanding</u> - 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.</p> <p><u>Sealer Primer</u> - 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.</p> <p><u>Basecoat Paint</u> - 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.</p> <p><u>Clear Coat</u> - 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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p><b>Environmental Impact</b></p> <p>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:</p> <p>Topcoats and primers will be chrome and lead free.</p> <p>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.</p> <p>Particulate emission collection from sanding operations will have a 99.99 percent efficiency factor.</p> <p>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.</p> <p>Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean.</p> <p>Paint wastes are disposed of in an environmentally safe manner.</p> <p>Empty metal paint containers will be recycled to recover the metal.</p> <p>Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse.</p> <p>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.</p> |
| 0709566 | Paint, Two-Tone Color, Enforcer                      | <p><b>TWO-TONE CAB PAINT</b></p> <p>The cab will be painted two-tone with the upper section painted #101 black and the lower section painted #90 red. There will be a standard two-tone cab paint break provided.</p> <p>There will be a standard cab shield provided.</p>  |
| 0709833 | Paint, Two-Tone Color, Body                          | <p><b>TWO-TONE BODY PAINT</b></p> <p>The body will be painted two-tone with the upper section painted to match the upper section of the cab and the lower section painted to match the lower section of the cab. The body paint break will be above the body compartment door openings.</p>   |

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| 0646901 | Paint Chassis Frame Assy, With Liner, E-Coat, Standard        | <b>PAINT CHASSIS FRAME ASSEMBLY</b><br>The chassis frame assembly will be finished with a single system black top coat before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc.<br>Components that are included with the chassis frame assembly that will be painted (unless otherwise stated in a secondary option) are:<br>Frame rails<br>Frame liners<br>Cross members<br>Axles<br>Suspensions<br>Steering gear<br>Battery boxes<br>Bumper extension weldment<br>Frame extensions<br>Body mounting angles<br>Rear Body support substructure (front and rear)<br>Pump house substructure<br>Steel fuel tank<br>Castings<br>Individual piece parts used in chassis and body assembly<br>Components treated with epoxy E-coat protection prior to paint:<br>Two (2) C-channel frame rails<br>Two (2) frame liners<br>The E-coat process will meet the technical properties shown. |
| 0693798 | Paint, Front Wheels   | <b>FRONT WHEELS PAINT</b><br>All wheel surfaces, inside and outside, will be provided with paint black #101.  |
| 0693793 | Paint, Rear Wheels, Single Axle                               | <b>REAR WHEELS PAINT</b><br>All wheel surfaces, inside and outside, will be provided with paint black #101.   |
| 0733739 | Paint, Axle Hubs  | <b>AXLE HUB PAINT</b><br>All axle hubs will be painted to match lower job color.  |
| 0007230 | Compartment, Painted, Spatter Gray                            | <b>COMPARTMENT INTERIOR PAINT</b><br>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.  |
| 0544129 | Reflective Band, 1"-6"-1"                                     | <b>REFLECTIVE STRIPES</b><br>Three (3) reflective stripes will be provided across the front of the vehicle and along the sides of the body. The reflective band will consist of a 1.00" black stripe at the top with a 1.00" gap then a 6.00" black stripe with a 1.00" gap and a 1.00" black stripe on the bottom.   |
| 0007356 | Reflective across Cab Face                                    | The reflective band provided on the cab face will be at the headlight level.  |
| 0820076 | Stripe, Chevron, Rear, Reflective, NFPA/ULC 2024, Pumper, PUC | <b>REAR CHEVRON STRIPING</b><br>There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear roll up door will be covered.<br>The colors will be black and ruby red reflective.<br>Each stripe will be 6.00" in width.   |
| 0073811 | Folded "Z" Ribbon in Reflective Stripe, Pair                  | <b>FOLDED RIBBON IN REFLECTIVE STRIPE</b><br>There will be one (1) folded type ribbon/s added to the reflective stripe LS3 and RS3.   |
| 0609444 | SP Stripe, Sign Gold Outline Above Reflective Band            | <b>SIGN GOLD STRIPE</b><br>There will be a Sign Gold stripe applied above the reflective band. The sign gold stripes will be 1.00" wide with an outline.  |
| 0512024 | Stripe, Reflective, Chevron/Inverted "V", On Front Bumper     | <b>CHEVRON/INVERTED "V" STRIPING ON THE FRONT BUMPER</b><br>There will be alternating chevron striping located on the front bumper.<br>The striping will consist of the following colors:<br>The first color will be black<br>The second color will be ruby red<br>The size of the striping will be 6.00".  |

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| 0509398 | Stripe, Reflective, Chevron, Cab and Crew Cab Doors Interior            | <b>INVERTED "V" CHEVRON STRIPING ON CAB AND CREW CAB DOORS</b><br>There will be alternating chevron striping located on the inside of each cab and crew cab door. The striping will consist of the following colors:<br>The first color will be black<br>The second color will be ruby red<br>The size of the striping will be 6.00".  |
| 0679822 | Stripe, Sign Gold, Two-Tone Paint Break with Shield, IPO Chrome Molding | <b>CAB STRIPE</b><br>There will be a Sign Gold stripe provided on both sides of the cab in place of the chrome molding and on the cab face with shield.  |
| 0594559 | Lettering Specifications, (Sign Gold Process)                           | <b>LETTERING</b><br>The lettering will be 22 karat gold vinyl.   |
| 0685931 | Lettering, Sign Gold, 3.00", (61-80)                                    | <b>LETTERING</b><br>Sixty-one (61) to eighty (80) Sign Gold lettering, 3.00" high, with outline will be provided.  |
| 0685744 | Lettering, Sign Gold, 10.00", (1-20)                                    | <b>LETTERING</b><br>One (1) to twenty (20) Sign Gold lettering, 10.00" high, with outline will be provided.  |
| 0685798 | Lettering, Sign Gold, 6.00", (1-20)                                     | <b>LETTERING</b><br>One (1) to twenty (20) Sign Gold lettering, 6.00" high, with outline will be provided.   |
| 0685817 | Lettering, Sign Gold, 4.00", Each                                       | <b>LETTERING</b><br>There will be sign gold lettering, 4.00" high, with outline provided. There will be eight (8) letters provided.  |
| 0695610 | Emblem, Reflective, Per Dept. Submittal, Each                           | <b>EMBLEM</b><br>There will be five (5) reflective emblem(s), approximately 14.00" - 16.00" in size, installed Crew doors, EMS compt. doors, and rear roll up door. the emblem will be modeled after the department submitted information (art, patch, etc).   |
| 0769755 | Emblem, Texas Flag Painted on Cab Grille, All Custom Chassis            | <b>CAB GRILLE DESIGN</b><br>A Texas flag design will be painted on the cab grille.   |
| 0772003 | Manual, Fire Apparatus Parts, USB Flash Drive, Custom                   | <b>FIRE APPARATUS PARTS MANUAL</b><br>There will be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided.<br>The manual(s) will contain the following:<br>Job number<br>Part numbers with full descriptions<br>Table of contents<br>Parts section sorted in functional groups reflecting a major system, component, or assembly<br>Parts section sorted in alphabetical order<br>Instructions on how to locate parts<br>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.<br><b>Service Parts Internet Site</b><br>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. |

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| 0772037 | Manual, Chassis Service, USB Flash Drive, Custom                 | <b>CHASSIS SERVICE MANUALS</b><br>There will be one (1) chassis service manuals on USB flash drives containing parts and service information on major components provided with the completed unit.<br>The manual will contain the following sections:<br>Job number<br>Table of contents<br>Troubleshooting<br>Front Axle/Suspension<br>Brakes<br>Engine<br>Tires<br>Wheels<br>Cab<br>Electrical, DC<br>Air Systems<br>Plumbing<br>Appendix<br>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. |
| 0773381 | Manual, Chassis Operation, (1) USB Flash Drive, Custom           | <b>CHASSIS OPERATION MANUAL</b><br>The chassis operation manual will be provided on one (1) USB flash drive.   |
| 0030008 | Warranty, Basic, 1 Year, Apparatus, WA0008                       | <b>ONE (1) YEAR MATERIAL AND WORKMANSHIP</b><br>A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.   |
| 0735523 | Warranty, Engine, Paccar MX13, 5 Year, WA0386                    | <b>ENGINE WARRANTY</b><br>A Paccar five (5) year <b>limited engine warranty will be provided. A limited warranty certificate is included with this proposal.</b>   |
| 0684953 | Warranty, Steering Gear, Sheppard M110, 3 Year WA0201            | <b>STEERING GEAR WARRANTY</b><br>A Sheppard <b>three (3) year</b> limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with this proposal.  |
| 0596017 | Warranty, Frame, 50 Year, Custom Chassis, WA0013                 | <b>FIFTY (50) YEAR STRUCTURAL INTEGRITY</b><br>The Pierce custom chassis frame only (does not include crossmembers) limited warranty certificate, WA0013, is included with this proposal.  |
| 0595698 | Warranty, Axle, 3 Year, TAK-4, WA0050                            | <b>FRONT AXLE THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY</b><br>The Pierce TAK-4 suspension limited warranty certificate, WA0050, is included with this proposal.  |
| 0610485 | Warranty, Axle, Eaton/Dana, 5 Year/100,000 Mile, Parts and Labor | <b>REAR AXLE WARRANTY</b><br>A Eaton <b>five (5)-year/100,000 mile</b> parts and labor warranty will be provided.  |
| 0652758 | Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232        | <b>ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY</b><br>A Meritor Wabco™ ABS brake system limited warranty certificate, WA0232, is included with this proposal.  |
| 0019914 | Warranty, Structure, 10 Year, Custom Cab, WA0012                 | <b>TEN (10) YEAR STRUCTURAL INTEGRITY</b><br>The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.   |
| 0744240 | Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055                  | <b>TEN (10) YEAR PRO-RATED PAINT AND CORROSION</b><br>A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.   |
| 0524627 | Warranty, Electronics, 5 Year, MUX, WA0014                       | <b>FIVE (5) YEAR MATERIAL AND WORKMANSHIP</b><br>The Pierce Command Zone electronics limited warranty certificate, WA0014, is included with this proposal.   |
| 0695416 | Warranty, Pierce Camera System, WA0188                           | <b>CAMERA SYSTEM WARRANTY</b><br>A Pierce fifty four (54) month <b>warranty will be provided for the camera system.</b>  |
| 0708760 | Warranty, Not Applicable, LED Strip Lights                       | <b>COMPARTMENT LIGHT WARRANTY</b><br>The compartment lights will not offer an extended warranty.   |

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| 0046369 | Warranty, 5-year EVS Transmission, Standard Custom, WA0187         | <b>TRANSMISSION WARRANTY</b><br>The transmission will have a <b>five (5) year/unlimited mileage</b> warranty covering 100 percent parts and labor. The warranty will be provided by Allison Transmission.<br>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.                                    |
| 0685945 | Warranty, Transmission Cooler, WA0216                              | <b>TRANSMISSION COOLER WARRANTY</b><br>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.  |
| 0688798 | Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195             | <b>WATER TANK WARRANTY</b><br>A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.  |
| 0596025 | Warranty, Structure, 10 Year, Body, WA0009                         | <b>TEN (10) YEAR STRUCTURAL INTEGRITY</b><br>The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.   |
| 0693126 | Warranty, AMDOR, Roll-up Door, 10 Year/5 Year Painted, WA0185      | <b>ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY</b><br>An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of <b>ten (10) years</b> . A <b>five (5) year</b> limited warranty will be provided on painted roll up doors.<br>The limited warranty certificate, WA0185, is included with this proposal.   |
| 0889364 | Warranty, Pump, Pierce, PUC-NG, 7 Year Parts, 1 Year Labor, WA0390 | <b>SEVEN (7) YEAR PARTS, ONE (1) YEAR LABOR</b><br>The pump and its components will be provided with a seven (7) year parts and one (1) year labor limited warranty. The manufacturer's warranty will provide that the pump and its components will be free from failures caused by defects in material and workmanship that would arise under normal use and service.<br>A copy of the warranty certificate will be submitted with the bid package. |
| 0648675 | Warranty, 10 Year S/S Pumping, WA0035                              | <b>TEN (10) YEAR PUMP PLUMBING WARRANTY</b><br>The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.   |
| 0641372 | Warranty, Foam System, Not Available                               |  |
| 0595820 | Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057                   | <b>TEN (10) YEAR PRO-RATED PAINT AND CORROSION</b><br>A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.  |
| 0595412 | Warranty, Graphics Lamination, 1 Year, Apparatus, WA0168           | <b>ONE (1) YEAR MATERIAL AND WORKMANSHIP</b><br>The Pierce graphics fading and deterioration limited warranty limited warranty certificate, WA0168, is included with this proposal.  |
| 0819254 | Certification, Vehicle Stability, CD0196                           | <b>VEHICLE STABILITY CERTIFICATION</b><br>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.  |
| 0808565 | Certification, Engine Installation, Enf, Paccar MX, 2027           | <b>ENGINE INSTALLATION CERTIFICATION</b><br>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.  |
| 0686786 | Certification, Power Steering, CD0098                              | <b>POWER STEERING CERTIFICATION</b><br>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.   |



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| 0892691 | Certification, Cab Integrity, Saber FR/Enforcer, CD0189                  | <p><b>CAB INTEGRITY CERTIFICATION</b></p> <p>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:</p> <p>SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks.<br/>European Occupant Protection Standard ECE Regulation No.29.<br/>SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks.</p> <p><b>Side Impact</b></p> <p>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.</p> <p><b>Frontal Impact</b></p> <p>The same cab will withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420.</p> <p><b>Additional Frontal Impact</b></p> <p>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)</p> <p><b>Roof Crush</b></p> <p>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.</p> <p><b>Additional Roof Crush</b></p> <p>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)</p> <p>The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area.</p> <p>There will be no exception to any portion of the cab integrity certification. Nonconformance will lead to immediate rejection of bid.</p> |
| 0631973 | Certification, Cab Door Durability, Saber FR/Enforcer, CD0137            | <p><b>CAB DOOR DURABILITY CERTIFICATION</b></p> <p>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.</p>   |
| 0631978 | Certification, Windshield Wiper Durability, Saber FR/Enforcer, CD0132    | <p><b>WINDSHIELD WIPER DURABILITY CERTIFICATION</b></p> <p>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 <i>Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles</i>. The bidder will certify that the wiper system design has been tested and that the wiper system has met these criteria.</p>  |
| 0631974 | Certification, Electric Window Durability, Saber FR/Enforcer, CD0133     | <p><b>ELECTRIC WINDOW DURABILITY CERTIFICATION</b></p> <p>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.</p>   |
| 0631977 | Certification, Seat Belt Anchors and Mounting, Saber FR/Enforcer, CD0134 | <p><b>SEAT BELT ANCHOR STRENGTH</b></p> <p>Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design 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.</p> <p><b>SEAT MOUNTING STRENGTH</b></p> <p>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.</p>   |

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| 0735949 | Certification, Cab HVAC System Performance, SFR/Enf, CD0165/CD0167/CD0174/CD0175 | <p><b>PERFORMANCE CERTIFICATIONS</b></p> <p><b>Cab Air Conditioning</b><br/>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.</p> <p><b>Cab Defroster</b><br/>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.<i>The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.</i></p> <p><b>Cab Auxiliary Heater</b><br/><i>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.</i></p> |
| 0545073 | Amp Draw Report, NFPA Current Edition  | <p><b>AMP DRAW REPORT</b><br/>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.<br/>The manufacturer of the apparatus will provide the following:<br/>Documentation of the electrical system performance tests.<br/>A written load analysis, which will include the following:<br/>The nameplate rating of the alternator.<br/>The alternator rating under the conditions specified per:<br/>Current edition of applicable NFPA standards.<br/>The minimum continuous load of each component that is specified per:<br/>Current edition of applicable NFPA standards.<br/>Additional loads that, when added to the minimum continuous load, determine the total connected load.<br/>Each individual intermittent load.<br/>All of the above listed items will be provided by the bidder per the current edition of applicable NFPA standards.</p>  |
| 0002758 | Amp Draw, NFPA/ULC Radio Allowance   |  |
| 0799248 | Appleton/Florida BTO   |  |
| 0000048 | PUMPER/TANKER, 3rd Gen   |  |
| 0000012 | PIERCE CHASSIS   |  |
| 0735525 | PACCAR MX13 ENGINE   |  |
| 0046396 | EVS 4000 Series TRANSMISSION   |  |
| 0520324 | PIERCE PUMP, PUC   |  |
| 0020009 | POLY TANK  |  |
| 0028047 | NO FOAM SYSTEM   |  |
| 0020006 | SIDE CONTROL   |  |
| 0020007 | AKRON VALVES   |  |
| 0020015 | ABS SYSTEM   |  |
| 0658751 | PUMPER BASE  |  |