

Texas County, Oklahoma  
**COUNTY PURCHASING OFFICE**  
 Texas County Court House  
 PO Box 197, 319 N. Main, Guymon, Oklahoma 73942  
 Phone: (580) 338-3233

**INVITATION TO BID**

Issued By  
Texas County  
Yarbrough Fire Dept.

PLEASE REVIEW TERMS AND CONDITIONS ON REVERSE  
 SIDE RELATING TO SUBMISSION OF THIS BID.

Page 1 of 11

Notarized Affidavit completions and signature required on reverse side.

| BID NUMBER<br>11-21-22 |          | BID CLOSING DATE AND HOUR<br>2-28-2022 @ 11:00 a.m. |  | REQUIRED DELIVERY DATE |                   |
|------------------------|----------|---|--|------------------------|-------------------|
| TERMS:                 |          |   |  |                        | Date of delivery: |
| Item                   | Quantity | Unit of Issue                                       | Description  | Unit Price             | Total             |
|                        |          |   | <p>Wildlands Firefighting Apparatus for Yarbrough</p> <p>See Specifications Attached</p> <p>We are an equal employment opportunity/affirmative action employer.</p> <p>The Commissioners reserve the right to reject any or all bids and to accept the bid deemed most advantageous to the County.</p> |                        |                   |

## TERMS AND CONDITIONS

1. Sealed bids will be opened in the Commissioner's Conference Room, Texas County Courthouse, Guymon, Oklahoma, at the time and date shown on the invitation to bid form.
2. Late bids will not be considered. Bids must be received in sealed envelopes (one to an envelope) With bid number and closing date written on the outside of the envelope.
3. Unit prices will be guaranteed correct by the bidder.
4. Firm prices will be F. O. B. destination. Hooker Rural Fire Department
5. Purchases by Texas County, Oklahoma, are not subject to state or federal taxes.
6. This bid is submitted as a legal offer and any bid when accepted by the County constitutes a firm contract.
7. Oklahoma laws require each bidder submitting a bid to a county for goods or services to furnish a notarized sworn statement of non-collusion. A form is supplied below.
8. Bids will be firm until **30 days**.

AFFIDAVIT: I, the undersigned, of lawful age, being first duly sworn on oath say that he (she) is the agent authorized by the bidder to submit the above bid. Affiant further states that the bidder has not been a party to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding; of said prospective contract; or in any discussions between bidders and any state official concerning exchange of money or other thing of value for special consideration in the letting of a contract; that the bidder/contractor has not paid, given or donated or agreed to pay, give or donate to any officer or employee of the State of Oklahoma (or other entity) any money or other thing of value, either directly or indirectly in the procuring of the award of a contract pursuant to this bid.

Subscribed and sworn before this \_\_\_\_\_ day

of \_\_\_\_\_ 20 \_\_\_\_\_.

(SEAL)

Firm: \_\_\_\_\_

My commission expires \_\_\_\_\_

Signed by \_\_\_\_\_ Title: \_\_\_\_\_

Address: \_\_\_\_\_ Phone: \_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC (CLERK OR JUDGE)

City: \_\_\_\_\_ State: \_\_\_\_\_

Zip: \_\_\_\_\_

**SPECIFICATIONS**  
**FOR**  
**YARBROUGH**  
**FIRE DEPARTMENT**  
**FOR A**  
**Quick Attack**

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**Wildlands Fire Fighting Apparatus**

Minimum Specifications for a Wildlands Fire Fighting Apparatus  
(Any Mention of a specific brand name – shall be or equivalent)

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**Intent of Specifications:**

It is the intent of these specifications to clearly describe the furnishing and delivery to the Purchaser, a complete apparatus equipped as specified. The primary objective of these specifications is to obtain the most acceptable apparatus for service in the Fire Department. These specifications cover specific requirements as to the type of construction and tests the apparatus must conform, together with certain details as to finish, material preferences, equipment and appliances with which the successful bidder must conform.

The design of the apparatus must embody the latest approved automotive design practices. The workmanship must be of the highest quality in its respective field. Special consideration shall be given to service access to areas needing periodic maintenance, ease of operation, and symmetrical proportions. Construction must be heavy-duty and ample safety factors must be provided to carry loads as specified. The construction method employed will be in such a manner as to allow ready removal of any component for service or repair.

The apparatus shall conform to the National Fire Protection Association Standard for Automotive Fire Apparatus, number 1901 and the National Fire Protection Association Standard for Wildland Fire Apparatus, number 1906, in its most recent edition, unless otherwise specified in this document. Only the specified firefighting support equipment listed in these specifications shall be provided.

The apparatus shall further conform to all Federal Motor Vehicle Safety Standards. **NO EXCEPTION.**

Each bidder shall furnish satisfactory evidence of their ability to design, engineer, and construct the apparatus specified and shall state the location of the factory producing the apparatus. They shall also substantiate they are in a position to render prompt and proper service and to furnish replacement parts for the apparatus.

Bids will be addressed and submitted in accordance with the instructions provided on the cover sheet. The bid number, the date, and bid opening time shall be stated on the front of the bid envelope.

It shall be the responsibility of the bidder to assure that their proposal arrives at the location and time indicated. Late proposals, telegrams, facsimile, or telephone bids will not be considered. **NO EXCEPTION.**

All bidders are required to detail the payment terms for apparatus on the bidder's proposal page. Any required prepayments or progress payments must be explained in detail.

**Service and Warranty Support:**

To insure full service after delivery, the bidder must be capable of providing service when required. The bidder shall show that the company is in position to render prompt service and furnish replacement parts. Each bidder must be able to display that they are actively in the fire apparatus service business by operating an authorized service center located within the State of Oklahoma, and shall stock parts equating to \$250,000.00, No Exceptions.

| Any Mention of Brand Name Shall be "or Equivalent"  | BIDDER<br>COMPLIES |    |
|---|--------------------|----|
|   | YES                | NO |
| <p>Detailed information shall be provided on service facilities, personnel, service vehicles, and how long the service facility has operated in the State of Oklahoma.</p>  |                    |    |
| <p>Service is a criteria for award of this bid.</p>   |                    |    |
| <p><b>Service Certification:</b></p>  |                    |    |
| <p>Each bidder shall supply with their bid an Emergency Vehicle Technician certification, and photos of the full-service repair facility that is located within the State of Oklahoma, these documents must be provided with the proposal. No Exceptions.</p>   |                    |    |
| <p><b>Brand Names:</b></p>  |                    |    |
| <p>Any brand names, trade names, manufacturer's names, or other product identification names included in these specifications are included to establish a minimum quality and standard. These products listed in our specifications which have name brands attached in no manner limit any bidder, however the items included in your bid must meet or exceed our minimum specifications. The Fire Departments will make the sole determination as to which items meet or exceed the specifications.</p>  |                    |    |
| <p><b>Oklahoma Motor Vehicle License:</b></p>   |                    |    |
| <p>Each manufacturer, dealer, and salesperson must furnish a copy of their Oklahoma Motor Vehicle Commission License.</p>   |                    |    |
| <p><b><u>This is an Oklahoma Law and must be furnished, No Exceptions.</u></b></p>  |                    |    |
| <p><b>Proposal Price:</b></p>   |                    |    |
| <p>Each bidder's proposal must include all items required in the specifications unless a specific exception is taken. Any bidder who options prices an item included in these specifications that does not specifically require option pricing will have their proposal rejected without further cause.</p>   |                    |    |
| <p><b>Proposal Format:</b></p>  |                    |    |
| <p>Each bid must be accompanied by a set of detailed contractor's specifications consisting of a detailed description of the apparatus and equipment proposed. All bid proposal specifications must be in the same sequence as the advertised specification for ease of comparison. These specifications shall include size, location, type, and model of all component parts being furnished. Detailed information shall be provided on the materials used to construct all facets of the apparatus body. Any bidder who fails to submit detailed construction specifications, or who photo copies and submits these specifications as their own construction details or any proposals</p> |                    |    |

**Any Mention of Brand Name Shall be "or Equivalent"**

BIDDER  
COMPLIES  
YES NO

found to have deviations without listing them will be considered non-responsive and shall render their proposal ineligible for award. **NO EXCEPTION.**

**Exceptions:**

The following apparatus specifications are considered minimum design and construction standards against which the apparatus will be inspected. It is the intent to receive proposals on equipment/apparatus meeting the attached detailed specifications in their entirety. Any proposals being submitted, without "Full Compliance" with these specifications shall so state on the bid proposal page, followed by a detailed "Letter of Exceptions" listing the areas of non-compliance. The reference must include page number, paragraph, and the exact nature of the exception.

Failure to follow this format, provided for the convenience of the Purchaser, will render the vendor's proposal non-responsive and ineligible for award of contract.

If a product brand name is specified and is commercially available to all bidders, an exception to such items is not acceptable and such bid may be rejected. All deviations, no matter how slight, shall be clearly explained on a separate sheet, in the bid sequence, citing the page and paragraph number(s) of the specifications, how the proposal deviation is different, how the deviation meets or exceeds the specifications and why it is necessary.

The Purchaser may add the statement "No Exception" to a component or design feature in these specifications. In the interest of fleet conformity or specific performance requirements, the Purchaser will not permit exceptions taken to these item(s). The Purchaser reserves the right to reject any or all bid proposals and purchase the equipment it deems most suitable to its needs.

The Purchaser does not, in any way, obligate itself to accept the lowest or any bid. Any bidder taking total exception to the complete specification, or a major element will result in immediate rejection of the proposal.

**Delivery:**

The bidder shall state the time required for delivery of the completed unit on the proposal page. The completed unit shall be delivered to the purchaser with full instructions provided to Fire Department personnel on operation, care and maintenance of apparatus at the purchaser's location.

**Cab & Chassis:**

The chassis shall be a 2022 or newer F550 4x4 regular cab chassis with XL trim with the following options:

**Specs:**

- GVWR: 19,500 lbs.
- 4.88 Ratio Limited Slip Axle
- Extra Heavy Service Suspension Package
- Extra Heavy-Duty Front-End Suspension

| Any Mention of Brand Name Shall be "or Equivalent"   | BIDDER COMPLIES |    |
|--|-----------------|----|
|  | YES             | NO |
| <ul style="list-style-type: none"> <li>- Rear and Front stabilizer bar</li> <li>- 60" Cab to axle</li> <li>- 145" Wheelbase</li> </ul>   |                 |    |
| <b>Power Train:</b> <ul style="list-style-type: none"> <li>- 6.7L V8 Diesel</li> <li>- 10-Speed Automatic Transmission</li> <li>- Engine Block Heater</li> <li>- Heavy Duty Alternator</li> </ul>  |                 |    |
| <b>Interior Requirements:</b> <ul style="list-style-type: none"> <li>- Vinyl 40/20/40 Split front bench seat</li> <li>- XL Trim</li> <li>- Air Conditioning</li> <li>- AM/FM Stereo/ Clock</li> </ul>  |                 |    |
| <b>Exterior Requirements:</b> <ul style="list-style-type: none"> <li>- Two (2) front tow hooks</li> <li>- 40-Gallon Fuel Capacity</li> <li>- Roof Clearance lights</li> <li>- Windshield Wipers – Interval</li> <li>- Spare Tire &amp; Jack</li> </ul>   |                 |    |
| <b>Safety &amp; Security:</b> <ul style="list-style-type: none"> <li>- Airbag – Driver and front passenger</li> <li>- Belt-Minder safety belt reminder</li> </ul>  |                 |    |
| <b>Cab Console:</b>  |                 |    |
| <p>An electrical console and enclosure shall be provided to house cab mounted electrical switching devices and equipment.</p>  |                 |    |
| <p>The console shall be located ahead of the driver's and the officer's seating up to the OEM dash.</p>  |                 |    |
| <p>There shall be sufficient space available to house siren control, and department's radio.</p>   |                 |    |
| <b>Tire(s):</b>  |                 |    |
| <p>The seven (7) tires on the apparatus shall be an all-terrain on-off road tire. The tires shall be a Michelin XDS2 tires.</p>  |                 |    |
| <b>Full Bumper Replacement:</b>  |                 |    |
| <p>A full front bumper replacement shall be supplied. The front bumper shall be manufactured with 1 ¼" square tubing with the 90-degree corners on the square tubing to give the grille guard unmatched strength &amp; durability. The body of the front bumper shall be constructed from 1/8" black gloss tread plate and shall mount to the apparatus frame using a combination 3/8" and ½" steel plate.</p> |                 |    |
| <p>The front bumper shall have an integrated speaker mount and integrated receiver tube.</p>   |                 |    |

**Body:**

The fire body shall be constructed entirely of steel and designed to fit a Ford 60"CA diesel chassis.

The fire body dimensions shall be 119" L x 96" W.

The perimeter of the fire body shall be constructed of a heavy duty 5.0" steel channel.

The fire body cross members shall be constructed of heavy duty 3.0" channel.  
The steel cross members shall be located on 12" centers.

The fire body mounting sills shall be constructed of heavy duty 6.0" channel.

There shall be .11ga. diamond plate covering the entire deck of the fire body.

The diamond plate deck shall be stitch welded to the bottom side of the perimeter extrusions.

**Headache Rack:**

There shall be a headache rack located at the front of the fire body.

The headache rack shall be constructed of heavy duty 2.0" x 3.0 x .125 tube.

The headache rack shall be approximately 76".

The front of the headache rack shall be covered with .14ga steel plating. A "window" shall be provided in the center to allow the cab occupants to see out.

**Railing:**

There shall be a railing on each side of the body extending out at the height of the headache rack to the edge of the body then proceed down each side of the body. A steel coving shall be provided 4' down each side to protect the fire fighters.

**Walkway:**

There shall be 18" walkway around the skid unit, with no side access manwells on the body.

**Rear Apron:**

There shall be a 95" W x 10.0" D x .11ga. steel smooth plate apron provided at the rear of the fire body.

**Rear Bumper:**

| Any Mention of Brand Name Shall be "or Equivalent"   | BIDDER<br>COMPLIES |    |
|--|--------------------|----|
|  | YES                | NO |
| <p>There shall be two (2) tow eyes provided at the rear of the body.</p>   |                    |    |
| <p>There shall be a steel rear step bumper installed at the rear of the fire body. A 2" receiver tube shall be attached to the rear steel bumper.</p>  |                    |    |
| <p><b>Compartmentation:</b></p>  |                    |    |
| <p><b>L1 Compartment:</b></p>  |                    |    |
| <p>There shall be one (1) compartment with a drop-down compartment door held in place by a chain provided under the driver side deck of the fire body.</p>   |                    |    |
| <p>The body and door of the compartment shall be constructed from 12ga. steel tread plate.</p>   |                    |    |
| <p>The compartment shall be approximately 36" L x 16" H x 20" D</p>  |                    |    |
| <p>The door shall have a D-Ring slam latch.</p>  |                    |    |
| <p><b>R1 Compartment:</b></p>  |                    |    |
| <p>There shall be one (1) compartment with a drop-down compartment door held in place by a chain provided under the passenger side deck of the fire body.</p>  |                    |    |
| <p>The body and door of the compartment shall be constructed from 12ga. steel tread plate.</p>   |                    |    |
| <p>The compartment shall be approximately 36" L x 16" H x 20" D</p>  |                    |    |
| <p>The door shall have a D-Ring slam latch.</p>  |                    |    |
| <p><b>B1 Compartment:</b></p>  |                    |    |
| <p>There shall be a 119" D x 30" W x 5.0" H long tool storage compartment provided.</p>  |                    |    |
| <p>The compartment shall be located between the fire body mounting sills, with the door opening facing the rear of the apparatus. This compartment shall be utilized for the stowage of 8' long x 2 ½" suction hoses</p> |                    |    |
| <p>The compartment door shall be constructed of 11ga. diamond plate and shall be horizontally hinged. The door shall have tow (2) black thumb latches.</p>   |                    |    |
| <p><b>Skid Unit</b></p>  |                    |    |
| <p>The water tank, pump and plumbing shall be mounted on a heavy-duty aluminum frame to allow for the unit to be removed as a single unit.</p>   |                    |    |

| Any Mention of Brand Name Shall be "or Equivalent"   | BIDDER COMPLIES |    |
|--|-----------------|----|
|  | YES             | NO |
| <p>The skid unit shall be bolt directly through the bed to the apparatus frame utilizing four (4) heavy duty grade 8 bolts.</p>  |                 |    |
| <p><b>Pre-connect Tray:</b></p>  |                 |    |
| <p>An aluminum diamond plate pre-connect tray shall be supplied and mounted to the top of the water tank. The tray shall be as wide as the water tank and allow for the hose to be pulled off each side of the apparatus.</p>  |                 |    |
| <p>A red hosebed cover shall be provided for the pre-connect tray. Tray shall be 24" W x 14" T x 60" L.</p>  |                 |    |
| <p><b>Polypropylene Water Tank:</b></p>  |                 |    |
| <p>A 650-gallon water tank shall be supplied and shall have a 4" overflow. The construction shall be of co-polymer polypropylene and shall be rectangular shaped. <b>No Fiberglass! No Exception!</b></p>  |                 |    |
| <p>The tank body and end bulkheads shall be constructed of 0.5" thick, polypropylene tested inside and out.</p>  |                 |    |
| <p>The transverse and longitudinal swash partitions shall be interlocked and welded to each other as well as to the walls of the tank. The partitions shall be designed and equipped with vent holes to permit air and liquid movement between compartments. The 0.5" thick cover shall be recessed .375" from the top of the side walls. Hold down dowels shall extend through and be welded to both the covers and the transverse partitions, providing rigidity during filling operations. Drilled pegs for lifting eyes shall be provided in the top area of the water tank.</p> |                 |    |
| <p>The water fill tower shall be 0.5" thick polypropylene stock with a hinged lid and a removable polypropylene screen.</p>  |                 |    |
| <p>The water fill tower shall be located on the rear driver's side of the water tank. A sight glass shall be supplied on the rear driver's corner of the water tank, so the operator can see the lifeline of water remaining during pumping operations from the rear of the apparatus.</p>   |                 |    |
| <p>Two (2) tank mounting tabs shall be provided. One shall be at the front and one at the rear to allow the tank to be fastened to the fire body.</p>  |                 |    |
| <p>The water tank shall have an overflow tube. The overflow tube shall exit below the body, ahead of the rear wheels.</p>  |                 |    |
| <p>The tank shall measure approximately 60" W x 68" L x 42" T</p>  |                 |    |
| <p><b>Polypropylene Storage Tray:</b></p>  |                 |    |

| Any Mention of Brand Name Shall be "or Equivalent"   | BIDDER COMPLIES |    |
|--|-----------------|----|
|  | YES             | NO |
| <p>A poly storage tray able to hold two five-gallon foam containers shall be in-set on the passenger rear of the water tank. The tray shall have a drain hole to allow water to escape.</p>  |                 |    |
| <p><b>Fire Pump Plumbing System:</b></p> <p>The engine driven fire pump plumbing system shall be built completely of stainless-steel piping, stainless steel and/or brass fittings, and connections.</p> <p>Tank connections, front discharges, and other piping shall use high-pressure flexible piping. Flexible hose couplings shall be threaded stainless steel or Victaulic connections.</p> <p><b>Plumbing shall not be welded for ease of disassembly, no exceptions.</b></p> |                 |    |
| <p><b>Hose Threads:</b></p> <p>The hose threads shall be National Standard (NST) on all base threads on the apparatus intakes and discharges, unless otherwise specified.</p>  |                 |    |
| <p><b>Intake and Discharge Valves:</b></p> <p>All valves used in the plumbing installation shall be stainless steel full flow type valves designed for the fire industry.</p>  |                 |    |
| <p><b>Steel – Industrial valves shall not be used due to rusting.</b></p>  |                 |    |
| <p><b>Hose Reel Discharge:</b></p> <p>One (1) 1" discharges shall be provided for the hose reel with flexible high-pressure hose and a 1" stainless steel full flow type valve will be provided for this connection on manifold.</p>   |                 |    |
| <p><b>Whipline Discharges:</b></p> <p>Two (2) whipline discharges shall be supplied and mounted in the walkway area of the apparatus. These discharges shall have a 90-degree swivel to allow firefighting operations to be conducted off the side of the apparatus.</p>   |                 |    |
| <p><b>Pre-Connect Discharge:</b></p> <p>A 1.5" stainless steel full flow type valve shall be provided for the pre-connect tray.</p>  |                 |    |
| <p><b>Fire Pump to Water Tank bypass Line:</b></p> <p>A 1" fire pump to water tank refill and pump bypass cooler line shall be provided. The valve shall be a full flow quarter turn ball valve.</p>   |                 |    |
|  |                 |    |

A 1" piping and flex hose will be provided from valve to tank. The valve control shall be directly on the valve.

#### **Water Tank to Pump & Suction:**

A 2½" water tank to fire pump line shall be provided with a full flow 2½" Akron Brass TS-handle full flow type valve.

Suction will be provided with a full flow 2½" quarter turn ball valve so that while pumping you can also be connecting to an additional water source.

A 2½" chrome plug and chain will be provided at the rear for the suction.

#### **Manifold:**

A common 304 stainless steel manifold will be provided for all discharges.

#### **Fire Pump:**

A Hale HPX200-B23 pump shall be supplied and mounted to the rear of the skid unit.

#### **Performance**

The pump/engine shall be capable of meeting the NFPA 1906 performance rating of 50 GPM @ 150 PSI and 150 GPM @ 100 PSI. Typical pump performance from 5 foot draft at sea level shall be: 90 GPM @ 150 PSI, 170 GPM @ 100 PSI and 250 GPM @ 30 PSI.

#### **Pump**

The pump body shall be made of anodized alloy aluminum castings coupled together with a stainless-steel band clamp with an O-ring seal which allows quick pump volute removal for servicing. The pump end shall be factory hydrostatically tested to 300 PSI. The impeller shall be bronze. The renewable clearance rings shall be made of bronze to inhibit galvanic corrosion. The impeller shall be 8.75 inches (222.3 mm) in diameter and designed with a sleeve back end to prevent water from coming in contact with the engine shaft. The pump shaft seal shall be an automatically adjusting, maintenance free, mechanical type. The pump body shall be equipped with a petcock drain valve.

#### **Priming**

The pump shall be equipped with an exhaust venturi primer of brass and stainless-steel construction. The primer shall be capable of priming at 13 feet lift. The primer shall be actuated with a spring return, single control lever located at the operator's panel. The primer to pump line shall be equipped with an automatic check valve for priming from an open body of water and a manual shut -off for pumping from a pressurized water source.

**Suction/Discharge**

The suction and discharge ports shall be female pipe thread, designed and located to accept applicable hose thread adapters (3" NPT / 4" Victaulic Suction, 2.5" NPT Discharge flange).

**Engine**

The engine shall be a 4 cycle gasoline Briggs and Stratton Vanguard 386447 series V-Twin, overhead valve, air cooled design. Engine rating shall be 23 BHP at 3600 RPM. Engine displacement shall be 627cc and shall be designed to meet current CARB (California Air Resources Board) and EPA (Environmental Protection Agency) standards. A 12-volt electric system shall be provided with electric starter and a 16-amp alternator. Engine shall be equipped with a residential muffler with USDA approved spark arrestor.

**Fuel Tank:**

A heavy-duty aluminum 6 gallon fuel tank shall be supplied and mounted to the skid unit frame. The fuel tank shall have fuel level sight gauge and an overflow tube.

**Battery Supply:**

The skid unit of the apparatus shall have a heavy-duty separate battery supply to power the unit.

An emergency back-up system that runs off the chassis electrical system shall be supplied that will assist in starting the skid unit in case of a battery failure.

The engine will include a 36-watt alternator to keep separate battery charged

**Pump Test:**

The fire pump shall be tested after all of its associated piping and valves have been installed on the apparatus. The tests shall be conducted at the manufacturer's facility and certified by the manufacturer.

**Pump Panel:**

A pump panel shall be supplied and located at the rear of the apparatus. The pump panel shall be installed on a tilted pump panel for the ease of visibility and shall be enclosed with diamond plate on the backside of the module.

Pump Panel shall have the following controls:

- Pump Panel Light switch
- Start/Stop switch
- Low oil pressure light
- Pump inlet/outlet pressure gauge
- Idle control
- Choke

**Booster Hose Reel:**

One (1) Hannay hose reel, model 16.5-17-18 with electric rewind shall be provided with a single roller and spool assembly and a brake to adjust tension on the spool.

The hose reel shall be mounted on apparatus bed, offset to the driver's side.

**Hose Reel Electric Rewind:**

One (1) electric rewind push button will be installed. The electric rewind control shall be a weather-resistant enclosed momentary push button switch. Switch shall be installed as follows: One (1) switch at the hose reel location.

**Hose:****Whipline Hose:**

Two (2) sections of 10' x 1" 800psi booster hose shall be provided for the whipline discharges.

**Booster Hose:**

100' of 1" 800psi booster hose shall be provided for the hose reel.

**Fire Hose:**

200' of 1.5" White fire hose.

**Nozzles:**

Three (3) Crestar SF40 1" select flow nozzles with pistol grip handles and bell shut off shall be supplied.

One (1) Crestar SF125 1.5" select flow nozzles with pistol grip handles and bell shut off shall be supplied.

**Nozzle Clips:**

Nozzle clips shall be installed close to the whipline discharges to allow for storage of the nozzles.

**Electrical System:**

Low Voltage Electrical System Specifications

**Any Mention of Brand Name Shall be "or Equivalent"**

BIDDER  
COMPLIES

YES NO

The following specifications describe the low voltage electrical system on the specified brush truck type fire apparatus. The electrical system shall include all panels, electrical components, switches and relays, wiring harnesses and other electrical components.

All wiring shall be stranded copper or 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. The wiring and wiring harness and insulation shall be in conformance to applicable SAE and NFPA standards. The wiring harness shall conform to SAE J-1128 with GXL temperature properties. All exposed wiring shall be run in a loom with a minimum 289-degree Fahrenheit rating. All wiring looms shall be properly supported and attached to body members. The electrical conductors shall be constructed in accordance with applicable SAE standards, except when good engineering practice requires special construction.

The wiring connections and terminations shall use a method that provides a positive mechanical and electrical connection and shall be installed in accordance with the device manufacturer's instructions. Electrical connections shall be with mechanical type fasteners and large rubber grommets where wiring passes through metal panels.

All connections shall be crimp-type to resist moisture and foreign debris such as grease and road grime. Weather-resistant connectors shall be provided throughout to ensure the integrity of the electrical system.

Any electrical junction or terminal boxes shall be weather resistant and located away from water spray conditions.

There shall be no exposed electrical cabling, harnesses, or terminal connections located in compartments, unless they are enclosed in an electrical junction box or covered with a removable electrical panel or wire loom. The wiring shall be secured in place and protected against heat, liquid contaminants and damage.

The electrical system shall include the following:

- A) The electrical wiring shall be harnessed or be placed in a protective loom.
- B) No Holes shall be made in the roof of chassis, unless approved by end user.
- C) Any electrical component that is installed in an exposed area shall be mounted in a manner that will not allow moisture to accumulate in it.

The warning lights shall be switched in the chassis cab with labeled switching in an accessible location. All electrical equipment switches shall be mounted on a switch panel mounted in the cab convenient to the operator and passenger.

A single warning light switch shall activate all required warning lights. This switch will allow the vehicle to respond to an emergency and call for the right of way.

**Master Disconnect Switch:**

| Any Mention of Brand Name Shall be "or Equivalent"   | BIDDER<br>COMPLIES |    |
|--|--------------------|----|
|  | YES                | NO |
| <p>A battery disconnect switch shall be located conveniently to the driver of the apparatus. The switch shall disconnect the 12-volt power supply from the battery system.</p>   |                    |    |
| <p><b>Light Bar:</b></p>   |                    |    |
| <p>A TOMAR 970L Scorpion 53" Red/Blue LED low profile light bar shall be supplied. The light bar shall have clear lenses to the front and blanks to the rear and will be mounted on the headache rack mounting platform.</p>   |                    |    |
| <p><b>Features:</b></p>  |                    |    |
| <ul style="list-style-type: none"> <li>• NFPA 1901 Compliant</li> <li>• Variety of selectable flash patterns</li> <li>• Hermetically sealed</li> </ul>   |                    |    |
| <p><b>Lower Warning Lights:</b></p>  |                    |    |
| <p>Fourteen (14) Tomar RECT-14 LED Warning lights shall be provided. These warning lights have eleven (11) different flash patterns to customize to department specifications.</p>   |                    |    |
| <p>Warning Lights shall be installed as follows:</p>   |                    |    |
| <ul style="list-style-type: none"> <li>• Four (4) Red/Blue LEDs on the front grille guard with one (1) each side</li> <li>• Two (2) Red/Blue LEDs on apparatus chassis with one (1) each side above the front wheel well area.</li> <li>• Two (2) Red/Blue on the apparatus body: with one (1) each side offset as far forward as possible of the rear wheel well.</li> <li>• Two (2) Red/Blue on the apparatus body: with one (1) each side offset as far rearward as possible of the rear wheel well.</li> <li>• Four (4) Red/Blue on the rear of the apparatus body, with two (2) each side.</li> </ul> |                    |    |
| <p><b>Features:</b></p>  |                    |    |
| <ul style="list-style-type: none"> <li>• Four (4) Ultra-High intensity LEDs</li> <li>• Multiple selectable flash patterns</li> <li>• Made of optical Lexan and hermetically sealed</li> <li>• Meets SAE J845, SAE J595 and CAL Title 13</li> <li>• Five-year manufacturer's warranty</li> </ul>  |                    |    |
| <p><b>Work Lighting:</b></p>   |                    |    |
| <p>Two (2) LED work lights shall be installed on the rear of the water tank to illuminate the pump and plumbing during nighttime operations.</p>   |                    |    |
| <p><b>Scene Lighting:</b></p>  |                    |    |

Two (2) LED scene lights model: FT-MB-15-FT-B shall be installed on the side of the apparatus body, up high on each side of the apparatus, as close to center as possible.

**Features:**

- Fifteen (15) LED lights
- 7,920 Lumen output
- 20" length
- Aluminum housing
- Lifetime warranty

**Tank Level Gauge:**

A lighted tank level gauge will be provided on the pump panel for view of lifeline of water during nighttime operations and a mini lighted tank level gauge will be provided inside cab so operator is able to watch life line of water from the safety of the cab.

**Electronic Siren:**

One (1) Carson SC-409 full function electronic siren shall be mounted in the cab console. The siren shall have the following features: electronic air horn, siren tones, radio rebroadcast, P.A. and shall have a hard-wired microphone.

**Features:**

- 100/200-Watt SAE J1849 and Class A output
- Internal programmable siren functions
- Four Position progressive slide switch
- Seven programmable inputs and twelve programmable solid-state relay outputs.
- Scrolling TAP II intersection clearing feature

**Speaker:**

One (1) Federal Signal ES100, 100-watt speaker shall be mounted behind the front of the chassis bumper or grille. The speaker shall be wired to the electronic siren located in the cab.

**Features:**

- Neo-driver for increased dependability
- 100-Watt high output power
- Sound output meets SAE J1849 and Class A
- Impedance of 11 ohms

**Backup Alarm:**

An automatic electric 97 db back-up alarm shall be wired to activate when the transmission is placed into reverse. The alarm shall be mounted under the rear of the apparatus body.

#### **Auto Charge:**

The Auto Charge 2000 is a compact, completely automatic, dual channel battery charger designed for vehicles with two batteries. The charger is ruggedized to withstand the shock and vibration encountered by vehicle mounted equipment.

- Independent charge controls for each battery
- Electronic remote sensing of true battery voltages, eliminates the need for sensing wires
- Automatic current limiting and apportionment
- Built-in Battery Saver
- Remote dual battery charge/condition indicator
- Power "ON" LED indicator
- Battery Saver overload indicator

The charger contains two independent charge controls, one for each battery. This allows each battery to be independently charged while maintaining battery isolation. Each battery voltage is remotely sensed, electronically, eliminating the need for four sense wires. Each of the charge controls is completely automatic and stops charging the battery when it is fully charged.

#### **Battery Saver:**

A 3 ampere Battery Saver is built into the charger. When connected as shown in the installation wiring diagram, loads on battery #1 such as radios and rechargeable hand lights are automatically switched to the Battery Saver when power is applied to the charger.

The Battery Saver allows more efficient charging by removing these loads. A Battery Saver overload indicator alerts the operator that the Battery Saver load has exceeded 3 amperes.

#### **Remote Battery Charge Condition:**

This remote indicator shows the charge condition of each battery in 10 levels from "LOW CHARGE" to "FULLY CHARGED".

#### **Auto Eject Receptacle:**

An auto eject weatherproof plug will be provided and mounted to the rear driver's side quarter panel.

#### **Radio:**

A customer supplied radio & antenna shall be provided. Make, model and antenna type will be needed at the time of pre-build.

#### **Radio Equipment:**

**Any Mention of Brand Name Shall be "or Equivalent"**

**BIDDER  
COMPLIES**

**YES NO**

The following shall be provided with the apparatus:

- Antenna cable shall be provided from the cab console to the driver's side of the headache rack.
- A power cable shall be provided for the customer supplied radio.
- A mounting bracket shall be provided on the driver's side of the headache rack for the customer supplied radio.

**Rear View Camera:**

A rearview camera system shall be supplied.

The screen shall be a windshield-mounted rearview mirror with an integrated 7" LCD monitor that displays the rear-view image when the apparatus is shifted into reverse. The monitor shall automatically adjust in day and night modes and shall have a resolution of 800\*480 pixels.

The camera shall be a high-mounted, wide-angle look-down camera with 150-degree visibility and night vision capabilities.

**Labels:**

Fastened labels shall be supplied and mounted in accordance to their function:

All appropriate switches inside the cab shall be properly labeled with their function.

All appropriate valves on the pump panel shall have a corresponding function label.

**Scotchlite Striping & Lettering:**

**Cab and Body:**

The apparatus cab and body shall be provided with Scotchlite striping and installed to department's requirements. Colors to be determined at prebuild meeting.

**Lettering:**

Scotchlite lettering with shading will be installed to department requirements and colors to be determined at prebuild meeting.

**Rear Body:**

Chevron "A" style Scotchlite striping shall be provided on rear of body (outboard rearward facing smooth plate panels of the rear apron).

The colors shall be decided at pre-build.

**Apparatus Paint:****Cab and Chassis**

The apparatus cab and chassis shall be painted in accordance to the policies with the chassis manufacturer with all applicable warranties. The color of the cab shall be: Ford Red.

**Apparatus Body**

The apparatus body shall be made of steel and shall have a black line-x type coating.

**Apparatus Rims**

The rims of the apparatus shall be painted red

**Warranty:****1 Year Standard Warranty:**

The apparatus manufacturer shall provide a full 1-year standard warranty. All components manufactured by the apparatus manufacturer shall be covered against defects in materials or workmanship for a 1-year period. All components covered by separate suppliers such as engines, transmissions, tires, and batteries shall maintain the warranty as provided by the component supplier. A copy of the warranty document shall be provided with the proposal. No Exceptions

**2 Year Pump Warranty:**

Pump manufacturer shall warranty products of its manufacture to be free from defects in material and workmanship, under normal use and service, for a period of two years or 2000 hours of usage, whichever comes first. Products used for rental or contracting purposes are warranted for a period of six months or 2000 hours of usage, whichever comes first. This limited warranty is effective only if the equipment or apparatus is used as directed, is not subjected to misuse, negligence or accident, and is not altered, treated or repaired by someone other than pump manufacturer or its designee. A copy of the warranty document shall be provided with the proposal. No Exceptions

**10 Year 100,000 Mile Structural Warranty:**

The apparatus manufacturer shall provide a comprehensive 10 year/100,000-mile structural warranty. This warranty shall cover all structural components of the cab and/or body manufactured by the apparatus manufacturer against defects in materials or workmanship for 10 years or 100,000 miles, whichever occurs first. Excluded from this warranty are all hardware, mechanical items, electrical items, or paint finishes. A copy of the warranty document shall be provided with the proposal. No Exceptions

**10 Year Stainless Steel Plumbing Warranty:**

The apparatus manufacturer shall provide a full 10-year stainless steel plumbing components warranty. This warranty shall cover defects in materials or workmanship of apparatus manufacturer designed foam/water plumbing system stainless steel components for 10 years. A copy of the warranty document shall be provided with the proposal. No Exceptions

**3 Year Graphics Warranty:**

The apparatus manufacturer shall provide a full 3-Graphics warranty. This warranty shall cover defects in materials or workmanship of apparatus manufacturer's graphic components for 3 years. A copy of the warranty document shall be provided with the proposal. No Exceptions

**5 Year Electrical Warranty:**

The apparatus manufacturer shall provide a full 5 year-electrical warranty. This warranty shall cover defects in materials or workmanship of apparatus manufacturer's electrical components for 5 years. A copy of the warranty document shall be provided with the proposal. No Exceptions

**Lifetime Polypropylene Tank Warranty:**

The tank manufacturer warranties that tanks will be free from defects in materials and workmanship for a period of time equal to the service life of the original vehicle on which tank was installed. Original vehicle must be in active fire suppression for warranty to be in full effect. A copy of the warranty document shall be provided with the proposal. No Exceptions.

**Loose Equipment:**

The following loose equipment shall be provided with the apparatus:

- Three (3) sections of 2 ½" suction hose
- One (1) Suction/ Barrel strainer
- Round headed shovel with mounting brackets.
- 8' Pike Pole with mounting brackets.
- 6' Pike Pole with mounting brackets.
- 30" Halligan Pry Bar with mounting brackets.
- 51" Long Pry Bar with mounting brackets.
- Fiberglass Pick Headed Axe with mounting brackets.
- 20# ABC Fire Extinguisher with mounting brackets.
- Hydrant & Spanner wrench set with mounting brackets.
- 2 ½" M to 2 ½" M adapter
- 2 ½" F to 2 ½" F adapter
- 2 ½" M to 3" F Camlock
- Four (4) 50' Sections of White 1 ½" hose

Any Mention of Brand Name Shall be “or Equivalent”

BIDDER  
COMPLIES  
YES NO