

REQUEST FOR PROPOSAL

ISSUING AGENCY

*Fannin County Board of Commissioners
400 West Main St., Suite 100
Blue Ridge, Georgia 30513
PHONE: 706-632-2203
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ISSUE DATE

May 26, 2023

PROPOSAL CLOSING DATE

Tuesday June 13, 2023

PROPOSAL CLOSING TIME

3:00 P.M.

Commodity

*Fannin County Fire Rescue
Mini-Pumper / Quick Attack
Project# FC-2023-03*

REQUEST FOR PROPOSAL

THE FANNIN COUNTY BOARD OF COMMISSIONERS IS REQUESTING PROPOSALS FROM QUALIFIED APPARATUS MANUFACTURERS.

PROPOSALS WILL BE RECEIVED BY THE FANNIN COUNTY COMMISSIONER'S OFFICE, 400 W. MAIN ST., STE 100, BLUE RIDGE, GA 30513 UNTIL 3:00 PM LOCAL TIME ON JUNE 13, 2023. LATE PROPOSALS WILL NOT BE CONSIDERED NOR RETURNED. PROPOSALS WILL BE FORMALLY ACCEPTED AND ACKNOWLEDGED AT THE FANNIN COUNTY COMMISSIONER'S OFFICE BY STAFF PERSONNEL.

THE PROPOSAL DOCUMENTS AND SPECIFICATIONS ARE AVAILABLE FOR INSPECTION ON THE FANNIN COUNTY WEBSITE AT WWW.FANNINCOUNTYGA.COM AND AT THE FANNIN COUNTY COMMISSIONER'S OFFICE 400 W. MAIN ST., STE 100, BLUE RIDGE, GA 30513; PHONE 706-632- 2203 OR FAX 706-632-2507

RFP DOCUMENTS ARE AVAILABLE AT THE FANNIN COUNTY, GEORGIA WEBSITE:

www.fannincountyga.com/fire-department

(LEGAL AD) TO RUN 5/31/23 and 6/7/2023

ALSO TO BE ADVERTISED ON THE COUNTY WEBSITE, THE GEORGIA PROCUREMENT REGISTRY, AND GEORGIA LOCAL ACCESS MARKETPLACE.

Fannin County Fire Department

Specifications

For

**One (1) Mini-Pumper / Quick
Attack**

Fannin County Fire-Rescue

**Bidder
Complies**

Yes No

INTENT OF SPECIFICATIONS

It shall be the intent of these specifications to cover the furnishing and delivery of a complete fire apparatus. These detailed specifications cover the requirements as to the type of construction and test to which the apparatus shall conform, together with certain details as to finish, equipment, and appliances with which the successful bidder shall conform. Minor details of construction and materials, which are not otherwise specified, are left to the discretion of the contractor. The manufacturer shall provide loose equipment only when specified by the customer. Otherwise, in accordance with the current edition of NFPA 1901 standards, the proposal shall specify whether the fire department or apparatus dealership shall provide required loose equipment.

Bids shall only be considered from companies that have an established reputation in the field of fire apparatus construction and have been in business for a minimum of 10 years. Further, bidder shall maintain dedicated service facilities for the repair and service of products. Evidence of such a facility shall be included in bidder proposal.

Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified and shall state the location of the factory where the apparatus is to be built.

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

Each bid shall be accompanied by a detailed set of Contractor's Specifications, consisting of a detailed description of the apparatus and equipment proposed, and to which the apparatus furnished under contract shall conform. These specifications shall indicate size, type, model, and make of all component parts and equipment.

GENERAL DESIGN AND CONSTRUCTION

The prime vehicle manufacturer shall be responsible for the overall design so that the cab, chassis, pump module, and body are all integrated and function together as a complete fire apparatus.

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

Special consideration shall be given to the following points: accessibility of the various units, which require periodic maintenance, ease of operation (including both pumping and driving), and symmetrical proportions.

Welding shall not be employed in the assembly of the apparatus in a manner that shall prevent the ready removal of any component part for service or repair.

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

Fannin County Fire-Rescue

**Bidder
Complies**

Yes No

COMMERCIAL GENERAL LIABILITY INSURANCE

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

- General Aggregate Waived
- Products/Completed Operations Aggregate \$2,000,000
- Personal and Advertising Injury \$1,000,000
- Each Occurrence \$1,000,000

Coverage shall be written on a Commercial General Liability form. The policy shall be written on an occurrence form and shall include Contractual Liability coverage. The policy shall include owner as an additional insured as their interest may appear.

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

COMMERCIAL AUTOMOBILE INSURANCE

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

- Each Accident: \$500,000

Coverage shall be written on a Commercial Automobile form.

UMBRELLA/EXCESS LIABILITY INSURANCE

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

- Aggregate: \$1,000,000
- Each Occurrence: \$1,000,000

The policy shall be written on an occurrence basis and at a minimum provide the same coverages as Bidder's General Liability, Automobile Liability, and Employer's Liability policies. Owner shall be included as an additional insured on the General Liability and Automobile Liability policies as their interest may appear. The required limits can be provided by one or more policies provided all other insurance requirements are met.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverage listed above along with its bid. The certificate shall be made out to the purchaser and be an original, no photocopies shall be accepted. The Certificate of Insurance shall provide that owner be given 30 days advance notice of cancellation, nonrenewable, or material change in coverage.

Fannin County Fire-Rescue

Bidder
Complies

Yes No

WARRANTIES

The following warranties shall be supplied with the proposal and be printed on company forms.

GENERAL WARRANTY

The manufacturer shall provide a one (1) year warranty from the date of delivery.

STRUCTURAL BODY WARRANTY

A structural Aluminum body warranty shall be provided by the apparatus manufacturer for products of its manufacture to be free from defects in material and workmanship under normal use and service for a period of ten (10) years. **No Exception**

PAINT WARRANTY

A Non-Prorated Paint Warranty shall be provided by the apparatus manufacturer for products of its manufacture to be free from defects in material and workmanship, under normal use and service, for a period of seven (7) years. **No Exception**

PERFORMANCE TESTS AND REQUIREMENTS

A road test shall be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power nor overheating.

The transmission drive shaft or shafts, and rear axles shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus.

Vehicle shall adhere to the following parameters:

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

Fannin County Fire-Rescue

**Bidder
Complies**

Yes No

FAILURE TO MEET TEST

In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the bidder within 30 days of the date of the first trial. Such trials shall be final and conclusive, and failure to comply with these requirements shall be cause for rejection. Failure to comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the bidder of such changes, shall also be cause for rejection of the apparatus.

Permission to keep or store the apparatus in any building owned or occupied by the purchaser, or its use by the purchaser during the above-specified period with the permission of the bidder, shall not constitute acceptance.

NFPA 2016 STANDARDS

This apparatus specification includes a commercial chassis that has not been certified to meet the requirements of NFPA 1901 by the chassis manufacturer. Although this chassis may comply with certain aspects of the standard, it has not received certification from this chassis manufacturer that all criteria have been met. The body, as built by the manufacturer, must comply with the NFPA standards effective January of 2016.

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

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

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

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

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

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

NFPA COMPLIANCY

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

Fannin County Fire-Rescue	Bidder Complies	
	Yes	No
<p><u>PRE-CONSTRUCTION CONFERENCE</u></p> <p>A pre-construction conference shall be held at the customer’s location via a teleconference. This conference shall be held to review the proposal specifications and any applicable changes prior to commencement of construction of the vehicle.</p> <p>This conference shall be attended by the designated members of the Fire Department, the designated members of the manufacturer, and the manufacturer’s representative or dealer (mandatory).</p> <p><u>FINAL INSPECTION MEETING</u></p> <p>The Dealership and/or the Manufacturer shall have a final inspection meeting with three (3) members of the Fire Department at the Manufacturer’s location upon completion of the apparatus and prior to delivery. The purpose of this meeting is to inspect and approve all construction details.</p> <p><u>APPROVAL DRAWING</u></p> <p>A drawing of the proposed apparatus shall be provided for approval before construction begins.</p> <p>The finalized and approved drawing shall become part of the contract documents. This drawing shall indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.</p> <p>A "revised" approval drawing of the apparatus shall be prepared and submitted by the Manufacturer to the purchaser showing any changes made to the approval drawing.</p> <p><u>APPARATUS COMPLETION</u></p> <p>Construction of the apparatus shall be completed within 330 days after the receipt of the purchase order or approved signed contract. This date is highly dependent upon receipt of all major components 90 days prior to the 330 day time frame. No Exception</p> <p><u>PUMP TEST</u></p> <p>The rated water pump shall be tested, approved, and certified by an ISO certified independent third-party testing agency at the manufacturer's expense.</p> <p>The test results, along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horsepower curve, and the manufacturer's record of pump construction details shall be forwarded to the Fire Department.</p>		

Fannin County Fire-Rescue

**Bidder
Complies**

Yes No

FORD F550 CHASSIS SPECIFICATIONS

The chassis shall be a 2023 Ford, Model F-550 Super Duty, 4x4 Crew Cab supplied with the following equipment:

ADDITIONAL UPGRADES

- Fire/Rescue Prep Pkg w/EPA Special
- High-Capacity Trailer Tow Package
- Rear View Camera Prep Package Kit

WHEELBASE

The wheelbase of the vehicle shall be no greater than 203.7", with a cab to axle distance of 84.00".

GVW RATING

The chassis shall include the Payload Plus Upgrade Package, so that the gross vehicle weight rating is 19,500 pounds.

FRAME

The frame rails shall include the upgrade required to meet the enhanced GVWR.

FRONT AXLE

The front axle shall be a driving type with a 7,500 lb. capacity rating at the ground.

A manually shifted, two (2) speed transfer case shall be provided to engage the front axle.

FRONT SUSPENSION

A "Heavy Service Suspension" shall be provided on the front axle. The rating shall be as described below, but it shall provide enhanced support over the standard suspension:

- Front Mono-beam non-independent suspension, with coil spring and anti-roll bar.
- Capacity at Ground: 7,000 lb.
- Front Anti-Roll Bar.

Shock absorbers shall be provided on the front axle.

Fannin County Fire-Rescue

**Bidder
Complies**

Yes No

ELECTRIC SHIFT TRANSFER CASE AND AUTO/LOCKING WHEEL HUBS

The front axle shall be provided with manually selectable full locking or automatic locking wheel hubs.

**ELECTRIC SHIFT TRANSFER CASE AND AUTO/LOCKING WHEEL HUBS
(Continued)**

There shall be an electric control for the transfer case to engage the front axle and shift between high and low all-wheel drive operation.

Skid Plates Provided.

TIRES, FRONT

The front tires shall be 225/70R19.50 with black side walls and an (AT) all-terrain "traction" tread.

WHEELS, FRONT

Wheels for the front axle shall be Argent Gray - Steel

REAR AXLE

The single reduction limited slip rear axle shall have a ground rating capacity of 14,706 lb.

REAR BRAKES

The rear brakes shall be hydraulic disc type.

PARKING BRAKE

The parking brake shall be located on the rear axle service brake.

REAR AXLE RATIO

Limited Slip / 4.30.

REAR SUSPENSION

The rear suspension shall be a leaf spring type, with a capacity at ground level of 15,000 lb.

The rear stabilizer bar shall be included.

TIRES, REAR

The rear tires shall be 225/70R19.50G with black side walls and an (AT) all-terrain "traction" tread.

Fannin County Fire-Rescue

**Bidder
Complies**

Yes No

WHEELS, REAR

Wheels for the front axle shall be Argent Gray – Steel

ANTI-LOCK BRAKE SYSTEM (ABS), ROLL STABILITY CONTROL (RSC)

The vehicle shall be equipped with an anti-lock braking and roll stability control systems.

ABS:

- Sensors monitor wheel rotation speed, checking for the onset of wheel lockup.
- If the onset of lockup is detected, the system automatically compensates for this condition and prevents wheel lockup by automatically "pumping" the brakes several times per second, even when the brakes are firmly applied.
- Improves vehicle steering control in severe braking maneuvers, under variety of weather conditions.

RSC:

- An additional vehicle control software module.
- Detects the roll angle of the vehicle on the horizontal axis.
- Monitor’s vehicle body roll angle at least 100 times per second.
- Automatically reacts to help the driver keep the vehicle upright and all tires on the ground.

FRONT BRAKES

The front brakes shall be hydraulic disc type.

ENGINE

Model: Power Stroke 6.7 Turbocharged Diesel, CGI (Compacted Graphite Iron) block and aluminum heads

- Number of Cylinders: Eight (8), "V" configuration.
- Bore and Stroke: 3.90 x 4.25 in.
- Displacement: 6.7 liters (406 cubic inches).
- Compression Ratio: 15.8:1
- Rated Brake Horsepower: 330 at 2200 rpm.
- Peak Torque: 950 ft-lb at 2000 rpm.
- Turbocharger: VGT (Variable Geometry Turbine) Dual Boost.
- Combustion System: High Pressure Bosch Fuel Injection System.

Fannin County Fire-Rescue

**Bidder
Complies**

Yes No

ENGINE ACCESSORIES

- Air Cleaner: dry type.
- Governor: limiting speed type.
- Lube Oil Cooler.
- Lube Oil Filter: full flow.
- Fuel Filter: single fuel filter/water separator, heated.
- Starting Motor: 12-volt.
- Oil Fill and Level Gauge.
- Engine Block Heater

RADIATOR

- Pressurized System, Tube and Fin
- Anti-Freeze Protection to -20 degrees Fahrenheit.

ENGINE EXHAUST BRAKE

A Smart Exhaust Brake shall be provided. The control button shall be located on the instrument panel within easy reach of the driver.

AIR RESTRICTION INDICATOR

To meet the NFPA requirement, the chassis shall have an air restriction indicator in the cab, visible to the driver.

EXHAUST SYSTEM

The exhaust system shall include a diesel particulate filter (DPF), a diesel oxidation catalyst, and a selective catalytic reduction (SCR) to meet current EPA standards. The exhaust shall terminate with a horizontal tailpipe and diffuser on the right side behind the rear wheels.

The combustion system is the heart of the 6.7L Power Stroke diesel engine and reflects how Ford engineers achieved a balance of power, fuel efficiency, and reduced emissions. To help reduce NOx levels, the Power Stoke burns cleaner in large part because of the Exhaust Gas Recirculation (EGR) system.

In addition, there is a three-step, after-treatment system utilizing a diesel oxidation catalyst (DOC), selective catalytic reduction (SCR) using diesel exhaust fluid (DEF), and a diesel particulate filter (DPF) as the key components.

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**Bidder
Complies**

Yes No

COOLANT LINES

Premium rubber hose shall be used for all engine coolant lines installed by the chassis manufacturer.

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

FUEL TANK

The fuel tank provided shall be 40-gallon capacity and mounted behind the rear axle by the chassis manufacturer. It shall comply with all DOT regulations. It shall be designed and installed so that it does not interfere with the mounting of the pump, plumbing or other components.

DIESEL EXHAUST FLUID TANK

A diesel exhaust fluid (DEF) tank shall be provided for the emissions system.

TRANSMISSION

A ten (10)-speed automatic overdrive transmission shall be provided.

TRANSMISSION COOLER

A transmission oil cooler shall be provided in a tank of the radiator.

TRANSMISSION PTO PROVISION

The chassis transmission shall include the provision for a PTO.

DRIVELINE

The driveline shall be a heavy-duty metal tube type. A splined slip joint shall be provided in each driveshaft.

STEERING

The steering wheel shall be black vinyl, with 3-button message center control. The steering wheel is 15.00" in diameter and includes tilt and telescoping adjustment.

Cruise control shall be steering wheel mounted.

The steering gear ratio shall be 20.30:1.00. The steering shall consist of a hydraulically driven steering system.

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**Bidder
Complies**

Yes No

BUMPER

A full-width, aerodynamic, chrome plated steel bumper shall be attached to the front of the chassis frame.

TOWING PROVISIONS

Two (2) painted, steel tow eyes or hooks shall be provided.

CAB

Type: conventional, engine forward, four (4) door crew cab.

Construction: aluminum.

Accessories:

- Tinted glass in all windows.
- Dual sun visors.
- Electric windshield washer.
- Two (2) speed electric windshield wipers with intermittent control.
- Dome light.
- Fresh air heater and defroster.
- Dual electric horns.
- Driver and passenger air bags.

XL TRIM PACKAGE

The chassis shall be equipped with the Ford XL trim package.

CAB GRILLE

The cab grille shall be a chrome plated high impact plastic.

MIRRORS

- Manual-telescoping.
- Manual-folding trailer tow.
- Power/heated glass with heated convex spotter mirrors.
- Turn Indicators.

AIR CONDITIONING

An air conditioner shall be provided that is integral with heater and defroster system.

Fannin County Fire-Rescue

**Bidder
Complies**

Yes No

SEATING

Seating inside the cab shall consist of a 40-20-40 split bench seat. These seats shall be upholstered in vinyl or similar material.

REAR SEATING

A vinyl fold-forward rear bench seat shall be provided by the chassis manufacturer.

SEATING - NFPA

NFPA 1901, 2016 edition, section 4.11 requires all apparatus have a vehicle data recorder, and that the data recorded includes "seat occupied" and "seat belt status".

This seat does not provide the necessary sensors to accomplish the requirements of section 4.11. Per fire department specification and request, this apparatus shall be non-compliant to NFPA 1901 standards effective at time of contract execution.

SEAT BELT WEB LENGTH

NFPA 1901, 2016 edition, Section 14.1.3.1 and 14.1.3.2 requires effective seat belt web length for a Type 1 lap belt for pelvic restraint to be a minimum of 60.00", and a Type 2 pelvic and upper torso restraint-style seat belt assembly to be a minimum of 110.00".

Per Fire Department specification of a commercial chassis, this apparatus may not have seat belts of the required length. These belts may not provide sufficient length for large firefighters in bunker gear. This apparatus shall be non-compliant to NFPA 1901 standards effective at time of contract execution.

SEAT BELTS

NFPA 1901, 2016 edition, section 14.1.3.3 requires the seat belt webbing to be bright red or bright orange in color, and the buckle portion of the seat belt shall be mounted on a rigid or semi-rigid stalk such that the buckle remains positioned in an accessible location.

The seat belt color is not available in red or orange from the commercial chassis manufacturer. Per Fire Department specification of a commercial chassis, the seat belt color shall be noncompliant. This apparatus shall be non-compliant to NFPA 1901 standards effective at time of contract execution.

CAB INSTRUMENTS

Instrumentation display includes the following:

- Engine Temperature Gauge.
- Engine Oil Pressure Indicator.
- Transmission Fluid Temperature Gauge.

Fannin County Fire-Rescue

**Bidder
Complies**

Yes No

CAB INSTRUMENTS (Continued)

- Speedometer with Odometer.
- Engine Tachometer.
- Engine Hour meter.
- Fuel Level Gauge.
- Turbo/supercharger Boost Gauge.
- Systems Monitor.
- Trip Odometer.

Warning Indicators Include:

- Oil Pressure.
- Battery.
- Engine Temperature.
- Lights On.
- Service Interval.
- Brake System Indicator.
- Key.
- Low Fuel.
- Door Ajar.

WIPER CONTROL

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

The wipers shall also activate with the automatic (on/off) rain lamp wiper activated headlamps.

AM/FM RADIO

There shall be an AM/FM stereo radio as part of this premium radio package with seven (7) premium speakers on the Super and Crew Cab. This system shall be mounted in the dash.

BATTERY SYSTEM

A single starting battery system shall be provided consisting of two (2) 12 volt, 750 CCA, maintenance-free batteries.

ELECTRICAL SYSTEM

The 12-volt electrical system shall be maintained by a dual alternator set-up provided by the chassis manufacturer. The dual alternators combined shall provide a total output of 410 amperes.

Fannin County Fire-Rescue

**Bidder
Complies**

Yes No

FORD POWER EQUIPMENT GROUP

The electrical power equipment group shall be provided on the chassis.

The option package shall include the following:

- Accessory Delay.
- Manually telescoping two-way folding trailer tow mirrors w/power/heated glass, heated convex spotter mirror, integrated clearance lamps, turn signals.
- MyKey owner controls feature.
- Perimeter anti-theft alarm.
- Power 1st row (front-seat) windows w/one-touch up/down.
- Power 2nd row (rear-seat) windows (Crew Cab).
- Power locks.
- Remote keyless entry.

EXTERIOR LIGHTING

Exterior lighting shall meet or exceed Federal Department of Transportation, Federal Motor Vehicle Safety Standards, and National Fire Protection Association requirements in effect at time of proposal.

Front headlamps shall be Quad-beam, jewel-effect halogen type, and comply to all FMVSS requirements.

The headlights shall be automatically activated (automatic on/off) with windshield wipers. Headlight high beam automatic dimming shall be included.

Five (5) clearance and marker LED lights shall be installed across the leading edge of the cab.

CHASSIS CAB COLOR

Ford Race RED.

CHASSIS RELATED ACCESSORIES

CHASSIS WHEEL REPAINT

The chassis provided wheels shall be removed from the chassis and repainted "BLACK". This will include both the front and back surfaces of each wheel.

RELOCATE UREA TANK/FILL

The chassis urea tank and fill may be moved to accommodate the fire pump and other pump related items. The fill to be located in a best fit location with FD approval.

Fannin County Fire-Rescue	Bidder Complies	
	Yes	No
<p>Chassis wiring harness shall be extended via an extension harness. Urea line also to be extended.</p> <p><u>CAB CONTROL CONSOLE</u></p> <p>There shall be one (1) cab control console installed in the chassis between the cab front seats. This console shall be fabricated from .125” aluminum, and shall be as large as possible and bolted into place.</p> <p>This console shall have a removable top cover plate, which shall be retained by stainless steel counter-sunk fasteners.</p> <p>The console shall accommodate all required electrical connections, sirens, light controls, switch banks, multiplex control heads, and any other electrical equipment as specified. Storage for binders and maps to be provided based on available space, to be determined. Two (2) cup holders shall also be added to the console layout.</p> <p>The console shall be coated with “BLACK” splatter finish to aid in abrasion resistance.</p> <p><u>12-VOLT POWER LEADS</u></p> <p>One (1) set of 12-volt power leads shall be installed on the apparatus. The power leads shall terminate inside the cab center console.</p> <p>The power leads shall consist of One (1), 12ga. B+ power and One (1), 12ga. ground. Both leads shall be approx. 24.0" long and terminate with solder-less barrel type connectors.</p> <p>The leads shall be connected battery direct through an appropriately rated circuit protection device.</p> <p><u>BLUE SEA 12-VOLT ACCESSORY PANEL</u></p> <p>One (1) Blue Sea Systems 4365 water resistant accessory panel shall be provided in the center console area allowing for quick and easy way to recharge electronic devices in the apparatus.</p> <p>The panel shall have two (2) 2.1 amp dual USB-A chargers and one (1) 12-volt socket charger, each provided with protective covers. The panel is also provided with an illuminated 15 amp circuit breaker switch to shut off the panel preventing parasitic draw.</p> <p><u>USB-C</u></p> <p>A USB-C receptacle shall also be provided for the charging of existing computer equipment or other items required USB- C connections.</p> <p><u>MAP LIGHT</u></p> <p>A Whelen 700 Series 70CREGCS interior dome light shall be provided at the cab ceiling over the center console area. The combination “RED /WHITE” lights shall be controlled with individual switches at each light.</p>		

Fannin County Fire-Rescue

**Bidder
Complies**

Yes No

"DO NOT MOVE APPARATUS" INDICATOR

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

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

MASTER BATTERY SWITCH

There shall be a master battery switch provided in the cab within easy reach of the driver. A green indicator light shall be provided in the cab to notify the driver of the status of the battery system.

"DOOR OPEN" WARNING LIGHT

A Federal Signal Commander 4-LED red warning light COM1MC-R shall be installed on the cab console and shall flash when any compartment door is open.

HIGH IDLE

A high idle switch shall be provided by the apparatus manufacturer on the instrument panel inside the cab. Activating the switch shall cause the vehicle to automatically maintain a preset engine rpm.

A green indicator light shall be provided adjacent to the switch. The light shall be labeled "OK To Engage High Idle".

PRE-WIRED ANTENNA CABLES

There shall be two (2) RG58U coax cables pre-wired by the body builder from the chassis front fender gap to the inside of the chassis cab.
One (1) shall terminate at the cab center console, and the other shall terminate at under the officer's seat.

Each cable will be clearly labeled and secured. The VHS antenna bases will be protected by removable covers.

AIR RESTRICTION INDICATOR

To meet the NFPA requirement, the chassis shall have an air restriction indicator in the cab, visible to the driver.

AIR INTAKE EMBER SEPARATOR

The air inlet shall be equipped with a stainless-steel mesh to separate water and burning

Fannin County Fire-Rescue

Bidder
Complies

Yes No

embers from the air intake system, such that particulate matter larger than 0.039" (1.0 mm) in diameter cannot reach the air filter element. This shall comply with NFPA 1901 and 1906 standards.

STAINLESS STEEL NERF BARS

Westin Pro Traxx 4" polished T-304 stainless steel nerf bars shall be provided and installed beneath the cab and crew area doors on both sides of the chassis. Westin Part Number #WES-21-23940.

CAB STEP LIGHTS

There shall be four (4) TecNiq Series E10-WS00-1 LED step lights provided. There shall be one (1) light installed at each cab entry door.

The lights shall be activated with marker lights turned on and the transmission is in Park position.

BUCKSTOP "OUTBACK" BUMPER

The original OEM factory bumper will be replaced by a Buckstop OUTBACK replacement bumper assembly. The bumper offers full protection for the grill and headlights.

Features include:

- All Aluminum lower bumper for weight savings
- Hidden winch mount w/ winch access door
- Recess light mounts for four (4) 3-1/2" x 5" fog lights and warning lights.
- 2" Trailer receiver
- Relocation points for OEM tow hooks
- License plate mount

FOG LIGHTS

Two (2) of the rectangular cutouts in the front bumper guard shall be provided with PIAA 2000 SMR Xtreme White Plus Halogen Lights. These lights shall be controlled at the chassis cab center console.

COMEUP WINCH, 12,500#

There shall be one (1) COMEUP SEAL Gen2 12.5rs, 12V electric Winch (#295795) provided and installed.

The winch has a rated Line pull of 12,500 lbs (5,670kg) single line, synthetic rope 82' x 7/16". The winch features a 5.0 hp 12-v. series wound motor, free-spooling clutch, exterior automatic brake and a steel planetary gear configuration with a 225:1 ratio.

Fannin County Fire-Rescue	Bidder Complies	
	Yes	No
<p>To be permanently installed using a low mount bracket kit (#883594).</p> <p>Includes built-in wireless remote and tethered 17' weatherproof control.</p> <p><u>BACK-UP CAMERA</u></p> <p>One (1) AAMP 7" color back up camera system, 8212-IR Camera Kit, shall be installed on the apparatus. The camera shall display the real time view of the area directly behind the apparatus. Monitor shall attach to the windshield in replacement of the chassis rear view mirror.</p> <p><u>HELMET STORAGE PROVIDED BY FIRE DEPARTMENT</u></p> <p>NFPA 1901, 2016 edition, section 14.1.7.4.1 requires a location for helmet storage be provided. There is no helmet storage on the apparatus as manufactured. The fire department shall provide a location for storage of helmets.</p> <p><u>VEHICLE DATA RECORDER (NOT PROVIDED)</u></p> <p>NFPA 1901, 2016 edition, section 4.11.1 requires all apparatus be equipped with an on-board vehicle data recorder. The VDR is intended to be used by the fire department to monitor seat belt use as a tool for enforcing a seat belt policy that enhances the safety of apparatus occupants.</p> <p>The vehicle data recorder is not available as required from the commercial chassis manufacturer. Per Fire Department specification of a commercial chassis, there shall be no vehicle data recorder on the apparatus. This apparatus shall be non-compliant to NFPA 1901 standards effective at time of contract execution.</p> <p><u>SEAT BELT MONITORING SYSTEM</u></p> <p>NFPA 1901, 2016 edition, section 14.1.3.9 requires a seat belt warning system be provided. The seat belt warning device is intended to assist the driver or officer in determining whether all occupants are seated and belted before the vehicle is driven.</p> <p>Without this device, the driver must manually determine that all occupants are seated and belted before the apparatus is placed in motion.</p> <p>The seat belt warning system is not available as required from the commercial chassis manufacturer, or not requested by the customer. Per Fire Department specification of a commercial chassis, there shall be no seat belt warning system on the apparatus. The purchasing authority is consciously choosing to accept an apparatus without a tool that the NFPA Technical Committee on Fire Department Apparatus believes all fire departments should use to promote and enforce seat belt compliance. This apparatus shall be non-compliant to NFPA 1901 standards effective at time of contract execution.</p>		

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**Bidder
Complies**

Yes No

BACK-UP ALARM

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

REAR SUSPENSION STABILIZATION

Rear suspension to include SuperSprings® stabilizing system to level the load created by water tank and to reduce body roll. Modification to be performed without removal of OEM spring pack and should not compromise ride quality.

MAXIMUM SEATING CAPACITY

There shall be a label located in the driver's view specifying the maximum number of personnel the vehicle is designed to carry per NFPA standards.

REMAIN SEATED

There shall be a label located in the driver's view that states "Occupants Must Remain Seated While Vehicle is in Motion".

WHEEL CHOCKS /BRACKETS

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

There shall 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 shall be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets shall be mounted each side of the road side rear wheels as shown on the production drawings.

TIRE PRESSURE MANAGEMENT

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

The sensor shall calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor shall activate an integral battery-operated LED when the pressure of that tire drops 5 to 8 psi. Removing the cap from the sensor shall indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED shall immediately start to flash.

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**Bidder
Complies**

Yes No

MUD FLAPS

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

EXHAUST PIPE EXTENSION

The chassis exhaust pipe shall be extended to the right side of the apparatus body to direct exhaust fumes away from the unit. The extension shall maintain the same diameter as the original chassis pipe.

EXHAUST PIPE EXTENSION (Continued)

The end of the extension shall be provided with a termination that will adapt to the in-station exhaust ventilation system.

CHASSIS EXHAUST HEAT SHIELD

The chassis exhaust system shall have heat shielding installed between the exhaust pipe and the bottom of the body.

OVERALL HEIGHT

The Maximum Height of the completed apparatus must be no higher than 96” from the ground to the highest point on the apparatus body.

There shall be a label located in the driver's view that states the overall height of the vehicle from the ground. This measurement shall be taken on flat ground with the tires properly inflated, in the unloaded condition, at that highest point of the vehicle.

OVERALL LENGTH

There shall be a label located in the driver's view that states the overall maximum length of the apparatus in feet and inches.

OVERALL WIDTH

There shall be a label located in the driver's view that states the overall maximum width of the apparatus in feet and inches.

FASTEN SEATBELT

There shall be a label located in the cab that states "Occupants Must Fasten Seat Belts Before Vehicle is in Motion".

DO NOT RIDE

There shall be two (2) labels located on the rear of the apparatus, one on each side, that states "Danger: Do Not Ride on Rear Step While Vehicle is in Motion - Death or Serious Injury May Result".

Fannin County Fire-Rescue	Bidder Complies	
	Yes	No
<p><u>FIRE PUMP – HALE No Exception</u></p> <p><u>PUMP COMPARTMENT (SIDE)</u></p> <p>The complete apparatus pump compartment shall be constructed of a combination of aluminum structural tubing and formed aluminum sheet metal.</p> <p><u>PUMP COMPARTMENT (SIDE) (Continued)</u></p> <p>The structure shall be welded utilizing the same A.W.S. Certified welding procedure as used on the structural body module. These processes shall ensure the quality of structural stability of the pump compartment module.</p> <p>The pump compartment module shall be separated from the apparatus body with a gap. This gap is necessary to accommodate the flexing of the chassis frame rails that are encountered while the vehicle is in transit so that harmful torsional forces are not transmitted into the structural framework.</p> <p>The outer edges of the pump house shall be wrapped with stainless, providing a picture frame-inset appearance for the pump panels as specified below.</p> <p><u>PUMP MODULE MOUNTING SYSTEM (SIDE)</u></p> <p>The pump module substructure shall be mounted above the frame to allow independent flexing to occur between the body and the chassis.</p> <p>Each assembly shall be mounted to the chassis frame rails with steel, gusseted mounting brackets.</p> <p>Each bracket shall be powder coated for corrosion resistance. Each pump compartment mount bracket shall be mounted to the side chassis frame flange.</p> <p><u>PUMP COMPARTMENT WORK LIGHTS (LED)</u></p> <p>Two (2) LED work light shall be installed in the pump compartment module to illuminate the piping and plumbing components.</p> <p><u>LEFT SIDE OPERATORS PANEL & PUMP PANEL</u></p> <p>The pump operator's panel shall be located on the left side of the apparatus pump compartment. The panel shall be split into an upper and lower section.</p> <p>The material of the operator's panel shall match that of the overlays and right-side panels specified.</p> <p>The upper panel shall house gauges and controls and be hinged to allow easy access to components. The door shall have a stainless-steel hinge, dual point chrome push button</p>		

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Bidder
Complies

Yes No

latches, and a rubber seal provided to prevent excessive moisture from entering or leaving the pump house.

The lower panel on the left side shall be a removable panel attached with mechanical fasteners.

Valve controls shall be immediately adjacent to its respective gauge. The valve controls shall be properly labeled, and color coded for ease of use.

VALVE CONTROL – SIDE MOUNT

Unless specified otherwise, the discharge valves shall be controlled from a side mounted locking push-pull valve actuation control assembly that shall be installed on the specified discharge.

The assembly shall have a T-handle chrome plated with an ergonomically designed surface to allow for a secure grip to turn and lock the handle.

PUMP PANEL LIGHTS

There shall be adequate illumination provided at the side pump panels with the installation of two (2) brushed stainless steel shielded light assemblies, one (1) on the left and one (1) on the right-side pump compartment.

Each shield shall contain the maximum number of lights permitted in the space available of LED strip lights.

PUMP PANEL LIGHT ACTIVATION

One (1) pump panel light at the operator's panel shall be illuminated at the time the pump is ready to pump and it is "OK TO PUMP". The Pump shift has been completed and the chassis automatic transmission is engaged.

The remaining lights shall be controlled by a switch located on the side operator's panel.

PUMP COMPARTMENT FRONT OVERLAY

The front wall of the pump compartment module shall be overlaid entirely with aluminum diamond plate material fastened with mechanical fasteners.

PUMP COMPARTMENT WIDTH

The width of the pump compartment shall be 24.00 inches.

RIGHT SIDE PUMP PANELS STYLE

There shall be two (2) separate panels on the right side of the pump compartment, one (1)

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Bidder
Complies

Yes No

upper and one (1) lower. Each panel shall be removable for service accessibility with mechanical fasteners.

RIGHT & LEFT SIDE BRUSHED STAINLESS-STEEL PANELS

The panels for the pump compartment on the left and right side shall be made from brushed stainless steel.

RUNNING BOARDS

The pump compartment running boards shall be made of an aluminum tubular framework. The tubular frame supports all loads by transmitting the loads through the pump compartment structure directly to the chassis frame rails.

The running boards shall be independent of the apparatus body and shall be integrated to the pump compartment structure only, eliminating any pump compartment to body interference.

EMBOSSSED ALUMINUM DIAMOND PLATE OVERLAYS

The side running boards shall have a .188-inch embossed aluminum diamond plate overlays installed. The stepping areas shall be as large as possible.

APPARATUS PLUMBING LABELING

Verbiage tag bezels shall be installed. The bezel assemblies will be used to identify apparatus components.

These tags shall be designed and manufactured to withstand the specified apparatus service environment and shall be.

The verbiage tag bezel assemblies shall include a chrome-plated panel-mount bezel with durable easy-to-read UV resistant inserts featuring the specified verbiage and color coding. These verbiage and color inserts shall be meet NFPA standards.

CLASS 1 SENTRY GOVERNOR

The apparatus shall be equipped with the Class1 Sentry Pressure Governor System. The Sentry Pressure Governor System (SPGS) is a J1939 CAN based pressure governing system that consists of a Sentry display, Twister throttle, pressure transducers and associated wiring.

The SPGS' advanced diagnostic capability shall instantly notify the operator of any out of parameter condition.

It shall also notify the operator of actions performed and suggest alternative operation methods in the event of an out of parameter condition. Graphic diagnostics shall also provide wiring and troubleshooting information.

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Bidder
Complies

Yes No

The display shall be capable of storing up to 12 different languages. It shall provide the operator with the ability to adjust the display brightness for day and night mode operations.

CLASS 1 SENTRY GOVERNOR (Continued)

The following parameters shall be visible at all times:

- Pump Intake Pressure
- Pump Discharge Pressure
- Engine RPM
- Engine Oil Pressure
- Engine Coolant Temperature
- Transmission Temperature
- System Voltage
- Throttle Ready Interlock Status
- Pump Engaged Interlock Status
- OKAY to Pump Interlock Status
- Operating Mode Status (RPM or Pressure)
- Target Pressure Indication (when in pressure mode)

TWISTER THROTTLE

The Twister throttle is a J1939 CAN based throttle device that shall communicate directly with the Sentry display.

It shall feature a robust knob operator that can be configured to operate the engine throttle in either the clockwise or counterclockwise directions. It shall feature a large stationary idle button in the center of the knob. It shall also provide the operator with “Throttle Ready” and “Throttle Active” LED indicators.

The Twister throttle can be mounted away from the Sentry Display giving the operator hand control at waist level. This will also allow the Sentry display to be mounted at eye level assuring that the operator has the most comfortable and ergonomic control possible.

PRESSURE RELIEF VALVE

A Class 1 stainless steel pressure relief valve with a range of adjustment from 50 to 200 PSI shall be provided and installed inside pump compartment piped to the suction side of the pump. The valve shall be preset at 125 PSI suction inlet pressure, unless otherwise shop noted.

The valve shall be installed inside the pump compartment where it will be easily accessible for future adjustment.

For normal pumping operations, the relief valve shall not be capped and there shall be a placard stating "DO NOT CAP" installed

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**Bidder
Complies**

Yes No

TESTING PORTS

Test port connections for pressure and vacuum shall be provided at the pump operator's panel. One (1) shall be connected to the intake side of the pump, and the other to the discharge manifold side of the pump.

Each port shall have 0.25 inch (6.35 mm) standard pipe thread connection and be manufactured of non-corrosive polished stainless steel or brass plugs.

TANK LEVEL GAUGE

There shall be a Class 1 model #ITL-40 tank level gauge provided and installed at the pump operator's panel location.

The tank level gauge shall indicate the liquid level for water in increments of 1/8th of a tank.

The tank level gauge shall include a pressure transducer mounted on the outside of the tank, a super bright LED 4-light display with visual indication at nine accurate levels, and a set of weather resistant connectors.

PUMP COMPARTMENT TOP OVERLAY

The top of the pump compartment shall be overlaid with 1/8" embossed aluminum diamond plate.

SINGLE-STAGE MIDSHIP PUMP

The pump shall have the capacity of 1500 gallons per minute, measured in U.S. Gallons.
No Exception

The pump shall be a Hale Fire Pump, DSD single stage. **No Exception**

PUMP ASSEMBLY

The entire pump shall be assembled and tested at the pump manufacturer's factory. The pump shall be driven by a drive line from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance.

The entire pump shall be hydrostatically tested to a pressure of 600 PSI. The pump shall be fully tested at the pump manufacturer's factory to the performance spots as outlined by (NFPA) 1901, Standard for Automotive Fire Apparatus. Pump shall be free from objectionable pulsation and vibration.

The pump body and related parts shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI (2069 bar). All metal moving parts in contact with water shall be of high-quality bronze or stainless steel. Pump utilizing castings made of lower tensile strength

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**Bidder
Complies**

Yes No

cast iron not acceptable.

Pump body shall be vertically split on a single plane for easy removal of entire impeller assembly including clearance rings.

PUMP ASSEMBLY (Continued)

Pump shaft to be rigidly supported by two bearings for minimum deflection. The bearings shall be heavy-duty, deep groove ball bearings in the gearbox, and they shall be splash lubricated. Shaft seal comes standard with face-type, self-adjusting corrosion- and wear-resistant mechanical seals.

The pump impeller shall be hard, fine grain bronze of the mixed flow design; accurately machines, hand-ground and individually balanced. The vanes of the impeller intake eye shall be hand ground and polished to a sharp edge and be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower. Impeller clearance rings shall be bronze, easily renewable without replacing impeller or pump volute body.

The pump shaft shall be heat-treated, electric furnace, corrosion resistant stainless steel. Pump shaft must be sealed with double-lip oil seal to keep road dirt and water out of gearbox.

GEAR BOX

The gearbox shall be manufactured and tested at the pump manufacturer’s factory.

Pump gearbox shall be of sufficient size to withstand up to 16,000 lbs. ft. of torque of the engine. The drive unit shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature.

The gearbox drive shafts shall be of heat-treated chrome nickel steel and at least 2.75 inches in diameter, on both the input and output drive shafts. They shall withstand the full torque of the engine.

All gears, drive and pump, shall be of highest quality electric furnace chrome nickel steel. Bores shall be ground to size and teeth integrated and hardened, to give an extremely accurate gear for long life, smooth, quiet running, and higher load carrying capability. An accurately cut spur design shall be provided to eliminate all possible end thrust.

The pump ratio shall be selected by the apparatus manufacturer to give maximum performance with the engine and transmission selected.

If the gearbox is equipped with a power shift, the shifting mechanism shall be a heat treated, hard anodized aluminum power cylinder, with stainless steel shaft.

An in-cab control for rapid shift shall be provided that locks in road or pump.

For automatic transmissions, three green warning lights shall be provided to indicate to the

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**Bidder
Complies**

Yes No

operator(s) when the pump has completed the shift from Road to Pump position. Two green lights to be located in the truck driving compartment and one green light on pump operator's panel adjacent to the throttle control.

For manual transmissions, one green warning light will be provided for the driving compartment. All lights to have appropriate identification/instruction plates.

MECHANICAL PUMP SEAL

A mechanical seal shall be supplied on the inboard side of the pump. The mechanical seal must be two (2) inches in diameter and shall be spring-loaded, maintenance-free and self-adjusting. Mechanical seal construction shall be a carbon sealing ring, stainless steel coil spring, Viton rubber cup, and a tungsten carbide seat.

PUMP SHIFT

The drive unit shall be provided with an air pump shift system. The control valve shall be a spring-loaded guard lever that locks in "Road" or "Pump" mode.

To the left of the pump shift control, there shall be two indicator lights to show the position of the pump when the control is moved to "Pump" position. A green light shall be energized when the pump shift has been completed and shall be labeled "PUMP ENGAGED"; a second green light shall be labeled "OK TO PUMP" energized when both the pump shift has been completed and the chassis automatic transmission is engaged.

A third green indicator light shall be installed adjacent to the throttle on the pump operator's panel. This light shall be labeled "Throttle Ready".

In addition to this indicator light, an additional indication shall be provided to the pump operator at the panel when the pump is ready to pump. This additional indication shall be that one (1) of the operator's panel illumination lights will only activate when the "OK TO PUMP" indicator is lit.

AIR PUMP SHIFT LOCATION

The pump shift shall be mounted in the "best fit" location as determined by the apparatus manufacture.

AIR COMPRESSOR - PUMP SHIFT

Since the mini pumper chassis does not have a chassis air system, an alternate air system shall be provided. This system shall include a 12-volt air compressor and small capacity tank.

The compressor and tank shall be installed in a location that does not interfere with other equipment.

The compressor shall maintain air system pressure.

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**Bidder
Complies**

Yes No

A pressure switch shall sense when the system pressure drops and automatically start the compressor, (providing the battery switch is "on") which then shall run until pressure is restored.

PRIMING PUMP

The priming pump shall be a positive displacement, oil-less rotary vane electric motor driven pump conforming to NFPA-1901 rated performance requirements.

PRIMING PUMP (Continued)

The pump body shall be manufactured of heat-treated anodized aluminum for wear and corrosion resistance.

The pump shall be capable of producing a minimum of 24 Hg vacuum at 2,000 feet (609.6m) above sea level.

The electric motor shall be a 12 VDC totally enclosed unit. The priming pump shall not require lubrication.

PRIMER CONTROL

The priming pump shall operate by a push button switch mounted on the pump operator's panel.

The switch controls an air cylinder on the PVG control valve, which shall be located behind the panel and manufactured of bronze construction.

AUXILIARY COOLING SYSTEM

A supplementary heat exchange cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the engine water.

Heat exchanger shall be cylindrical type and shall be a separate unit. It shall be installed in the pump or engine compartment with the control located on the pump operator's control panel.

Exchanger shall be plumbed to the master drain valve.

DISCHARGE AND INLET MANIFOLDS

A pump manifold inlet shall be provided on the pump as required for the layout.

The inlet(s) shall protrude up to 2.00 inches away from the side panels and maintain a low connection height.

A discharge manifold shall also be added to the pressure side of the pump to feed the specified discharge waterways.

Fannin County Fire-Rescue	Bidder Complies	
	Yes	No
<p><u>MAIN PUMP INLET-LEFT SIDE</u></p> <p>A 6.00-inch pump manifold inlet shall be provided on the left side of the pump. The inlet shall protrude up to 2.00 inches away from the side panel and maintain a low connection height.</p> <p>The main pump inlet shall have National Standard Threads and includes a removable screen designed to provide cathodic protection for reducing deterioration in the pump.</p> <p><u>6" CHROME PLATED BRONZE CAP</u></p> <p>There shall be one (1) 6.00-inch-long handled chrome plated cap installed on the Steamer Inlet. The cap shall be National Standard Thread.</p> <p><u>MAIN PUMP INLET-RIGHT SIDE</u></p> <p>A 6.00-inch pump manifold inlet shall be provided on the right side of the pump. The inlet shall protrude up to 2.00 inches away from the side panel and maintain a low connection height.</p> <p>The main pump inlet shall have National Standard Threads and includes a removable screen designed to provide cathodic protection for reducing deterioration in the pump.</p> <p><u>6" CHROME PLATED BRONZE CAP</u></p> <p>There shall be one (1) 6.00-inch-long handled chrome plated cap installed on the Steamer Inlet. The cap shall be National Standard Thread.</p> <p><u>MASTER DRAIN VALVE</u></p> <p>A Class 1 manifold type drain valve shall be installed in the pump compartment. All pump drains shall be connected to the master drain valve. The drain valve shall be controlled from the left side lower pump house sill. The control shall be a hand wheel knob marked "open" and "closed".</p> <p>The drain shall be located such that it shall not interfere with pumping operations or function such as soft suction hoses, etc. nor shall it protrude past the outer edge of the apparatus, to prevent damage to the valve.</p> <p><u>PUMP COOLING LINE</u></p> <p>There shall be a .38-inch line running from the pump to the water tank to assist in keeping the pump water from overheating. A valve shall be installed on the operator's panel.</p> <p><u>PUMP ANODES</u></p> <p>Three (3) pump anodes shall be installed in the pumping system, one (1) on the discharge side</p>		

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Bidder
Complies

Yes No

and two (2) on the suction side, to prevent damage from galvanic corrosion within the pump system.

STAINLESS STEEL PLUMBING

All auxiliary suction and discharge plumbing related fittings, and manifolds shall be fabricated with a minimum of 3.00 inch, or greater as required by design, schedule 10 stainless steel pipe, brass or high-pressure flexible piping with stainless steel couplings. All piping components and valves shall be non-painted, unless otherwise specified.

All piping welds shall be wire brushed and cleaned for inspection and appearance.

STAINLESS STEEL PLUMBING (Continued)

The high-pressure flexible piping shall be black SBR synthetic rubber hose with 300 PSI working pressure and 1200 PSI burst pressure for flexible piping sizes 1.50 inches through 4.00 inches.

Sizes .75-inch, 1.00 inch and 5.00 inches are rated at 250 PSI working pressure and 1000 PSI burst pressure. All sizes are rated at 30 in HG vacuum.

Reinforcement consists of two plies of high tensile strength tire cord for all sizes and helix wire installed in sizes 1.00 inch through 5.00 inches for maximum performance in tight bend applications.

The material has a temperature rating of -40 degrees Fahrenheit to +210 degrees Fahrenheit.

The stainless-steel full flow couplings are precision machined from high tensile strength stainless steel.

All female couplings are brass. Mechanical grooved and male .75-inch and 1.00-inch couplings are brass.

A high tensile strength stainless steel ferrule with serrations on the I.D. is utilized to assure maximum holding power when fastening couplings to hose.

DRAIN VALVES

All manual drains shall be ¾" J-style lift handle type.

LEFT SIDE INLET

There shall be one (1) gated suction inlet with .75-inch bleeder installed on the left side of the apparatus with the following specified components.

Fannin County Fire-Rescue	Bidder Complies	
	Yes	No
<p><u>INTAKE VALVE</u></p> <p>A 2.50-inch Akron Brass 8000 series swing-out valve with stainless steel ball.</p> <p><u>INTAKE VALVE CONTROL</u></p> <p>The intake control valve shall be a 'swing out type' direct operation manual lever actuator at the valve.</p> <p><u>INTAKE PLUMBING</u></p> <p>The plumbing shall consist of 2.50-inch piping and shall incorporate a manual drain control installed below the pump area for ease of access.</p> <p><u>SUCTION/INTAKE TERMINATION</u></p> <p>The termination shall include the following components:</p> <ul style="list-style-type: none"> • One (1) 2.50-inch NST swivel female straight adapter with screen • One (1) 2.50-inch self-venting plug, secured by a chain. <p><u>INLET LOCATION</u></p> <p>The inlet shall be located on the pump panel in the forward position.</p> <p><u>LEFT SIDE DISCHARGE</u></p> <p>There shall be one (1) gated discharge installed on the left side of the apparatus with the following specified components.</p> <p><u>DISCHARGE VALVE</u></p> <p>A 2.50-inch Akron Brass 8000 series swing-out valve with a stainless-steel ball.</p> <p><u>DISCHARGE VALVE CONTROL</u></p> <p>The control valve shall be a 'swing out type' direct operation manual lever actuator at the valve.</p> <p><u>DISCHARGE PLUMBING</u></p> <p>The plumbing shall consist of 2.50-inch piping and shall incorporate a manual drain control installed below the pump area for ease of access.</p>		

Fannin County Fire-Rescue	Bidder Complies	
	Yes	No
<p><u>DISCHARGE TERMINATION</u></p> <p>The discharge termination shall include the following components:</p> <ul style="list-style-type: none"> • One (1) 2.50-inch Male NST adapter • One (1) 2.50-inch NST 30-degree polished elbow • One (1) 2.50-inch female self-venting cap, secured by a chain. <p><u>RIGHT SIDE FORWARD DISCHARGE</u></p> <p>There shall be one (1) gated discharge installed on the right side of the apparatus with the following specified components.</p> <p><u>DISCHARGE VALVE</u></p> <p>A 2.50-inch Akron Brass 8000 series swing-out valve with a stainless-steel ball.</p> <p><u>DISCHARGE VALVE CONTROL</u></p> <p>The discharge shall be controlled from the pump operator's panel location.</p> <p><u>DISCHARGE PLUMBING</u></p> <p>The plumbing shall consist of 2.50-inch piping and shall incorporate a manual drain control installed below the pump area for ease of access.</p> <p><u>DISCHARGE TERMINATION</u></p> <p>The discharge termination shall include the following components:</p> <ul style="list-style-type: none"> • One (1) 2.50-inch x 3.0" Male NST 30-degree polished adapter • One (1) 3.00-inch female self-venting cap, secured by a chain. <p><u>RIGHT SIDE REARWARD DISCHARGE</u></p> <p>There shall be one (1) gated discharge installed on the right side of the apparatus with the following specified components.</p> <p><u>DISCHARGE VALVE</u></p> <p>A 3.00-inch Akron Brass 8000 series Slo-Cloz swing-out valve with a stainless-steel ball.</p> <p><u>DISCHARGE VALVE CONTROL</u></p> <p>The discharge shall be controlled from the pump operator's panel location.</p>		

Fannin County Fire-Rescue	Bidder Complies	
	Yes	No
<p><u>DISCHARGE PLUMBING</u></p> <p>The plumbing shall consist of 3.00-inch piping and shall incorporate a manual drain control installed below the pump area for ease of access.</p> <p><u>DISCHARGE TERMINATION</u></p> <p>The discharge termination shall include the following components:</p> <ul style="list-style-type: none"> • One (1) 3.00 inch (77 mm) NST adapter • One (1) 3.00 inch (77 mm) NST female swivel by 5.00 inch (125 mm) Storz with 30 degree elbow • One (1) 5.00 inch (125 mm) Storz cap, secured by a chain <p><u>RIGHT REAR DISCHARGE</u></p> <p>There shall be one (1) gated discharge installed on the right rear of the apparatus with the following specified components.</p> <p><u>DISCHARGE VALVE</u></p> <p>A 2.50-inch Akron Brass 8000 series swing-out valve with a stainless-steel ball.</p> <p><u>DISCHARGE VALVE CONTROL</u></p> <p>The discharge shall be controlled from the pump operator's panel location.</p> <p><u>DISCHARGE PLUMBING</u></p> <p>The plumbing shall consist of 2.50-inch piping and shall incorporate a manual drain control installed below the pump area for ease of access.</p> <p><u>DISCHARGE TERMINATION</u></p> <p>The discharge termination shall include the following components:</p> <ul style="list-style-type: none"> • One (1) 2.50-inch Male NST adapter • One (1) 2.50-inch NST 30-degree polished elbow • One (1) 2.50-inch female self-venting cap, secured by a chain. <p><u>DECK GUN DISCHARGE</u></p> <p>There shall be one (1) Deck Gun discharge installed at the center top of the pump module with the following specified components. (Deck Gun Not Included).</p>		

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**Bidder
Complies**

Yes No

DISCHARGE VALVE

A 3.0-inch Electric Controlled Akron Brass 8000 series swing-out valve with a stainless-steel ball.

DISCHARGE VALVE CONTROL

The discharge shall be operated from the pump operator's panel location with an Akron Navigator Pro 9335 Controller. This controller shall indicate pressure digitally.

DISCHARGE PLUMBING

The plumbing shall consist of 3.00-inch piping and shall incorporate an automatic drain control installed below the pump area for ease of access.

DISCHARGE TERMINATION

The pipe shall terminate in a 3” (7.62cm) MNPT thread. The pipe shall be held in place by a 2 piece stainless steel bracket.

CROSSLAY MODULE

The crosslay hose beds shall be in the upper portion of the pump compartment. The crosslay module shall be manufactured of a bolt-on design configuration constructed of smooth aluminum materials that shall span the entire width of the apparatus pump compartment.

DOUBLE STACK CROSSLAYS

The crosslay area shall be constructed with a minimum fifteen 15.00-inch depth for laying a double stack of each hose size as specified below.

Chicksan swivels shall be installed just below the floor of each crosslay bed, high enough for hose couplings to be accessed and tightened on to chicksans. Chicksan swivels shall swing from left to right to allow attached hose to be deployed from either side of the apparatus.

CROSSLAY DIVIDER

The crosslay divider shall be fabricated of .188-inch smooth aluminum and shall have a dual-action sanded finish.

HOSE BED FLOORING

The hose bed areas of the pump compartment shall be lined with a black matting material.

1 3/4" CROSSLAY

An adjustable crosslay with the following specified components shall be provided for up to

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	Yes	No
<p>200 feet of 1.75-inch hose. This section shall be the first section, directly behind the cab.</p> <p>There shall be a total of two (2) provided.</p> <p><u>DISCHARGE VALVE</u></p> <p>A 2.00-inch Akron Brass 8000 series swing-out valve with a stainless-steel ball.</p> <p><u>DISCHARGE VALVE CONTROL</u></p> <p>The discharge shall be controlled from the pump operator's panel location.</p> <p><u>DISCHARGE PLUMBING</u></p> <p>The plumbing shall consist of 2.00-inch piping and shall incorporate a manual drain control installed below the pump area for ease of access.</p> <p><u>DISCHARGE TERMINATION</u></p> <p>The discharge termination shall include the following components:</p> <p>One (1) 2.00-inch NPT x 1.50-inch NST brass chicksan swivel</p> <p><u>CROSSLAY COVER</u></p> <p>A D & S Custom vinyl crosslay hose bed cover shall be provided to conceal the entire crosslay hose bed area. The cover shall be securely fastened to the outside rails with 1/4-turn style latches. The right and left ends of the cover shall have flaps with heavy duty zippers sewn in for ease of access.</p> <p>The zipper pull tabs shall have gripper tags installed, enabling ease of access to the stored hose.</p> <p><u>CROSSLAY TOP & SIDES COVER COLOR</u></p> <p>The crosslay hose bed covers shall be red in color.</p> <p><u>CROSSLAY HOSE BED LIGHT</u></p> <p>There shall be one (1) LED light in a bezel provided and installed on the front face of the body to illuminate the crosslay hose bed.</p> <p><u>CROSSLAY LIGHT ACTIVATION</u></p> <p>The crosslay light shall be activated when the park brake is set.</p>		

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**Bidder
Complies**

Yes No

DISCHARGE GAUGES

Class 1 2.50-inch gauge shall be supplied for reading the pressure of each discharge greater than 1.50 inches in diameter, unless otherwise specified.

The gauge shall be a model LFP220.

GAUGE SCALE

Each gauge shall be marked for reading a pressure range of 0-400 PSI.

GAUGE FACE COLOR

Each gauge shall have black markings on a white face.

TANK TO PUMP LINE

The connection between the tank and the pump shall be capable of the flow recommendations as set forth in (NFPA) 1901, Standard for Automotive Fire Apparatus, latest revision and shall be tested to those standards when the pump is being certified.

One (1) non-collapsible flexible hose and valve shall be incorporated into the tank to pump plumbing to allow movement in the line as the chassis flexes to avoid damage during normal road operation. Four (4) inch stainless steel schedule 10 piping shall be used to complete the connection from the tank to pump valve to the water tank.

TANK TO PUMP CHECK VALVE

There shall be a tank to pump check valve, conforming to NFPA standard requirements to prevent water from back flowing at an excessive rate if the pump is being supplied from a pressurized source. The check valve shall be mounted as an integral part of the pump suction extension. A hole up to .25 inch (6.00 mm) is allowable in the check valve to release steam or other pressure buildup so that the void between the valve and check valve may drain of water that could be subject to freezing.

TANK TO PUMP VALVE

A 3.00-inch Akron Brass 8000 series swing-out valve with a stainless-steel ball.

VALVE CONTROL

The valve shall be controlled from the pump operator's panel location.

TANK FILL LINE

One (1) 2.0 -inch tank fill/recirculating line shall be installed from the pump directly to the booster tank.

Fannin County Fire-Rescue	Bidder Complies	
	Yes	No
<p><u>TANK FILL VALVE</u></p> <p>A 2.0-inch Akron Brass 8000 series swing-out valve with a stainless-steel ball.</p> <p><u>VALVE CONTROL</u></p> <p>The valve shall be controlled from the pump operator's panel location.</p> <p><u>RESCUE BODY DESIGN AND CONSTRUCTION SPECIFICATIONS</u></p> <p>This Rescue Mini Pumper Body shall be designed for easy service access to the pump components and other related items. For this reason, the body shall be designed and built with the forward section being the pump module with roll up doors and the rearward section being a rescue type body with four compartments, a water storage tank, and an upper rear hosebed.</p> <p><u>RESCUE BODY DESIGN AND CONSTRUCTION SPECIFICATIONS (Continued)</u></p> <p>The apparatus body shall be all aluminum construction. The body shall be fabricated and assembled on a body "fixture" to assure proper fit, form, and finish standardization.</p> <p>The apparatus body shall be constructed of .125" thick Type #5052-H32 alloy aluminum sheet except for compartment floors being .188". No Exception</p> <p>The body shall be designed and engineered specifically for emergency vehicles, and shall be built to meet the duty cycle for fire and rescue services.</p> <p>The apparatus body shall be formed, welded construction for maximum strength and integrity for the entire life of the apparatus.</p> <p>The sub-body structural aluminum extrusions shall be integrated with the exterior body sheet metal and form an interference fit, reinforced body construction.</p> <p>The structural extrusions shall be Type #6061 and heat tempered to T-6 hardness. No Exception</p> <p>All compartment seams shall be sealed with silver TremPro #644 sealant.</p> <p>For ease of replacement part ordering, each body panel shall have an alpha-numeric part identification number assigned to it.</p> <p><u>BODY SUB-STRUCTURE</u></p> <p>The body sub-structure shall consist of 2" x 3" x .125" and 2" x 3" x .250 structural #6063-T6 aluminum tubing, located on no greater than 12-inch centers. The body sub-frame shall be welded to the fabricated aluminum compartment construction. No Exception</p>		

Fannin County Fire-Rescue	Bidder Complies	
	Yes	No
<p><u>BODY MOUNTING</u></p> <p>The rescue body shall be mounted to the chassis frame using Grade 8 U-bolts, coil springs, and Rubber isolator system, which shall allow for flexing of the chassis frames.</p> <p>This mounting method shall provide the greatest combination of strength and flexibility, allowing for maximum body life and quick removal of the apparatus body from the chassis.</p> <p>Six (6) 1,220 inch-lbs. steel compression springs shall be installed on the mounting U-bolts, to allow for flexing of the body to chassis mounting.</p> <p>The body to chassis connection shall include a full frame length UHMWPE isolator that is encased in aluminum and welded to the sub-structure of the body.</p> <p><u>COMPARTMENT TOP SURFACE</u></p> <p>The compartment top surface shall be constructed of .125” thick slip resistant aluminum diamond plate.</p> <p><u>EXTERIOR BODY AND COMPARTMENT CONSTRUCTION</u></p> <p>The exterior body fabrication shall be constructed of Type #5052-H32 .125" smooth aluminum plate.</p> <p>The floor, ceiling, and sidewalls shall be of body construction that shall be integral, which shall be self-supporting and welded construction.</p> <p>Compartments shall be of all welded construction with continuous welding in critical structural areas and 2" strip welding on 8" centers in non-critical areas.</p> <p>All compartment seams shall be sealed with silver Trem-Pro sealant.</p> <p><u>COMPARTMENT FLOOR CONSTRUCTION</u></p> <p>The compartment floors shall be .188" #5052-H32 aluminum with a "lip free" and sweep out construction, which shall permit easy cleaning of the compartments. No Exception</p> <p>The compartment floors shall have .125" aluminum 2" x 4" hat-sections welded on the underside of body for reinforcement. No Exception</p> <p><u>WHEEL WELL PANEL CONSTRUCTION</u></p> <p>Wheel well panels shall be painted .125" aluminum and bolted in place. All seams on the frame side of the body shall be welded and caulked to prevent moisture from entering the compartment.</p>		

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Bidder
Complies

Yes No

NOTE: the exterior fasters will be supplied with a nylon washer to assist in corrosion resistance.

WHEEL WELL LINERS

Wheel well liners designed to protect the body from impact resulting from road debris thrown by the tires shall be installed. The wheel well shall be provided with smooth aluminum, full fender liners that shall be formed to eliminate pockets that might trap and collect road dirt.

REAR WHEEL FENDERETTES

Polished stainless steel fenderettes shall be installed at each rear wheel opening. The fenderettes shall be positioned outside of the wheel well panel to cover the tire area that extends past the body.

The fenderettes shall be secured with threaded fasteners and shall be sealed with TremPro #644 sealant.

FUEL FILL DOOR

A flush mounted fuel filler guard with a hinged door shall be installed over the fuel fill ports. The door shall be a Cast Products Incorporated #FG2103 or similar. The door shall have a label for FUEL FILL. The labels shall be a product of Innovative Concepts Inc.

Additionally, DIESEL ONLY engraved plates shall be installed inside the door on a permanently attached label above or near each fill site.

DEF FILL LOCATION

The DEF Fill point location will be located at the right side pump panel behind the pump panel access door.

SCBA WHEEL WELL STORAGE

There shall be individual SCBA bottle storage areas provided in the rear wheel well area. The air bottle compartments shall be in the form of a round tube and of adequate depth to accommodate air bottles. Each storage area shall have a rubber liner on the sides and bottom and a drain hole. A strap shall be installed in each cylinder tube to retain the cylinder in the event of a collision.

A Cast Products brushed aluminum hinged door with latch shall be provided for each compartment.

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Bidder
Complies

Yes No

NOTE: Storage for three (3) SCBA bottles to be provided; one (1) street side and two (2) curb side of vehicle.

RUB RAILS

An impact and rub rail system shall be used for body side protection. A polished aluminum material shall be bolted to the body ½" with poly spacers.

PROTECTIVE COVERING – FRONT BODY

The entire exterior front of the apparatus body shall have a protective covering installed. The covering shall be constructed of bright aluminum .125" treadplate material.

These panels shall be mechanically fastened to the main body structure using stainless steel screws inserted into drilled and tapped hole, and further secured with split-washers.

REAR BODY PANEL

The rear vertical exterior body panels shall have overlays of smooth 0.125" aluminum surface for the application of chevron stripping.

These panels shall be mechanically fastened to the main body structure using stainless steel screws inserted into drilled and tapped hole and further secured with split-washers.

VENTILATION LOUVERS -- EXTERIOR COMPARTMENTS

The exterior body compartments shall be equipped with Polished 4.5" diameter louvers mounted inside of each compartment, to permit the passage of moisture or hazardous vapors into and out of compartments.

BODY FASTENERS

The securement of all equipment to the body shall be with only stainless steel "nuts and bolts" or expanding type captive nut devices. No rivets or self-tapping screws shall be used in the attachment of equipment to the apparatus.

DRIP MOULDINGS – OVER SIDE COMPARTMENT DOORS

Extruded aluminum full length molding, sealed with TremPro #644 shall be installed over all compartment doors.

CORROSION PROTECTION

Electrolysis Corrosion Kontrol (ECK) shall be used to prevent dissimilar metal corrosion. ECK shall be used for door latches, door hinges, trim plates, fenderettes, etc. ECK shall be applied to every external fastener hole prior to component mounting.

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**Bidder
Complies**

Yes No

UNDERCOATING

The underside of the vehicle including all metal work shall be sprayed with SEM ROCK-IT XC urethane automotive undercoating.
The ROCK-IT XC product is designed to prevent chipping, cracking, or marring of painted and unpainted surfaces after exposure to high impact sand, gravel, and other abrasive materials.
This undercoating shall aid in preventing corrosion, and will provide a sound and vapor barrier to the aluminum body structure.

PPG PAINT SPECIFICATIONS

All bright metal fittings, if unavailable in stainless steel, shall be heavily chrome plated. Critical body and sub-frame area which cannot be primed after assembly shall be pre-painted. All welded metal surfaces shall be ground to a smooth surface prior to a degreasing and high pressure, high temperature phosphatizing process. The entire surface shall be sprayed with a non-chromate sealing compound, to prevent formulation of stains or flash rust on previously phosphatized parts.
The paint applied to the apparatus shall be PPG Industries Delta® brand, applied throughout a multi-step process, including at least two coats of each color and clear coat finish.

PPG PAINT SPECIFICATIONS (Continued)

The coating shall be an infra-red, baked air dried. The coatings shall provide full gloss finished suitable for application by high-pressure airless or conventional low pressure air atomizing spray.
The coatings shall not contain lead, cadmium or arsenic. The polyisocyanate component shall consist of only aliphatic isocyanates, with no portion being aromatic isocyanates in character. The solvents used in all components and products shall not contain ethylene glycol mono-ethyl ethers or their acetates (commercially recognized as cello solves), nor shall they contain any chlorinated hydrocarbons.
The products shall have no adverse effects on the health nor present any unusual hazard to personnel when used according to manufacturer's recommendations for handling and proper protective safety equipment, and for its intended use.
The coating system, as supplied and recommended for application, shall meet all applicable federal, state, and local laws and regulations now in force or at any time during the courses of the bid.
The manufacturer shall supply (upon request) for each product and component of the system, a properly complete OSHA "Safety Data Sheet".
The following documents of the issue in effect on the date of the invitation to quote form a part of this document to the extent specified herein:
Federal Standards: Number 141A and 141B paint, varnish, lacquer and related material: methods of inspection, sampling, and testing.
Military Standard: MIL-C 83486B Coating, Urethane, Aliphatic Isocyanates, for Aerospace applications.
Industry Methods and Standards: ASTM Method of Analysis (American Society for testing and Materials). BMS 10-72A (Boeing Material Specifications).

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Bidder
Complies

Yes No

The entire exterior body structure (excluding roll-up doors) shall receive the primer coats and the finish coats. The apparatus body will be painted in a down draft type paint booth to reduce dust, dirt, or impurities in the finish paint.

The painted surfaces shall have a finish with no runs, sags, craters, pinholes, or other defects. The coating will meet the following test performance properties as a minimum standard.

The Body Color shall match the chassis cab color – RACE RED.

BODY COMPARTMENT COATING

All body compartments shall be fully coated with durable light gray splatter tone finish to aid in abrasion resistance.

ROLL-UP DOORS

ROLL-UP DOOR CONSTRUCTION, AMDOR

AMDOR brand roll-up style doors with satin aluminum finish shall be provided at the specified door locations.

Each door shall be manufactured in the United States. Replacement parts shall be available within 2-3 working days.

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

Door slats shall be anodized to prevent oxidation.

Door slats to have interlocking end shoes on every slat to be secured by a punch dimple process. The door slats shall have interlocking joints with a folding locking flange. A PVC/vinyl inner seal to prevent any metal-to-metal contact shall be provided between each slat.

Each track shall be one piece construction with attaching flange and finishing flange incorporated into the design. The flange design eliminates any requirement for additional trim or caulk. Each track shall have a replaceable seal to prevent water and dust from entering the compartment.

Each assembly shall include an aluminum drip rail with a replaceable wiper seal.

Each roll-up door shall have a 4" counterbalance spring in the roller assembly to assist in lifting and help prevent the accidental closing. A full width lift bar shall secure each door.

Each roll up door shall have an integral "door open" indicator magnet in the lift bar. If the bar is not properly closed, it shall activate the "Door Open" light in the cab.

NOTE: Door Finish: the roll-up doors shall be finished anodized Satin.

NOTE: Key Lock: compartment door handles shall be equipped with a #1250 keyed cylinder lock assembly.

ROLL UP DOOR DRIP & PROTECTION PAN

The underside of the roll-up compartment doors shall have an integral bolt-in drip and protection panel.

The unit shall be constructed of brushed finish #304 stainless steel, with a 1" bent lip on the front and rear edges of the pan.

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**Bidder
Complies**

Yes No

The pan shall be supported from the steel plates on each end of the door cylinder.

Each pan shall also be provided with a drain hose to the underside of the apparatus body.

SIDE DOOR SILL PLATE

Each compartment door shall have a brushed stainless steel sill plate installed. **No Exception**

COMPARTMENT STRIP LIGHTING, AMDOR

AMDOR "LUMA BAR" LED strip lighting elements shall be installed in all compartments, to provide even, full height lighting for the compartment without interference from shelves or equipment.

There shall be a light strip installed on both sides of the opening, and shall run the full height of the compartment.

Lights shall be "BLUE / WHITE" in color. Lights shall be activated by opening the compartment doors.

EXTERIOR COMPARTMENT SPECIFICATIONS

DRIVER'S SIDE

The front driver's side compartment, L1, shall have a clear opening of 50.0 H x 27.5" W x 23" D with a roll-up door.

The compartment over the rear wheels on the driver's side, L2, shall have a clear opening of 22" H x 43" W x 23" D with a roll-up door.

The driver's side compartment behind the rear wheels, L3, shall have a clear opening of 50.0" H x 35.5" W x 23" D with a roll-up door.

Please Note: Due to the fuel tank location and hose routing to the side wheel well panel the lower area of this compartment shall be 19" deep.

OFFICER'S SIDE

The front officer's side compartment, R1, shall have a clear opening of 50.0" H x 27.5" W x 23" D with a roll-up door.

The compartment over the rear wheels on the officer's side, R2, shall have a clear opening of 22" H x 43" W x 23" D with a roll-up door.

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**Bidder
Complies**

Yes No

The officer's side compartment behind the rear wheels, R3, shall have a clear opening of 50.0" H x 35.5" W x 23" D with a roll-up door.

REAR

The rear compartment, RR1, shall have a clear opening of 22.5. H x 42" W x 39" D with a roll-up door.

COMPARTMENT L1 SHALL CONTAIN

ADJUSTABLE SHELF

One (1) adjustable shelf shall be fabricated and installed. The shelf shall be constructed of 3/16" DA finished aluminum, with a 2" lip on all four sides.
The shelf shall be vertically adjustable by mounting to the Uni-Strut channels provided.

COMPARTMENT R1 SHALL CONTAIN

ADJUSTABLE SHELF

One (1) adjustable shelf shall be fabricated and installed. The shelf shall be constructed of 3/16" DA finished aluminum, with a 2" lip on all four sides.
The shelf shall be vertically adjustable by mounting to the Uni-Strut channels provided.

COMPARTMENT L2 SHALL CONTAIN

ADJUSTABLE SHELF

One (1) adjustable shelf shall be fabricated and installed. The shelf shall be constructed of 3/16" DA finished aluminum, with a 2" lip on all four sides.
The shelf shall be vertically adjustable by mounting to the Uni-Strut channels provided.

COMPARTMENT R2 SHALL CONTAIN

ADJUSTABLE SHELF

One (1) adjustable shelf shall be fabricated and installed. The shelf shall be constructed of 3/16" DA finished aluminum, with a 2" lip on all four sides.
The shelf shall be vertically adjustable by mounting to the Uni-Strut channels provided.

ADJUSTABLE SHELF

One (1) adjustable shelf shall be fabricated and installed. The shelf shall be constructed of 3/16" DA finished aluminum, with a 2" lip on all four sides.
The shelf shall be vertically adjustable by mounting to the Uni-Strut channels provided.

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	Yes	No
<p><u>COMPARTMENT L3 SHALL CONTAIN</u></p> <p><u>ADJUSTABLE SHELF</u></p> <p>One (1) adjustable shelf shall be fabricated and installed. The shelf shall be constructed of 3/16" DA finished aluminum, with a 2" lip on all four sides. The shelf shall be vertically adjustable by mounting to the Uni-Strut channels provided.</p> <p><u>COMPARTMENT R3 SHALL CONTAIN</u></p> <p><u>ADJUSTABLE SHELF</u></p> <p>One (1) adjustable shelf shall be fabricated and installed. The shelf shall be constructed of 3/16" DA finished aluminum, with a 2" lip on all four sides. The shelf shall be vertically adjustable by mounting to the Uni-Strut channels provided.</p> <p><u>COMPARTMENT RR1 SHALL CONTAIN</u></p> <p><u>SLIDE OUT TRAY</u></p> <p>A SlideMaster SM3-MP 100% extension slide out tray shall be provided and installed. The tray shall be constructed from 3/16" smooth aluminum and have a 3" lip on all four sides. The tray shall have a capacity of 600-pounds and shall be mounted on SlideMaster steel slides. An IMS push/pull red ball latch on the front of the slide shall lock the tray in the "in" or "out" position.</p> <p><u>POLY POLYPRENE WATER TANK</u></p> <p>A 300-gallon water tank shall be provided. The tank shall be designed to utilize cavities that have commonly been wasted space. The tank shall extend up and over the rear center compartment to just behind the rear body wall. The tank shall fill the void between the main hose bed floor and the top of the rear center compartment. This tank design shall provide for a lower overall tank height, resulting in a lower overall main hose bed height. In addition, this design shall create a lower center of gravity of the vehicle, for improved vehicle handling.</p> <p><u>TANK CONSTRUCTION</u></p> <p>The booster tank shall be constructed of .50-inch thick Polypropylene sheet stock, which is a non-corrosive stress relieved thermoplastic. It shall be designed to be completely independent of the body and compartments. All joints and seams are extrusion welded and/or contain the "Bent Edge", and tested for maximum strength and integrity. The top of the booster tank is fitted with lifting eyes designed with a 3-to-1 safety factor to facilitate tank removal.</p>		

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**Bidder
Complies**

Yes No

COVER

The tank cover shall be constructed of .50-inch thick Polyprene and shall be recessed. A minimum of two lifting dowels shall be drilled and tapped .50-inch x 2.00 inch to accommodate the lifting eyes.

BAFFLES

The swash partitions shall be manufactured from .50-inch Polyprene. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments to provide maximum water flow. All swash partitions interlock and are welded to one another as well as to the walls of the tank.

MOUNTING

The tank shall have a reinforced .75-inch floor for added strength and durability. The tank shall be isolated from the body substructure cross members with .50-inch x 2.50-inch rubber strips. The tank shall sit nested inside the center body substructure, and shall be completely removable without disturbing the body side panels.
Tank stops on all four sides will keep the tank from shifting front to back or side to side.

FILL TOWER

The fill tower opening shall be approximately 13.00 inches x 12.00 inches.
The tower will have a .25-inch thick removable Polyprene screen and a Polyprene hinged type cover that will open if the tank is filled at an excess rate. There shall be a removable .25-inch thick Polyprene screen to prevent debris from falling into the tank.
The fill tower shall have a 4.00-inch overflow that will discharge underneath the tank, extended behind the rear axle, avoiding the chassis fuel tank and suspension components where applicable. The overflow shall terminate above the tank water level when filled to the rated capacity.

FILL TOWER LOCATION

The water tower shall be located at the front of the hose bed.

SUMP

The sump will be constructed in an 8.00-inch x 16.00-inch x 3.00-inch-deep area.
The construction material shall utilize .50-inch Polyprene and be in line with the tank suction valve.
There shall be a 4.00-inch schedule 40 Polyprene tube installed that will run from the suction outlet to the sump location. The tank will have an anti-swirl plate located approximately 2.00 inch above the sump.

SUMP PLUG

The sump shall have a plug for use in draining and cleaning out the tank.

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	Yes	No
<p><u>OUTLETS</u></p> <p>In addition to the tank suction valve outlet located in the sump, there shall be an outlet provided for the tank fill valve.</p> <p><u>OUTLETS (Continued)</u></p> <p>If there are any additional options selected (such as an extra tank suction or direct tank inlets), there shall be additional outlets provided to accommodate these items. The display module shall receive an input signal from a pressure transducer. This stainless steel sender unit shall be installed on the outside of the tank near the bottom. All wiring, cables, and connectors shall be waterproof without the need for sealing grease.</p> <p><u>UPPER HOSE BED</u></p> <p>Hose bed located full length and width of upper center section of apparatus between side compartments walls. Hose bed supporting structure of 2.0" x 2.0" x .125" 6063-T52 alloy square aluminum tubing. The Floor of NFPA non-slip aluminum, minimum .188" aluminum.</p> <p><u>HOSE BED WALLS</u></p> <p>The hose bed walls shall be covered with brushed stainless steel overlays</p> <p><u>HOSE BED PARTITION</u></p> <p>There shall be one (1) .188" aluminum reinforced, fully adjustable hose bed partition. Each partition shall be adjustable by usage of spring-loaded cam lock fasteners. The partition shall have an oval hand hold cut-out at the rear of the partition to aid personnel in accessing the hose bed area.</p> <p><u>HOSE BED LIGHT</u></p> <p>There shall be one (1) Whelen, Model 70C0ELZR, LED light with a Whelen, Model 7EFLANGE, chrome flange installed at the forward hose bed bulkhead located at the front of the hosebed. The light shall be mounted with no mounting bracket and with an aluminum guard. The light shall be activated by a switch at the rear of the apparatus.</p> <p><u>HOSE BED HOSE STORAGE</u></p> <p>The hose bed shall be designed to accommodate 500 feet of 3.0" supply line and 250 feet of 1-3/4" double jacketed fire hose.</p>		

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Bidder
Complies

Yes No

VINYL HOSE BED COVER

A D & S Custom reinforced vinyl hose bed cover shall be provided over the upper hose bed storage area. This cover shall be reinforced at all four edges and shall be retained on the front, left side, and right-side walls with stainless steel twist lock fasteners.

There shall be a rear flap extending from the rear of the hose bed cover to secure hose at the rear opening of the hose bed. This flap shall have a minimum of five (5) sewn-in bungee cord retaining loops with stainless steel hook retainers.

BODY HANDRAILS - LIGHTED

Two (2) "RED" lighted handrails shall be provided at the rear of the apparatus body. Each will be 1 1/4" extruded aluminum Hansen non-rotating knurled tubing with chrome plated end stanchions. To also include stanchion to body gaskets to prevent dissimilar metal corrosion. Each stanchion shall be bolted into place for ease of removal or replacement.

FOLDING STEPS

Six (6) Cast Products, Inc. model #SP6610-1CH dual LED illuminated folding steps, made of high strength die cast aluminum with a protective chromed coating, pyramid tread platform, conforming to current NFPA requirements, shall be provided and installed on the apparatus as specified.

The steps shall have a minimum of 46 sq. inches of surface area capable of sustaining a 1200 lb. static load. The steps shall be mounted no more than 18" inches between each step.

Installed at the rear of the apparatus body.

ELECTRICAL SYSTEM – BASE

All wiring and electrical equipment to be compliant with any applicable NFPA 1901 criteria for Special Service Fire Apparatus and SAE standards. All lighting and reflectors shall meet Federal Motor Vehicle Standards. A master warning device switch that energizes all optical warning devices shall be provided.

The warning system on the apparatus shall be capable of two separate signaling modes during emergency operations.

One mode shall signal to drivers and pedestrians that the apparatus is responding to an emergency and is calling for the right of way. The other mode shall signal that the apparatus is stopped and is blocking the right of way.

Switching to sense the position of the park position of an automatic transmission. When the master warning system switch is closed, and the parking brake released or the automatic transmission is not in park, the warning devices signaling the call for right of way shall be energized.

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**Bidder
Complies**

Yes No

When the master optical warning system switch is closed, and the parking brake is on or the automatic transmission is in park, the warning devices signaling the blockage of right of way shall be energized. The system shall be permitted to have a method of modifying the two signaling modes.

The warning devices shall be constructed or arranged to avoid the projection of light either directly or through mirrors into any driving or crew compartment(s).

Electromagnetic interference suppression shall be in accordance with SAE J551, performance levels, and methods of measurement of electromagnetic radiation from vehicles and devices (30-1000 MHZ).

Wiring grommets shall be provided through all panels for automotive type wiring with coated automotive type loom.

ELECTRICAL SYSTEM – BASE (Continued)

Insulation shall be in accordance with SAE J1128, low tension primary cable, type SXL or GXL, and wired to SAE J1292, Automobile, Truck, Truck-Tractor, Trailer, and Motor Coach wiring for such loading at the potential employed. All wiring installed by the Apparatus Manufacturer shall be stranded copper alloy conductors of a gauge rated to carry 125 percent of the maximum current for which the circuit is protected.

Voltage drops in all wiring from the power source to the using device shall not exceed 10 percent. Wiring shall be color and function coded the entire length with insulated bolted-down type hold-down clamps and mechanically secured connections.

Overall covering of conductors shall be 280 degrees F. Minimum flame retardant, moisture resistant loom.

Hydraulic lines, air system tubing, control cables, and electrical lines shall be clipped to the frame or body structure of the apparatus and shall be furnished with metal protective looms or grommets at each point where they pass through body panels or structural members. Where any through-the-frame connector is provided, any such connector and wiring shall also be protected from shear or tear.

Wiring shall be provided with properly rated low voltage over current automatic resetting protective devices. Such devices shall be readily accessible and protected against excessive heat, damage, and water spray.

Switches, relays, terminals, and connectors shall have a direct current rating of 125 percent of maximum current for which the circuit is protected. All electrical components shall be protected against corrosion, heat, vibration, and moisture. There shall be a minimum of two (2) spare wires installed in each loom running to the body of the vehicle.

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**Bidder
Complies**

Yes No

ELECTRICAL SYSTEM – WHELEN CORE

A Whelen CORE C399 Electrical System shall be provided and installed. The system shall consist of all solid-state components contained inside aluminum module. The system shall consist off eighteen (18) output channels and twelve (12) input channels. All inputs and outputs shall be configured into a scale-able electrical harness utilizing plug-in connectors. The system is expandable and shall be capable of performing the following functions: load management sequencing, switch loads, and receive digital and analog signals.

The complete system shall eliminate the need for the following separate components or devices: load manager, load sequencer, warning lamp flasher, headlamp flasher, door open notification system, interlock modules, separate voltmeter, ammeter, and temperature monitor.

A Whelen CANport C399K1 OBDII Interface cable shall be included for connection to the vehicle CAN bus system.

In an application where this system is unable to provide the necessary switching, then Carling rocker type switches with function labels shall be provided and installed on the center console.

POWER DISTRIBUTION QUARTERS – (Chassis Crew Cab)

The vehicle shall be equipped with a Power Distribution Quarters (PDQ) to provide a protected environment for the electrical systems interface to the apparatus body. The PDQ shall have a service access door that is removable via two (2) recessed positive type door latches.

The compartment and access door shall be fabricated from 5052-H32 aluminum alloy, finished to match with interior compartments, and include venting for heat dissipation. The design shall provide a standardized platform for reliable and repeatable hard-wired or multiplexed electrical systems that can be documented and easily serviced and maintained. The internal wiring terminals shall be machine or torque-tool crimped to the wire ends, and splices shall be protected with heat shrink material.

All body harnesses entering and exiting the distribution panel shall pass through a protected wiring channel directly into the PDQ.

The electrical distribution panel shall incorporate wiring harnesses that meet or exceed NFPA standards while providing a central location for body wiring harnesses.

The distribution panel, including all circuits, shall be documented and made part of the records available at time of delivery.

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	Yes	No
<p><u>BATTERY CHARGER</u></p> <p>A Kussmaul Auto Charge Low Profile LPC 20 Series Model #091-207-12-194B shall be installed for a single battery system. The charger shall include a status display mounted on the cab console.</p> <p>Charger to be built in an aluminum enclosure and include an auxiliary 15-amp output circuit with power source selector for operating accessory loads, and front panel connections for a remote display.</p> <p>Charger output shall pose no interference with other electronic systems on the vehicle.</p> <p><u>KUSSMAUL 120-VOLT SUPER AUTO EJECT</u></p> <p>A Kussmaul Super Auto Eject, model 091-55-20-120 BW with a 091-55-194B Yellow Cover, 20-amp, automatic shoreline disconnect will be provided for the on board, 120-volt battery charging system.</p> <p>The disconnect will be equipped with a NEMA 5-20P male receptacle, which will automatically eject the shoreline when the vehicle starter is energized.</p> <p>The Kussmaul Cover shall have a built-in digital display. The cover shall have two (2) 3-digit LED displays showing the charger output voltage and current. Two (2) individual LEDs are used to provided additional battery charger status such as High and Low Voltage, current-limit, and over-current.</p> <p>The Auto-Eject location shall be at the front left right of the body to the outside of the body.</p> <p><u>ELECTRONIC SIREN</u></p> <p>The Whelen Siren Amplifier shall be part of the Whelen CORE system. A Whelen CCTL7 remote mounted control head shall be provided and installed in the cab console. This control head shall include functions: wail, yelp, manual, hands-free, piercer tones, PA, and radio-rebroadcast. The siren shall have the ability to drive a 100-watt output. Control to be backlit with soft LED non-glare lighting. The operating controls will consist of a power switch, manual button, PA volume switch, horn button, lighting controls, and a microphone.</p> <p><u>SPEAKER SYSTEM</u></p> <p>There shall be one (1) Whelen SA315P Series siren speakers mounted behind the chassis grill. The 100-watt composite speaker shall be wired to the siren head.</p> <p><u>FRONT LIGHT BAR</u></p> <p>Whelen Liberty II light bar shall be provided and installed on the vehicle. The light bar shall be 54" long and include:</p>		

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**Bidder
Complies**

Yes No

- Two (2) front corner RED, four (4) front linear, two (2) RED and two (2) WHITE, two (2) rear corner RED.

FRONT LOWER WARNING LIGHTS

There shall be six (6) Whelen ION "T" series Super LED lights with chrome bezels installed.

- Four (4) warning lights shall be mounted in the grille.
- Two (2) in the lower front bumper.

The warning lights shall be red LEDs with clear lenses.

SIDE UPPER WARNING LIGHTS

There shall be Whelen M7 series Super LED upper warning lights with chrome bezels installed.

- Two (2) warning lights shall be mounted on the left upper body panel.
- Two (2) warning lights shall be mounted on the right upper body panel.

The warning lights shall be red LEDs with clear lenses.

SIDE LOWER WARNING LIGHTS

There shall be Whelen ION "T" series Super LED lower warning lights with chrome bezels installed on the vehicle.

- Two (2) lights installed, one (1) on each front fender of the chassis.
- Two (2) lights installed, one (1) at the side steps under the chassis cab doors.
- Two (2) lights installed, one (1) at each side at the rear sides of the body.

The warning lights shall be red LEDs with clear lenses.

REAR UPPER WARNING LIGHTS

There shall be Whelen M7 series Super LED rear upper warning lights with chrome bezels installed.

- Two (2) lights shall be mounted, one (1) in each upper rear corner.

The warning lights shall be Red LEDs with clear lenses.

REAR LOWER WARNING LIGHTS

There shall be Whelen M6 series Super LED rear upper warning lights with chrome bezels installed.

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**Bidder
Complies**

Yes No

- Two (2) lights shall be mounted in the lower position in the taillight module., one (1) each side.

The warning lights shall be Red LEDs with clear lenses

UPPER BODY SCENE LIGHTS

There shall be Whelen M7 LED series clear scene lights installed.

- Two (2) lights shall be mounted with chrome bezels on the upper street side of the body.
- Two (2) lights shall be mounted with chrome bezels on the upper curb side of the body.

The scene lights shall be controlled in pairs at the cab console.

REAR BODY SCENE LIGHTS

There shall be Whelen M7 LED series clear scene lights installed.

- Two (2) lights shall be mounted with chrome bezels on the rear upper body.

The scene lights shall be controlled in pairs at the cab console.

REVERSE ACTIVATED REAR SCENE LIGHTS

The rear scene lights to automatically activate whenever the apparatus transmission is in reverse mode.

REAR D.O.T. QUAD CLUSTER W/WARNING LIGHT

A four (4) light vertical cluster with chrome bezel shall be mounted on the rear of the body, one (1) each side. The cluster will utilize Whelen M6 series LED lights:

- Model #M6BTT LED red combination stop/taillight.
- Model #M6T LED amber turn signal.
- Model #M6BUW LED white back-up light.
- Model #M6RC LED red warning light

LED CLEARANCE LIGHTS

Eleven (11) Weldon 1500 Series LED Low Amp Draw Marker Lamps, seven (7) Red (Model #9186-1500-10) and four (4) Amber (Model #9186-1500-20), with stainless steel brush guards (Model #0J10-1200-00) shall be installed to meet ICC, FMVSS and other applicable regulations.

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**Bidder
Complies**

Yes No

LED UNDERBODY LIGHTS

There shall be eight (8) TecNiq Series E10-WS00-1 LED underbody lights mounted on stainless steel brackets.

- Two (2) under the chassis cab bumper, one (1) each side.
- Two (2) under the front body compartments, one (1) each side.
- Two (2) under the rear body compartments, one (1) each side.
- Two (2) under the rear bumper, one (1) each side.

The lights shall be activated when the transmission is placed in Park and the Marker lights are on.

STEP LIGHTS

Two (2), Technique LED step lights shall be provided at the rear of the apparatus body. The lights shall be located above the rear step. The step lights shall be activated when the chassis transmission is placed in the "PARK" position.

LICENSE PLATE BRACKET WITH LIGHT

There shall be a license plate bracket with light supplied and mounted at the rear of the apparatus.

FIRE RESEARCH TELESCOPIC LED LIGHTS

Two (2) Fire Research SPECTRA LED lights model SPA 512-Q15 telescopic light shall be installed.

The light pole shall be anodized aluminum and have a knurled twist lock mechanism to secure the extension pole in position. The extension pole shall rotate 360 degrees.

The lamp head shall operate at 12-volts DC, draw 7 Amps, and generate 15,000 lumens of light. The lamp head shall have a unique lens that directs flood lighting onto the work area and focuses the spot-light beam into the distance. The lamp head angle of elevation shall be adjustable at a pivot in the mounting arm and the position locked with a round knurled locking knob.

The lamp head shall be no more than 6.50" H x 8.75" W x 3.25" D and have a heat resistant handle. The lamp head mounting arm shall be powder coated white. The LED scene light shall be for fire service use.

The lights shall be controlled by a single switch mounted and labeled in the cab console.

The floodlights shall be installed to the back of the pump module, one each side.

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**Bidder
Complies**

Yes No

FIRE RESEARCH HAZARD LIGHT SWITCHES

Fire Research raised pole hazard light switches shall be installed on each pole. The magnetic switch shall be secured, and a magnet shall be mounted in each extension pole. The switch contacts shall close when the extension pole is raised.

A raised pole indicator light shall be provided in the cab console.

REAR STEP AND BUMPER

The rear bumper and step assembly shall extend full width of the body. The bumper structure shall be attached to the chassis frame rails using a minimum of 3" structural channel.

The bumper and step assembly shall extend beyond the rear of the modular body a minimum nine inches (9") to protect the body from damage. The rear step shall be constructed of 1/8" embossed aluminum tread plate material.

REAR TRAILER HITCH

TRAILER HITCH CLASS IV

The apparatus shall be equipped with a receiver hitch installed at the rear of the apparatus mounted directly to the chassis frame rails and below the apparatus in the center.

TRAILER HITCH CLASS IV (Continued)

The receiver shall be classified as a Class IV receiver hitch with a 2.50-inch hitch box opening.

The maximum towing capacity shall be 7500 pounds (3400 kg) with a tongue weight of 750 pounds (340 kg) or 12000 pounds (5443 kg) towing capacity with an approved distributed trailer load.

TRAILER LIGHT CONNECTOR

A weather-proof covered combination 7-pin/4-pin trailer plug connector wired to the taillights shall be installed.

TOW EYES – REAR

There shall be two (2) tow eyes mounted directly to the chassis rear bumper framework.

MUD FLAPS - REAR

There shall be black rubber mud flaps installed for the rear wheels.

Fannin County Fire-Rescue	Bidder Complies	
	Yes	No
<p><u>EXTENSION LADDER</u></p> <p>A 12', two (2) section, aluminum, Duo-Safety, Series 1000-A extension ladder shall be provided.</p> <p><u>ROOF LADDER</u></p> <p>A 10', aluminum, Duo-Safety, Series 1000 roof ladder shall be provided.</p> <p><u>FOLDING LADDER</u></p> <p>A Duo-Safety 10 foot aluminum attic ladder, model 585A shall be provided.</p> <p><u>LADDER STORAGE</u></p> <p>There shall be one (1) storage area for the ladder(s) and shall be mounted in an aluminum treadplate (4-way) trough on the top of the on the top right-side compartments.</p> <p>The trough shall be constructed from aluminum treadplate (4-way) and the bottom of the trough where the ladder rails ride shall be lined with a smooth nylon or poly material to protect the ladder rails and aid in the removal and installation of the ladder.</p> <p>A nylon strap with Velcro at the rear shall retain the ladders within the trough. The ladders shall be banked together if more than one ladder is to be carried.</p> <p><u>SUCTION HOSE STORAGE TRAYS</u></p> <p>Suction hose shall be stored on a formed aluminum trough sized to hold 6.00-inch x 10.00-foot hose. The trough shall have two (2) Velcro hold-down straps, one (1) at each end, which shall secure the suction hose to the tray.</p> <p>Two (2) troughs shall be mounted to the top left side catwalk above the left side compartments.</p> <p>There shall be two (2) 10-foot lengths of 6.00 inch clear PVC suction hose with lightweight couplings provided with the above specified storage.</p> <p><u>WARNING LABELS AND INFORMATION PLATES</u></p> <p>All operator controls and switches shall have the appropriate label and corresponding bezel such as pump discharge controls, electrical connections, fuel/DEF fill and exterior switches, etc.</p> <p><u>REAR RETRO-REFLECTIVE CHEVRON STRIPING</u></p> <p>A minimum of 50 percent of the rear-facing vertical surface, visible from the rear of the apparatus, shall be equipped with Diamond Grade, retro-reflective striping in a chevron pattern, sloping downward and away from the centerline of the vehicle at an angle of 45-degrees.</p>		

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**Bidder
Complies**

Yes No

The stripe shall be 6.00 inches (152.40 mm) wide alternating in “RED” and “YELLOW GREEN” colors.

REFLECTIVE STRIPING

There shall be a white 4.00-inch reflective stripe applied to the chassis and apparatus body as specified in a straight line from the front to the apparatus to the rear.

DELIVERY REQUIREMENTS

VEHICLE ROAD AND SYSTEMS INTEGRITY TESTING

A complete and thorough road test and systems integrity test shall be conducted at the time of vehicle completion, and prior to delivery. The road-test portion shall encompass differing types of road conditions and terrain, including but not limited to: hills, curves, rough roads, rural high-speed environments, urban stop and go environments, and other conditions to verify vehicle manufacturing and delivery integrity.

A systems integrity test shall be performed on the completed vehicle. In this test, the completed vehicle shall have all systems checked for proper operation and conformity to manufacturing specs.

This test shall include but not be limited to: a full 12-volt electrical test, a full 120-volt electrical test; all doors shall be checked for proper closure; all doors, hatches, bellows, etc. shall have a water test performed to check for leaks; all roll out trays, tool boards, drawers, etc. shall be checked for proper opening and closing; tire chains (if included) shall be operated, and any system having a mechanical function shall be tested.

FLUID CHECKS

Prior to delivery and prior to the customer final inspection all fluids shall be checked and filled as needed.

This includes both the chassis fuel tank and the DEF Fluid tank.

PRESENTATION

Prior to the customer final inspection, the finished apparatus shall be thoroughly cleaned.

MANUALS

All manuals related to sub-system components for included optional equipment to be provided at the time of customer acceptance.

These shall include the printed “Glove-Box” Chassis Manuals, as well as the Waterous Pump Manuals.

In addition, as built wiring diagrams shall also be provided.

The vendors supplied manuals shall be in an electronic format where possible on a USB “Key” Drive.