



Specification for:  
**NWCG Type 5 Wildland Engine**  
**Ford F550 - 4x4 - Gas - 4 Door**  
**Rescue Side, Alum, 114**

Submitted To:  
**Mike Cody, Battalion Chief**  
**Coppell Fire Department**  
265 Parkway Blvd Coppell, TX 75019

Specification **4448**  
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Prepared by:  
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**Siddons-Martin Emergency Group**

## **Proposal**

We are pleased to submit the following specifications to you for a **Skeeter Type V Brush Truck** per your request for quotation. The following paragraphs will describe in detail the apparatus proposed. Loose equipment not specifically requested will not be provided.

Skeeter Brush Trucks, LLC. a wholly owned company of Siddons-Martin Emergency Group, is a custom fire apparatus manufacturer specializing in Brush-Grass-Wildland fire fighting vehicles. Our 22,000 square foot manufacturing facility is located in Hillsboro, Texas and is operated by some of the most experienced wildland firefighting vehicle manufacturing individuals in the business. Our performance and quality minded approach to manufacturing generates some of the most reliable vehicles in the industry, thus yielding a very high return on investment.

Skeeter Brush Trucks, LLC. provides the very best sole source product and service solutions to the fire service. Skeeter Brush Trucks LLC carries \$1,000,000 in liability insurance, with \$3,000,000 in excess umbrella liability insurance. The opportunity to place this Skeeter Brush Truck in your department is greatly appreciated and we are certain it will fulfill your every requirement. We look forward to working for you.

Siddons-Martin Emergency Group sales and service professionals are dedicated and experienced in all aspects of the fire apparatus business. Our core business is the sales and service of fire apparatus.

## **Service Advantage**

Siddons-Martin Emergency Group currently staffs sixteen (16) service centers located throughout Texas, Louisiana, and New Mexico, and maintains a fleet of service vehicles to provide on-site service of your SKEETER Brush Truck. The Siddons-Martin Emergency Group Service Department is dedicated to the fire service and provides service and maintenance exclusively on fire apparatus. Siddons-Martin Emergency Group employs numerous EVT trained technicians and is constantly engaged in continuing factory and EVT training classes and programs in order to stay abreast of the rapidly improving technologies incorporated within today's fire apparatus. SMEG is an authorized sales and service dealer for Pierce Mfg., and an authorized service center for Waterous, Hale, and Darley fire pumps, and an OEM distributor for all major fire equipment accessories.

## **Construction and Design**

Skeeter Brush Trucks body and component designs are engineered. Body construction (unless otherwise noted) is done in-house, using the best in design and materials. RBM's for body frames are among the very highest in the industry. Wiring harnesses are custom manufactured in-house, and meet or exceed OEM standards. All wiring is protected, run through conduit, and distributed through one, easily accessed, sealed control box.

## **Chassis Operation Manual**

The chassis manufacturer shall provide one (1) operational manual.Â This manual may be in either a notebook type binder, with reference tabs or a compact disk (CD) with all of the printed material in an electronic format (Adobe Acrobat PDF).

## **Fire Pump Operational Manual**

A fire pump service, instruction, and operational manual shall be supplied.Â This manual may be in either a notebook type binder, with reference tabs or a compact disk (CD) with all of the printed material in an electronic format (Adobe Acrobat PDF).

## **Foam System Operational Manual**

A foam system service, instruction, and operational manual shall be supplied.Â This manual may be in either a notebook type binder, with reference tabs or a compact disk (CD) with all of the printed material in an electronic format (Adobe Acrobat PDF).

## **Apparatus Operational Manuals**

The chassis manufacturer shall provide one (1) operational manual. This manual may be in either a notebook type binder, with reference tabs or USB thumb drive with all of the printed material in an electronic format (Adobe Acrobat PDF).

## **204069.1 - PAINT, INDUSTRIAL QUALITY**

1. Cab Color: \*\*\*\*\*
2. Cab Secondary Color: N/A
3. Description: Solid \*\*\*\*\*

COMPLETE CAB SINGLE COLOR PAINT SCHEME, DOOR JAMBS PAINTED

## **100035.1 - CHASSIS SPECIFICATIONS**

One (1) FORD F-550 two axle drive 4x4, dual rear wheels (DRW), four (4) door XL Crew Cab and chassis

GVWR: payload upgrade, single axle rating of 19,500#

Wheelbase: 179"

Cab to Axle: 60"

Grille: black

Tow Hooks: front loops

Driving Front Axle and Suspension: 7,000# HD front package, 7,000# suspension package, stabilizer bar, front shocks, manual hubs

Tires: two (2) front tires shall be 225/70R19.50, radial all weather/off road tread

Front Wheels: two (2) 19.50" x 6.00" steel disc, ten (10)-hole pattern steel disc wheels

Rear Axle and Suspension: 14,706# wide track rear axle, 14,706# suspension package, stabilizer bar, limited slip

Tires: four (4) 225/70R19.50 radial all weather/off road tread

Rear Wheels: four (4) 19.50" x 6.00" steel disc, ten (10)-hole pattern steel disc wheels

Braking System: four (4) wheel disc brake system with an Anti Lock (ABS)

Engine:

- Model: 7.3L V-8, EFI, Flex Fuel gasoline engine
- Number of Cylinders: Eight (8) "V" configuration
- Displacement: 7.3 liters
- Rated Brake Horsepower: 430 hp
- Torque:

Cooling System: a coolant mixture protected to -30 degrees Fahrenheit

Exhaust System: horizontally mounted, discharge on passenger's side aft of wheels

Fuel Tank: 40 gallon rear mounted, driver's side filler extension

Transmission: six speed automatic

Steering: power steering system

Battery: 78 amp-hr 750CCA 12-volt battery

Alternator: single 200 amp 12 volt

Cab Construction: XL Series four (4) door aluminum construction, sun visors, tinted glass, roof clearance lights, grab handles interior

Mirrors: black manually telescope fold-away in/out for view adjustment.

Cab Paint: single color

Climate Controls: controls for heat, defroster, and air conditioning

Window and Door Controls: manual

Air Bags: driver's and passenger's front, seat side, and side curtain

Cab Instruments: standard type, six (6) rocker switches

Drivers and Passenger Seat: 40/20/40 vinyl bucket type seats with three (3) point safety harness, center flip down seat back. Flip rear seat.

Printed Manuals: one (1) printed chassis operation manual

Cab Accessories: AM/FM radio, two radio speakers and antenna

Jack and lug wrench set

Color: Ford Race Red

### **203807.1 - 60" CAB TO AXLE**

The chassis Cab to Axle measurement shall be 60".

### **203770.1 - ELECTRONIC SHIFT ON THE FLY**

The chassis shall be equipped with an electronic shift transfer case. The front axle hubs shall be auto locking, with a manual backup feature.

NOTE: ONLY AVAILABLE ON "DIESEL" CHASSIS PER FORD

### **100037.1 - POWER PACKAGE**

The chassis shall be equipped with power locks, windows, and heated power mirrors.

### **204028.1 - XLT CHASSIS UPGRADE WITH CARPET DELETE (FORD ONLY)**

The chassis shall include the XLT trim level. Accessories listed herein supercede the chassis option in this spec, and include the following:

Power equipment group  
XL value package  
Chrome front grille  
Privacy glass  
Sirius/XM radio  
Soft armrest, grab handle, power window/lock switches  
CARPET DELETE  
Cloth 40/20/40 split front seats  
Four-way adjustable driver/passenger headrests  
Cloth 60/40 split rear seats  
Advanced security pack  
Autolock, Auto unlock  
SecuriLock Passive Anti-theft System  
Trailer brake controller

### **100097.1 - TRAILER BRAKE CONTROLLER**

A factory OEM electronic trailer brake controller shall be installed.

### **203918.1 - FLEET/GOVERNMENT INCENTIVE DISCOUNT**

\*\*\* NOTE\*\*\* Pricing quoted is contingent upon the end user (customer) filing for and receiving OEM Fleet/Government Pricing Number.

\*\*\* FAILURE BY THE CUSTOMER TO RECEIVE THE OEM FLEET/GOVERNMENT PRICING NUMBER WILL RESULT IN FULL LIST PRICE BEING CHARGED FOR THE CHASSIS \*\*\*

#### **100603.1 - CHASSIS LIFT KIT**

A 2" chassis lift kit shall be installed. It shall consist of spacers on the front coil springs, and blocks on the rear leaf springs.

\*\*\*NOTE: NOT APPLICABLE FOR TIRE SIZES OVER 285/70R19.5"\*\*\*

#### **204093.1 - OFF-ROAD TIRE UPGRADE, CONTINENTAL 245/70R19.5 CONTITERRA**

The factory tires shall be removed and replaced with Continental 245/70R19.5 HD3 Contiterra tires on the factory supplied wheels.

#### **100051.1 - ALUMINUM WHEELS**

The exposed chassis wheels shall be aluminum.

NOTE: This option is for stock OEM tires only.

#### **204094.1 - UPGRADED OFF-ROAD SPARE TIRE, CONTINENTAL 245/70R19.5**

The factory spare tire shall be removed and replaced with a Continental 245/70R19.5 HD3 Contiterra off-road tire on the factory wheel.

#### **100055.1 - MOUNTING SPARE TIRE AND WHEEL**

The spare tire and wheel shall be mounted on top of the water tank.

#### **100060.1 - FRONT BUMPER**

The factory bumper shall be removed and replaced with a heavy duty Ranchhand off-road bumper and grille protection assembly. The bumper extension unit shall be custom painted to purchaser requirements. A receiver hitch shall be installed at the front of the apparatus below the front bumper. The bumper assembly shall be winch ready.

#### **100058.1 - REAR MUD FLAPS**

The chassis shall be supplied with mud flaps with the manufacturer's logo. The mud flaps shall be installed behind the rear wheels.

#### **100063.1 - FRONT BUMPER SKID PLATE 1/4"**

A 1/4" (0.25") aluminum skid plate will be installed from the bumper area extending below the bumper and chassis radiator area.

#### **100065.1 - TRANSFER CASE SKID PLATE, LONG**

A removable heavy .250" aluminum skid plate assembly shall be installed to protect the oil pan and transfer case.

#### **100111.1 - CAB STEPS**

The cab shall be equipped with steel tubing step assemblies, on each side of the cab.

#### **100086.1 - CUSTOM FABRICATED CONSOLE AND SWITCH PANEL**

A custom fabricated poly (plastic) electrical console and enclosure shall be located between the driver's and passenger's seats. It shall house the siren, switches, cup holder, and auxiliary equipment.

#### **100543.1 - 12 VOLT POWER SOURCES**

Three (3) 12 volt plug-in utility power outlets rated at 15 amps shall be provided in cab.

LOCATIONS: Determined at preconstruction.

#### **100075.1 - FRONT RECEIVER**

The front of the chassis shall be equipped with one (1) square steel tube receiver assembly for high or low angle rescue or winch applications. It shall be the same size as a Class III trailer hitch and shall be attached to the chassis frame and bumper extension assembly. The receiver shall be rated at approximately 10,000#.

### **100077.1 - WINCH POWER SUPPLY**

Two (2) Anderson type 12 volt quick disconnect electrical receptacles with covers shall be installed for the portable winch. Power cables shall be color coded "red" positive and "black" neutral; rated at 125% of winch power requirement including line drop; protected with conduit for mechanical abrasion and equipped with circuit breaker protection at the battery area.

Location shall be: one (1) front of the apparatus and one (1) rear of the apparatus

### **100078.1 - WINCH POWER SUPPLY**

A 500 amp 12 volt industrial series solenoid shall be installed to supply power to the winch. The solenoid shall be activated by the upfitter switch.

### **100079.1 - PORTABLE WINCH**

A Warn Winch Company Model 9.5cti PN85760 9,500# capacity 12-volt electric portable winch shall be provided incorporating a portable mounting system with two carrying handles. The unit shall include the following:

- a) extreme duty seals for weather resistance
- b) thermo-metric indicator for motor monitoring
- c) A cable guide and 125 feet of 5/16" diameter galvanized cable and hawse fairlead & safety hook assembly shall be supplied.
- d) Winch speed shall be constant with forward and reverse modes controlled with a push button device at the end of a twelve foot control cable which connects to the winch through a weatherproof receptacle.
- e) Carrying handles

The winch shall be attached to the body at the specified locations with a steel tube insert secured with steel pins. Power shall be supplied through a 12 volt pigtail with an Anderson type plug.

### **100178.1 - REAR RECEIVER**

The rear of the chassis shall be equipped with one (1) square steel tube receiver assembly for high or low angle rescue, trailer use, and winch applications. It shall be the same size as a Class III trailer hitch and shall be attached to the chassis frame assembly. The receiver shall be rated at approximately 10,000#.

The rear receiver assembly shall be equipped with two (2) heavy duty rear tow loops, one (1) each side.

### **203815.1 - FIRE PUMP SPECIFICATIONS**

A Darley model number 2 BE 21H Honda gasoline powered centrifugal pump shall be installed. The medium pressure, high volume pump, direct drive, engine mounted shall meet the following performance requirements:

380 GPM @ 25 PSI  
150 GPM @ 115 PSI  
100 GPM @ 135 PSI

#### **Pump Design**

Pump casing shall be of anodized aluminum and vertically split, with a minimum tensile strength of 33,900 PSI - bronze-fitted. Pump ratio to be selected by the manufacturer's Engineering Department. Seal rings shall be renewable, double labyrinth, wrap around bronze type. Bearings are to be heavy duty, deep groove, radial-type ball bearings, oversized for long life. Bearings to be protected at all openings from road dirt and water splash with oil seals and water slingers.

The pump unit shall be supplied with a control panel for remote mounting, panel light, hour meter / tachometer, pressure gauge, on/off ignition switch, and a low oil pressure light, engine choke, engine throttle

#### **Mechanical Seal**

The pump shall be furnished with a Darley maintenance free mechanical seal. The mechanical seal shall be a non-contacting, non-wearing seal design. Seal shall be a Silicon Carbide Mechanical seals with welded springs. The stationary face of mechanical seals shall be made from Silicon Carbide, and be extremely hard and of a heat dissipative material, which resists wear and dry running damage much better than conventional Ni-resist and Tungsten Carbide materials

#### **Pump Shaft**

Pump drive shaft shall be precision ground, heat treated alloy steel, with a 1-3/8 spline. Gears shall be helical design, and shall be precision ground for quiet operation and extended life. The pump shaft shall be splined to receive broached impeller hubs, for greater resistance to wear, torsional vibration, and torque imposed by engine, as well as ease of maintenance and

repair. Pump shaft to be precision-ground 416 stainless steel.

#### Impeller

The impeller shall be a high strength bronze alloy, splined to the pump shaft for precision fit, durability, and ease of maintenance.

Impeller shaft oil seals shall be constructed to be free from steel components except for the internal lip spring. The impeller shaft oil seals shall carry a lifetime warranty against damage from corrosion from water and other fire-fighting fluids.

#### Hand Type Primer

There shall be a mechanical Guzzler hand primer installed.

#### Dimensions & Weight

27"L x 21"W x 25"H, 145lbs (66kg)

Suction 3" NPTF

Discharge (2) 1.5" NPTF and (1) 2.5" NPTF

#### Documentation

Pump Warranty/Guarantee to be included with each proposal. Pump warranty shall be for three (3) years or 3,000 hrs. Additional details about the warranty can be found in the Skeeter user's manual of this vehicle.

#### Engine

The pump shall be powered by an 21 horsepower, Honda gasoline engine with a 16 amp regulated alternator and 12 volt electric starter. A 6 gallon plastic fuel tank shall be supplied.

### **100423.1 - THERMAL RELIEF UNIT**

There shall be a Trident model brass thermal relief valve installed in the manifold allowing auto dump at 143° water temperature. The thermal relief valve shall auto close at 118° water temperature. There shall be a hose directing water under the body, but in a location visible by the pump operator.

### **100272.1 - STAINLESS STEEL PLUMBING SYSTEM**

The auxiliary fire pump plumbing system shall be built mostly of stainless steel piping, fittings, and connections. Victaulic couplings shall be installed to permit flexing of the plumbing system and allow for quick removal of piping or valves for service. Tank connections and remote plumbing shall use high-pressure flexible piping. Flexible hose couplings shall be threaded stainless steel or Victaulic connections.

### **100285.1 - VALVES**

All valves used in the plumbing installation shall be stainless steel quarter turn full flow type.

The plumbing installation shall include quarter turn ball valves with local "on-valve" handle control, with custom embossed labeling for each valve.

### **100483.1 - HOSE THREADS**

The hose threads shall be National Hose Standard (NH) on all base threads on the apparatus intakes and discharges, unless otherwise specified.

### **100263.1 - EXHAUST SYSTEM**

The auxiliary fire pump and engine assembly shall have a muffler and vertical exhaust pipe. The exhaust pipe shall be directed upward and away from the pump operator. A rain cap will be installed on the vertical exhaust outlet.

### **100685.1 - HAND PRIMER**

A Guzzler® Hand Pump GH-0400D shall be installed for manual drafting.

### **100265.1 - PUMP CONTROL PANEL ENCLOSURE**

A pump panel enclosure shall be installed. The enclosure shall be fabricated of .125" aluminum with a DA finish, bolted in place with a pump instrument panel installed.

An engine and pump control panel shall be installed in the pump panel enclosure. The following shall be on the pump panel:

2.5" discharge pressure gauge  
start/stop control  
throttle control  
low oil pressure warning light

The pump control panel shall be installed at the passenger's side rear corner of the body.

#### **100418.1 - REMOTE PUMP CONTROL PANEL IN CAB, GAS PUMP**

The cab shall be equipped with secondary remote electrically controlled pump instrument control in the cab. There shall be a remote pressure gauge, start/stop switch, and electronic throttle control.

NOTE: \*\*\*GAS PUMPS ONLY\*\*\*

#### **100534.1 - LOW WATER PRESSURE CUT-OFF**

There shall be a low water pressure cut-off switch that will shut off the pump engine when pump pressure is lost. There shall be a manual override switch to bypass the cut-off.

#### **100267.1 - FUEL SYSTEM FROM CHASSIS FUEL TANK**

The fuel system for the auxiliary fire pump shall be plumbed from the chassis fuel system. There shall be a separate fuel pickup tube mounted in the chassis fuel tank specifically for a separate engine driven pump assembly.

There shall be an electric fuel pump with spin on fuel filter and flexible fuel hose furnished between the chassis fuel tank and the auxiliary pump.

#### **100256.1 - ELECTRIC START WIRING TO CHASSIS**

The 12 volt positive and negative cables shall be provided from the chassis battery to the fire pump area, wired through the master disconnect solenoid system. The cables shall have a circuit breaker installed at the chassis battery.

#### **100474.1 - AUXILLIARY FIRE PUMP MOUNTING PROVISIONS**

The auxiliary fire pump shall be installed at the center rear of the body. The sub-structure shall have welded in mounting sub-plates between the structural members.

#### **100254.1 - PUMP ENGINE OIL DRAIN**

The fire pump engine shall have an oil drain line installed. It shall allow for easy oil draining.

#### **100253.1 - FIRE PUMP MASTER DRAIN**

The fire pump shall have a master drain at the bottom of the water pump housing.

#### **100273.1 - FRONT BUMPER MANIFOLD SUPPLY**

There shall be an 1.5" stainless steel valve, with a flexible supply hose installed to feed the front discharge manifold.

#### **100270.1 - 2-1/2" GATED INTAKE -- REAR**

One (1) 2-1/2" gated suction intake shall be installed on rear area to supply the fire pump from an external water supply. The valve shall be controlled with a direct quarter-turn ball valve control handle and shall have 2-1/2" NH female thread with removable screen with plug.

#### **100284.1 - TANK TO PUMP LINE INSTALLATION**

The 3" tank to pump line shall be installed with a flexible hump hose connection and stainless steel clamps to the water tank. The 3" valve shall be controlled with a manually operated handle directly on the valve.

#### **100281.1 - WATER TANK FILL AND COOLING LINE**

One (1) 1" fire pump to water tank refill and bypass cooler line shall be provided. The pump to tank valve shall be a 1" full flow quarter turn ball valve with local control handle. A 1" flex hose shall be installed to the water tank.

#### **100278.1 - 3/4" GARDEN HOSE DISCHARGE -- REAR**

One (1) .75" garden hose discharge shall be installed on the rear pump area, controlled by a quarter turn ball valve with local control handle. The discharge shall have a .75" male garden hose threads and cap.



### **100277.1 - 1-1/2" PRE-CONNECT DISCHARGE -- REAR HOSEBED**

One (1) 1-1/2" pre-connect discharge shall be installed on the rear hosebed, controlled by a quarter turn ball valve with direct local control handle in pump area. The discharge shall have 1-1/2" NH male hose threads.

The valve shall be on the manifold, with a feed line to the rear of the tray.

### **100441.1 - FRONT OF BODY DISCHARGE (THROUGH THE TANK)**

A 1.5" discharge shall be piped from the rear pump area to the front on the body. A 1.5" master control valve shall be installed at the rear pump manifold area with direct control handle. Two 1" valves shall be installed at the front of the water tank.

### **100643.1 - HOSE REEL**

One (1) Hannay aluminum hose reel shall be installed. The reel shall have leak proof ball bearing swing joint, adjustable friction brake, electric 12 volt rewind and manual crank rewind provisions.

The reel shall be mounted above the water pump and plumbing, center of the rear flat-bed body. There shall be a custom aluminum platform to support it.

### **100291.1 - REEL CAPACITY**

Each hose reel shall have a capacity of 200 feet of hose.

### **100295.1 - HOSE REEL DISCHARGE**

One (1) 1" discharge shall be piped from the fire pump to each hose reel with flexible high pressure hose. The quarter turn ball valve shall be on manifold.

### **100302.1 - NOZZLE MOUNT**

Each 1" flexible hose discharge shall have a nozzle bracket installed to hold the nozzle in place.

### **100297.1 - HOSE REEL HOSE**

One (1) 150' foot length of 1" water hose shall be installed on the hose reel. The hose shall be equipped with NH threaded couplings and have a 300 PSI working pressure.

### **100303.1 - HOSE REEL ROLLER**

Each hose reel shall be provided with a Hannay top mounted stainless steel roller assembly.

### **100280.1 - GROUND SWEEP DISCHARGES -- FRONT BUMPER**

Two (2) ground sweep discharge nozzles shall be installed, one each side of the front bumper. Each nozzle shall have a 1" electric control valve, switched independently in the cab. The discharges shall be equipped with removable ground sweep nozzles angled accordingly with a 180 degree total front sweep pattern. The flow rate shall be 15-30 gpm.

Each nozzle shall have a custom fabricated brush guard installed to protect from damage when off road. The valves and manifold shall be protected from damage by the front bumper and skid plate.

One (1) 1.5" front bumper ground sweep discharge shall be piped to the front bumper area. The discharge shall be controlled by a 1.5" manual override valve at the rear pump area. Flexible 1.5" diameter high pressure hose shall be provided from the pump to the sweep nozzles with low point drains where necessary.

### **100385.1 - MID BODY WHIP LINES**

Two (2) 1" x 12 feet long 300# working pressure hose whips with threaded couplings shall be installed at front of body, one each side, with securement devices.

### **100259.1 - CLASS A FOAM SYSTEM**

A Scotty Model #4171 Class A through-the-pump foam system shall be installed to supply all discharges. The unit shall be mounted at the rear of the apparatus, within easy reach of pump operator. The unit shall be adjustable, permitting various foam ratio percentages to be educted depending on the nozzles in use. Foam selection percentages between .07 and 3% shall be available. The foam system has been designed for simplicity of operation and maintenance. A flush system will be installed.

MAXIMUM WORKING PRESSURE: 300 PSI

### **100226.1 - WATER TANK GAUGES**

One (1) Class 1 "Intelli-Tank" water tank level gauge shall be installed on pump panel. The tank level gauge shall indicate the liquid level on an easy to read LED display and show increments of 1/8 tank. A pressure transducer shall be mounted on the outside of the tank in an easily accessible area.

CAB MOUNTED -

One (1) Class 1 112124 "Intelli-Tank" mini water tank level gauge shall be installed in the cab or center console. The tank level gauge shall indicate the liquid level on an easy to read LED display and show increments of 1/4 tank.

### **100200.1 - WATER TANK SPECIFICATIONS**

The water tank shall have a capacity of 400 gallons.

### **100203.1 - TANK BUILD SPEC**

The water tank shall be constructed of black polypropylene, poly-welded and tested inside and out. The tank manufacturer shall define the floor, top, sides, ends, and baffles material thickness. The tank shall carry a lifetime warranty.

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 tank covers shall be welded on top and bottom, and the transverse partitions, providing rigidity during fast fill operations. Drilled and tapped holes for lifting eyes shall be provided in the top area of the water tank.

The water tank manufacturer shall certify the capacity of the water tank prior to delivery of the apparatus. This capacity shall be recorded on the manufacturer's data plate.

### **100205.1 - NFPA COMPLIANCE**

The water tank construction shall conform to applicable NFPA standards.

### **100206.1 - WATER TANK SIGHT GAUGE**

The water tank shall be equipped with translucent water level sight gauge in the rear wall of the tank.

### **100207.1 - FILL TOWER LOCATION**

The tank fill tower shall be located in the driver's side rear corner of the water tank.

### **100209.1 - VENT AND OVERFLOW**

The fill tower shall incorporate a vent and overflow system shall be designed into the water tank. The system shall include a 3" diameter pipe that functions both as an air vent while emptying the tank and as an overflow when filling the tank. The overflow shall discharge excess water below the frame rails of the vehicle.

### **100215.1 - PUMP TO TANK CONNECTION**

An 1-1/2" connection shall be provided on the water tank for connection of the discharge side of the pump to the tank for filling purposes. The valves and hose required to complete this connection shall be supplied by the final assembler.

### **100216.1 - WATER TANK DRAIN PLUG**

A 1.5" drain plug shall be installed in the bottom of the water tank under P/S wheel well for water tank draining and flush-out of debris.

### **203831.1 - TANK ACCESS LADDER**

There shall be a tank access ladder installed at the rear of the water tank. It shall allow access from the body deck to the top of the water tank. It shall be made of 1" tubular aluminum.

### **100223.1 - PERIMETER WALL AROUND TANK**

An 8" vertical poly wall shall be installed around the perimeter of the water tank to allow for storage on top of the water tank.

### **100227.1 - FOAM TANK SPECIFICATIONS**

The Class A foam tank shall have a capacity of 10 gallons.

### **100232.1 - FOAM TANK AND VENTING PROVISIONS**

The foam concentrate tank shall be provided with a fill pipe having a volume of not less than 2 percent of the total tank volume. The filler opening shall be capped with a sealed air-tight threaded cover. The fill opening shall be designed to incorporate a removable screen and shall be located so that foam concentrate from a five (5) gallon container can be dumped into the tank.

The foam tank filler shall be equipped with a pressure/vacuum vent that enables the tank to compensate for changes in pressure or vacuum when filling or withdrawing foam concentrate from the tank. The pressure/vacuum vent shall not allow atmospheric air to enter the foam tank except during operation or to compensate for thermal fluctuations. The vent shall be protected to prevent foam concentrate from escaping or directly contacting the vent at any time. The vent shall be of sufficient size to prevent tank damage during filling or foam withdrawal.

A color coded label or visible permanent marking that reads "CLASS A -- FOAM TANK FILL" shall be placed at or near the foam concentrate tank fill opening. An additional label shall be placed at or near any foam concentrate tank fill opening stating the type of foam concentrate the system is designed to use.

Any restrictions on the types of foam concentrate that can be used with the system shall also be stated, along with a warning message that states "WARNING: DO NOT MIX BRANDS AND TYPES OF FOAM."

### **100233.1 - FOAM SYSTEM PIPING**

A 3/4" fitting shall be provided on the foam tank for connection of the foam tank to the suction side of the foam system.

### **100235.1 - FOAM TANK DRAIN AND VALVE PROVISIONS**

A 3/4" diameter connection, piping, and valve shall be installed for the foam tank for draining purposes.

### **100549.3 - CUSTOM RESCUE SIDE ALUMINUM BODY**

The body will be a custom fabricated severe service rescue-side type, constructed of all aluminum. The body shall be 114" long by 96" wide, designed for a 60" cab to axle dimension. The body shall be specifically designed and engineered for off-road wildland firefighting.

#### **MAIN FRAME**

The body shall have 6" x 1.75" structural aluminum channel main frame rails. The body frame rails shall be isolated from the truck frame by .500" industrial isolators.

#### **SUB-FRAME**

The cross-members shall be 3" x 2 5/16" structural aluminum I beams with cross-members on 12" centers.

#### **MOUNTING**

The body shall be bolted to the chassis frame rails at the rear end of the frame. There shall be brackets installed at the middle of the body frame to prevent side to side movement. The body shall be spring mounted at the front of the body frame. The flexible mounting system shall allow for body/chassis flexing during extreme off road conditions.

#### **SQUARE CORNERS**

The front corners of the flat-bed body shall be square.

#### **HEADACHE RACK**

The front of the body shall have a 2" formed aluminum tube headache rack. The rack shall extend the full width of the body and be attached to the front body corners. The assembly shall extend above the chassis cab and have mounting platform for installation of the light bar and two work lights. Wiring for the lights will be placed inside the tubing for protection. The headache rack shall have four (4) vertical 2" tubes for extra strength.

#### **FUEL FILLER**

The fuel filler tube and cap shall be installed at the driver's side, rear of the body.

#### **FENDER PANELS**

The lower portion of the flat-bed body shall have fender panels over and aft of the rear wheel panel area. The panels shall be constructed of aluminum. The wheel well openings will be cut out to conform to the wheels.

#### **REAR BODY PANEL**

A vertical body panel shall be installed at the rear of the body constructed of .125" smooth aluminum. The panel shall house

the running lights, taillights, back-up lights, and emergency lights. The body panel shall be angled to allow for a 27 degree angle of departure.

#### **PROTECTIVE RAILS**

The upper body area shall be protected with radius corner 1" diameter aluminum tube railing assembly installed around the top of the body. The corners of the body shall have vertical risers space in critical areas. The railings shall act as protection for the upper body structures when off road in heavy brush conditions. The rear upper body corner rails shall house the upper emergency lights and work lights.

#### **SIDE BODY COMPARTMENTS, FRONT BODY -- DRIVER AND PASSENGER'S SIDES**

Two (2) body equipment storage compartments shall be installed at the front of the body just behind the headache rack, one each side of the apparatus. The dimensions shall be approximately: 30" wide, 44" high, and 24" deep. The compartments shall be constructed of .125" aluminum on all exterior surfaces. Each compartment shall be equipped with a vertically hinged door with a single latch installed. The doors shall be equipped with gas operated door opening assistant cylinders.

Each vertical compartment shall have one (1) fixed shelf.

The compartment floors shall be lined with turtle tile.

#### **203804.1 - PAINTED FINISH BODY AND COMPARTMENTS/TRAYS**

The exterior surface of all body skins, compartments, and trays shall all be Painted.

The surface shall be sanded, acid washed, acid primed, primed, and top coat painted in accordance with the paint manufacturers specifications.

#### **100121.1 - ANGLED CORNERS, BODY**

The front corners of the body will be angled at approximately 22 degrees.

#### **203934.2 - ADJUSTABLE SHELF (Qty: 4)**

There shall be one (1) adjustable shelf located in the \*\*\* Enter Location Below\*\*\* compartment constructed of .190 smooth aluminum. There shall be adjustable tracking mounted to the wall of the compartment to allow height adjustment of the shelf. The shelf shall be no larger than 4 feet wide by 2 feet deep. The tracking shall be as long as possible to allow for max adjustment range of shelf.

\*\*\*MUST SPECIFY QTY AND LOCATION AND UPDATE DEFAULT QTY ABOVE\*\*\*

QTY:

LOCATION:

#### **100141.1 - FRONT BODY TRANSVERSE COMPARTMENT, UPPER**

A transverse compartment 96" long x 18" wide x 24" high (exterior dimensions) will be installed in front of the water tank, on the body floor, between the vertical compartments. The compartment floor shall be lined with Turtle Tile.

#### **100462.1 - TOOL STORAGE TRAY/TRANSVERSE -- FRONT OF TANK, ABOVE**

A tool storage compartment shall be installed in front of the water tank, above the lower compartments. The dimensions shall be approximately: 86" long, 18" wide, 16" high. The compartment shall be constructed of .125" aluminum on all exterior surfaces. The compartment shall be equipped with hinged aluminum lid with latches installed. The hinge shall be at the front of the compartment, near the headache rack. There shall be two (2) gas struts to hold the lid open. The tray shall have turtle tile installed on the bottom.

#### **203877.1 - LONG TOOL STORAGE, TRANSVERSE COMPARTMENT, REAR WALL**

There shall be two (2) vertical track mounts installed on the rear wall of the transverse compartment. The tracks shall have two (2) sections of aluminum tubing for storage of long tools. The tubes shall be adjustable, vertically.

#### **100144.1 - DRIVERS SIDE UPPER BODY COMPARTMENT**

A body equipment storage compartment shall be installed on the flatbed surface, driver's side of the apparatus. The exterior dimensions shall be approximately 48" wide, 24" high, and 18" deep. The compartment shall be constructed of .125" aluminum on all exterior surfaces.

The compartment shall be equipped with:

- a lift up door with latch installed
- key type door locks.
- dual gas operated door opening assistant cylinders.
- a white LED strip light that is automatically controlled by a door activated switch.
- a louvered vent
- Turtle Plastics Turtle Tile Compartment Matting shall be installed in the compartment. Turtle Tile shall be black in color and lock together design.

The actual door opening shall be approximately 3" smaller in dimension.

#### **100148.1 - PASSENGERS SIDE UPPER BODY COMPARTMENT**

A body equipment storage compartment shall be installed on the flatbed surface, passenger's side of the apparatus. The exterior dimensions shall be approximately 48" wide, 24" high, and 18" deep. The compartment shall be constructed of .125" aluminum on all exterior surfaces.

The compartment shall be equipped with:

- a lift up door with latch installed
- key type door locks.
- dual gas operated door opening assistant cylinders.
- a white LED strip light that is automatically controlled by a door activated switch.
- a louvered vent
- Turtle Plastics Turtle Tile Compartment Matting shall be installed in the compartment. Turtle Tile shall be black in color and lock together design.

The actual door opening shall be approximately 3" smaller in dimension.

#### **100544.1 - CUSTOM COMPARTMENT SHELVING**

A horizontal shelf with 1" lip shall be installed in the passenger's side compartment.

There shall be a vertical divider in the passenger's side upper body compartment. It shall be installed under the horizontal shelf.

#### **100642.1 - SIDE BODY COMPARTMENTS, REAR BODY -- DRIVER'S AND PASSENGER'S SIDES**

Two (2) body equipment storage compartments shall be installed at the rear of the body, one each side of the apparatus. The exterior dimensions shall be approximately: 32" wide, 44" high, and 18" deep. The compartments shall be constructed of .125" aluminum on all exterior surfaces. Each compartment shall be equipped with a vertically hinged door with a single latch installed. The doors shall be equipped with gas operated door opening assistant cylinders.

Each vertical compartment shall have one (1) fixed shelf.

The compartment shall be equipped with:

- a lift up door with latch installed
- key type door locks.
- dual gas operated door opening assistant cylinders.
- a white LED strip light that is automatically controlled by a door activated switch.
- a louvered vent
- Turtle Plastics Turtle Tile Compartment Matting shall be installed in the compartment. Turtle Tile shall be black in color and lock together design.

The actual door opening shall be approximately 3" smaller in dimension.

The compartment floors shall be lined with turtle tile.

#### **100159.1 - UNDER BODY COMPARTMENT -- REAR CENTER**

An under body equipment storage compartment shall be installed under the flatbed surface located in the center rear of the apparatus. The compartment shall be between the vertical body beams, upper floor surface, and an aluminum lower floor area. The compartment shall be equipped with a hinged drop down door with dual latches installed.

The exterior dimensions shall be approximately:

108" for a 114"L bed

120" for a 138"L bed

#### **100166.1 - REAR SLIDE-OUT TRAY**

The rear center compartment shall be equipped with an .190" aluminum slide out tray on UHMW plastic slide pads and poly rollers. The tray shall be full width and full length of the compartment interior.

#### **100160.3 - INTERIOR COMPARTMENT VENTILATION LOUVERS**

The interiors of the upper body compartments shall have louvered ventilation units.

#### **100161.3 - COMPARTMENT DOOR KEY LOCKS**

The hinged compartment doors shall be equipped with key type door locks.

#### **100720.3 - COMPARTMENT LIGHTING, STRIP LIGHTS**

Each upper body compartment shall be equipped with a white LED strip light.

#### **100163.3 - AUTOMATIC COMPARTMENT DOOR LIGHT SWITCHES**

Each compartment light shall be automatically controlled by a door activated switch.

#### **100164.1 - DOOR AJAR LIGHT**

A "door ajar" warning light shall be installed on the center console. The light shall be flashing red LED light with a clear lens.

#### **100169.1 - HOSE TRAY -- DRIVERS SIDE**

A hose storage tray shall be installed over the driver's side equipment compartment, on the driver's side of the apparatus. The exterior dimensions shall be approximately: 16" wide, 8" high, and 72" long. The hose tray shall be constructed entirely of .125" aluminum on all exterior surfaces. The assembly shall be equipped with a hinged lift up aluminum door on top, enclosed front panel, and open rear area. The hose tray shall be equipped with Turtle Tile floor covering.

The actual door opening shall be approximately 3" smaller in dimension.

#### **100382.1 - TOOL STORAGE TRAY/COMPARTMENT - PASSENGER SIDE**

A tool storage compartment shall be installed over the passenger's side equipment compartment, on the passenger's side of the apparatus. The exterior dimensions shall be approximately: 16" wide, 8" high, and 72" long. The compartment shall be constructed of .125" aluminum on all exterior surfaces. The compartment shall be equipped with a hinged lift up aluminum door with a latch installed. The compartment shall be equipped with Turtle Tile floor covering.

The actual door opening shall be approximately 3" smaller in dimension.

#### **200317.1 - I-ZONE BRACKETS**

Two easily removable or flip out I Zone brackets will be provided and mounted at the rear of the apparatus, one on each side. The brackets will be designed with adequate reinforcement to eliminate flexing of the body and not interfere with any of the rear facing lights when carrying hose. The brackets will be mounted beside upper grab rail on the rear and as high as practical

#### **100180.1 - REAR PULL OUT STEP**

There shall be a rear "Pull-Out-Fold-Down" step located at the driver's side rear of the apparatus, step shall be stowed in a pocket under the rear of the unit. Storage pocket shall be fabricated to allow easy access to deploying for operation.

#### **100181.1 - FOLDING STEP**

A Signature 4 lighted 8" square folding step of die cast zinc shall be installed. The step shall comply with NFPA non-slip standards and shall be installed on the rear driver's side of the body. The step shall be equipped with lighting to NFPA standard.

#### **100545.1 - RECESSED/POCKET STEPS, REAR OF BODY**

There shall be two (2) body access pocket steps located at the rear of the body, one (1) each side. They shall be installed behind the rear wheel opening.

### **100692.1 - SIDE BODY ACCESS STEPS**

There shall be a body access step assisting in access to top of the tool/hose trays from the side of the apparatus. It shall be a stirrup design, and be fabricated from 1" aluminum tubing. They shall be installed under the front of the body, one (1) each side.

### **100325.1 - ELECTRICAL ENCLOSURE**

An electric wiring enclosure for the 12 volt wiring shall be installed in the forward wall of the driver's side upper body compartment with an access panel. The dimensions of the enclosure shall be approximately 20" high, 14" wide, and 4" deep.

### **100326.1 - 12 VOLT ELECTRICAL SPECIFICATIONS**

The following describes the low voltage electrical system on the apparatus including all panels, electrical components, switches and relays, wiring harnesses and other electrical components. The apparatus manufacturer shall conform to the latest Federal DOT standards, current automotive electrical system standards and the applicable requirements of the NFPA.

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 shall not exceed 10 percent in all wiring from the power source to the using device. The wiring, 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. Exposed wiring shall be run in a loom with a minimum 289 degree Fahrenheit rating. Wiring looms shall be properly supported and attached to body members. Electrical conductors shall be constructed in accordance with applicable SAE standards, except when good engineering practice requires special construction.

All wiring connections and terminations shall provide positive mechanical and electrical connections and be installed in accordance with the device manufacturer's instructions. When wiring passes through metal panels, electrical connections shall be secured with mechanical type fasteners and rubber grommets

Wiring between cab and body shall be split using connectors or enclosed in a terminal junction panel allowing body removal with minimal impact on the apparatus electrical system. Connections shall be crimp-type with heat shrink tubing with insulated shanks to resist moisture and foreign debris such as grease and road grime. Weather resistant connectors shall be provided throughout the system.

Electrical junction or terminal boxes shall be weather resistant and located away from water spray conditions. When required, automatic reset breakers and relays shall be housed in the main body junction panel.

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

Low voltage overcurrent protective devices shall be provided for the electrical circuits. The devices shall be accessible and located in required terminal connection locations or weather resistant enclosures. Overcurrent protection devices shall be automatic reset type suitable for electrical equipment and meet SAE standards. All electrical equipment, switches, relays, terminals, and connectors shall have a direct current rating of 125 percent of maximum current for which the circuit is protected. Electro-magnetic interference suppression shall be provided in the system as required in applicable SAE standards.

The electrical system shall include the following:

Electrical terminals in weather exposed areas shall have a non-conductive grease or spray applied. All terminal plugs located outside of the cab or body shall be treated with a corrosion preventative compound.

All electrical wiring shall be placed in a protective loom or be harnessed.

Exposed connections shall be protected by heat shrink material and sealed connectors.

Large fender washers shall be used when fastening equipment to the underside of the cab roof and all holes made in the roof shall be caulked with silicone.

Electrical components installed in exposed areas shall be mounted in a manner that will not allow moisture to accumulate inside.

A coil of wire must be provided behind an electrical appliance to allow them to be pulled away from mounting area for inspection and service work.

All lights in a weather exposed area that have their sockets shall have corrosion preventative compound added to the socket terminal area.

### **100327.1 - ELECTRICAL HARNESS AND WIRING**

All wiring shall be hidden, enclosed, or protected under the body in protective material, or within the apparatus body components. In addition, split loom conduits shall be installed and enclosed, suitably secured and protected against heat and physical damage.

#### **100090.1 - BATTERY MASTER DISCONNECT**

A battery disconnect system shall be installed to control the 12 volt power supply from the battery system to the body and cab final stage manufacturer installed equipment. The solenoid shall be controlled by the standard key starter switch.

#### **100094.1 - BATTERY CHARGER AND 120 VOLT SHORE POWER RECEPTACLE**

A Kussmaul Autocharge 1000, Model 091-215-12, high output automatic battery charger shall be provided. The battery charger shall be wired to the 12 volt battery system. The unit shall be mounted in a clean, dry area accessible for service and/or maintenance. It shall be wired to the specified shore power receptacle.

It shall include Model 091-194B-IND-WT-XX Digital Status Display Center.

It shall also include Model 091-55-15-120 15 amp "auto-eject" shore power receptacle with hinged weatherproof cover and an enclosure for protection from dirt and damage. The shore power plug shall be "ejected" when the chassis' engine starter is engaged and the receptacle shall be wired to any 120 volt A/C equipment requiring shore power.

Location shall be: Determined at the Pre-Construction conference.

Color of Digital Status Display Center and Auto Eject: Determined at pre-construct conference

Components wired hot: Determined at pre-construct conference

#### **100328.1 - DOT IDENTIFICATION LIGHTS**

All LED identification lights shall be installed on the vehicle as required by applicable highway regulations.

#### **100329.1 - LICENSE PLATE MOUNTING**

An LED license plate light shall be installed on the rear vertical wall of the body.

#### **100330.1 - BRAKE, TURN, TAIL LIGHTS**

Two (2) Whelen M6 Series Model M6BTT 4-5/16" x 6-3/4" brake, turn, tail lights with M6FC chrome flanges shall be provided. The warning lights shall incorporate Linear Super-LED and Smart LED technology. The lighthouse configuration shall consist of 18 red Super-LEDs and a clear optic polycarbonate lens. The lighthouses shall be surface mountable via two screws.

The lighthouses shall utilize an optic collimator and a chrome vacuum metalized reflector for maximum illumination. The lighthouse shall include 164 flash patterns including: a variety of CA Title 13 compliant, sinkable, left/right, top/bottom, in/out, and steady burn. The lighthouses shall have the Whelen exclusive NERM (Non-Emergency Recognition Mode) feature.

The lens/reflector assembly shall be wet sealed and resistant to: water, moisture, dust, and other environmental conditions. The outer lens shall have a hard coating applied to increase strength and ensure longevity. The light engine shall be installed at the rear of the unit and be completely sealed. The pc board shall be conformal coated for additional protection.

The lights shall be furnished with five 6" wire pigtails, a Santoprene rubber gasket and the #M6FC chrome flanges shall be included for installation.

#### **100331.1 - BACK-UP LIGHTS**

Two (2) Whelen M-Series, 4" x 6" rear LED back-up lights shall be installed.

#### **100096.1 - TRAILER PLUG**

Wiring shall be provided at the rear of the apparatus for the towing of an auxiliary trailer. A 12 volt seven (7) pin electrical connector shall be wired to the chassis stop, running, and turn lights.

#### **100067.1 - OFF ROAD LIGHTS**

No off road lights shall be installed.

#### **100070.1 - NO BUMPER GROUND LIGHTS**

There shall be no under bumper ground lights installed.



### **200312.1 - GROUND LIGHTS, CAB, 4 DOOR, LED STRIPS**

Four (4) LED ground strip lights shall be installed under the cab step area in compliance with NFPA standards, two (2) on each side of the apparatus, wired to the Cencom, and the chassis interior lights.

### **100183.1 - GROUND LIGHTS - UNDER REAR STEP**

Two (2) Grote #63871 LED ground lights shall be installed under the rear step area, one on each side of the apparatus. They shall have an aluminum housing, and be 800 lumens at 1.4 amps.

### **100184.1 - BODY WORK LIGHTS**

Four (4) Grote #63871 LED body work lights with clear lens shall be installed, wired to switch on the Cencom. They shall have an aluminum housing, and be 800 lumens at 1.4 amps. Location shall be: in each corner of the protective tubing assembly to light the pump panel and the front body walkway area.

### **100500.1 - FRONT BUMPER SCENE LIGHTS**

A Rigid Manufacturing SR series 910113 10" flood light shall be installed. The LED scene lights shall incorporate clear LED's with a clear optic polycarbonate lens for maximum illumination.

### **100322.1 - SCENE LIGHTS**

Six (6) Rigid Manufacturing Dually 20211 scene lights shall be installed. The LED scene lights shall incorporate clear LED's with a clear optic polycarbonate lens for maximum illumination.

Location shall be: Two (2) outward facing, each side of body, two (2) rear facing.

### **100433.1 - SCENE LIGHTS**

Two (2) Whelen Model PFP1 Pioneer scene lights shall be installed. The flood-type scene lights shall be 75 watts 12 volts. The lights shall incorporate clear 3/16" LED's with a clear optic polycarbonate lens for maximum illumination.

Location shall be: To be determined at the pre-construct conference

### **100107.1 - BACK-UP CAMERA SYSTEM**

One (1) Rear View Systems camera system shall be furnished utilizing a camera which provides a wide field of view and picture quality. A sealed camera enclosure shall be utilized along with electronic connections. The color monitor shall be installed in cab.

One (1) camera shall cover the rear of the apparatus, which will activate during back-up mode and during normal operations if needed.

Location:

### **100099.1 - RADIO INSTALLATION**

One (1) fire radio, one (1) faceplate (if applicable) and one (1) speaker shall be supplied by the purchaser to be installed.

THIS OPTION DOES NOT INCLUDE INSTALLATION OF ANTENNAS, CABLES, OR MDT/MCT.

### **100620.1 - INSTALLATION -- RADIO ANTENNA**

One (1) radio antenna with cable shall be supplied by the purchaser and installed on the apparatus at a location to be determined by the purchaser.

THIS OPTION DOES NOT INCLUDE INSTALLATION OF RADIOS, OR MDT/MCT.

ALL EQUIPMENT NECESSARY TO INSTALL/OPERATE A CUSTOMER SUPPLIED ANTENNA MUST BE PRESENT AT SKEETER BRUSH TRUCKS 60 DAYS PRIOR TO PRODUCTION. IF ALL COMPONENTS ARE NOT PRESENT THE ANTENNA WILL NOT BE INSTALLED

### **100324.1 - BACK-UP ALARM**

One (1) back up alarm shall be installed.

### **203773.1 - ELECTRONIC SIREN**

One (1) Whelen, Model #CCSRNT4G CenCom Carbide siren with auxiliary switches with noise canceling microphone shall be provided. Siren head will be mounted on the center console in easy reach of the driver.

### **100313.1 - SIREN SPEAKER**

One (1) Whelen Model #SA315P Projector Series siren speaker shall be provided with bracket. The 100 watt siren speaker shall be designed in a black nylon composite housing with 123 decibel rating.

Location shall be: Behind the front grille.

### **100310.1 - MOUNTING OF LIGHT BAR WITH PROTECTIVE GUARD**

The lightbar shall be mounted on the headache rack shelf with an aluminum brush guard protective assembly.

### **100309.1 - LIGHTBAR**

A Whelen Legacy low profile Super-LED NFPA lightbar shall be installed. The 54" lightbar shall be designed to meet the minimum clearing requirements for Zone A Upper. The internal components of the lightbar shall be housed within a two piece extruded aluminum base/top. The outer shell shall be clear optic polycarbonate lenses designed to maximize light output and shield against environmental elements.

The lightbar shall utilize snap-in brackets to hold in the lightheads. The brackets shall give the end user the ability to make quick repairs. The lightbar shall have all solid state components. The lightbar shall have two wire harnesses exiting the unit: one (1) 17 conductor 22 gauge control cable which controls all internal light functions; and one (1) 2 conductor 10 gauge cable for main power and ground. Each cable shall be 15' long.

The lightbar shall have four (4) red Linear Super-LED corner modules to provide off angle protection for the front and rear of the vehicle. Each corner module shall consist of twelve (12) Super-LEDs mounted within a vacuum metalized parabolic reflector. The corner module shall also utilize an optic collimator for maximum light output. The twelve (12) LEDs shall be mounted in one straight line.

The solid state I/O board shall be microprocessor controlled. The I/O board shall have built-in reverse-polarity protection and output-short protection. The board shall have the ability to flash sixteen (16) LED warning lights. There shall be a data bank of 13 Scan-Lock flash patterns including steady burn. The board shall also have outputs to add takedown and alley lights. Low power and cruise light function shall also be included. The cruise light function shall allow the user to employ the four (4) corner modules as marker courtesy lights.

The lightbar shall include clear "Take Down" and "Alley Lights".

The lightbar shall have an amber "Traffic Advisor" built into the rear portion of the lightbar.

### **100315.1 - NFPA WARNING LIGHTS**

#### **ZONE A -- LOWER FRONT WARNING LIGHTS**

Two (2) Whelen M-7 Series Model #M7RC 3" x 7" warning lights with chrome flanges shall be in the front forward facing area of the front bumper. The warning lights shall incorporate Linear Super-LED and Smart LED technology. The lighthead configuration shall consist of RED 18 Super-LEDs and a clear optic polycarbonate lens. The lightheads shall be surface mountable via two screws. The lightheads shall utilize an optic collimator and a chrome vacuum metalized reflector for maximum illumination.

#### **ZONE B AND D -- INTERSECTION LIGHTS**

Two (2) Whelen M-7 Series Model #M7RC 3" x 7" warning lights with chrome flanges shall be installed on bumper extension, as far forward as possible. The warning lights shall incorporate Linear Super-LED and Smart LED technology. The lighthead configuration shall consist of RED 18 Super-LEDs and a clear optic polycarbonate lens.

#### **ZONE B AND D -- LOWER SIDE REAR CORNER WARNING LIGHTS**

Two (2) Whelen M-7 Series Model #M7RC 3" x 7" warning lights with chrome flange shall be installed in lower rear side corner body area. The warning lights shall incorporate Linear Super-LED and Smart LED technology. The lighthead configuration shall consist of RED 18 Super-LEDs and a clear optic polycarbonate lens.

#### **ZONE B AND D -- UPPER SIDE REAR WARNING LIGHTS**

Two (2) Whelen M-7 Series Model #M7RC 3" x 7" warning lights with chrome flanges shall be installed in the upper rear body side panel. The warning lights shall incorporate Linear Super-LED and Smart LED technology. The lighthead configuration shall consist of RED 18 Super-LEDs and a clear optic polycarbonate lens.

#### ZONE C -- UPPER REAR WARNING LIGHTS

Two (2) Whelen M-7 Series Model #M7RC 3" x 7" warning lights with chrome flanges shall be installed in the upper rear corner of the handrails. The warning lights shall incorporate Linear Super-LED and Smart LED technology. The lighthouse configuration shall consist of RED 18 Super-LEDs and a clear optic polycarbonate lens.

#### ZONE C -- LOWER REAR WARNING LIGHTS

Two (2) Whelen M-7 Series Model #M7RC 3" x 7" warning lights with chrome flanges shall be lower rear of body. The warning lights shall incorporate Linear Super-LED and Smart LED technology. The lighthouse configuration shall consist of RED 18 Super-LEDs and a clear optic polycarbonate lens.

#### **100333.1 - CAB LETTERING.**

The cab lettering shall be made of 3M Scotchcal type material and installed in the customers desired location. There shall be no more than a total of fifty (50) 3" letters per door of apparatus. All lettering shall be reflective grade material.

#### **100335.1 - CUSTOM GRAPHICS**

The apparatus shall be provided with two (2) custom designed sign gold graphics, emblems, or seals. The installation shall be designed primarily with letters and numbers as specified. The purchaser shall approve of the design graphics prior to installation.

#### **100337.1 - CAB AND BODY STRIPING**

The cab and body shall have a straight Scotchlite reflective stripe applied horizontally. The stripe shall be a 4" minimum in width and be applied horizontally around the cab and body in accordance with NFPA standards. The purchaser shall specify the color and location of the stripe.

#### **100343.1 - FRONT CHEVRON STRIPING**

There shall be alternating chevron striping installed across the front bumper where permitted. The chevron striping shall consist of 6" diamond grade in the following colors:

The first color shall be red diamond grade.

The second color shall be lime yellow diamond grade.

#### **100345.1 - REAR CHEVRON STRIPING**

There shall be alternating chevron striping installed on the rear vertical body panel. The chevron striping shall consist of 6" diamond grade in the following colors:

The first color shall be red diamond grade.

The second color shall be lime yellow diamond grade.

#### **100346.1 - CAPACITIES PLACARD**

The apparatus shall have a reflective placard that provides the following information:

Water Tank Capacity  
Pump Capacities  
NWCG Typing  
Skeeter Contact Information

#### **100350.1 - SPANNER AND HYDRANT WRENCH SET WITH MOUNTING BRACKET**

One (1) Kocheck lightweight spanner wrench holder shall be installed. The bracket shall hold one (1) hydrant wrench and two (2) universal spanners. It shall be mounted on the rear vertical exterior panel of the driver's side compartment.

#### **100040.1 - CHASSIS PREPARATION**

The chassis cab shall be "prepped" for fire apparatus production as follows:

- a) Wash and clean chassis
- b) Weigh chassis for NFPA reports
- c) Quality control check in.

#### **100041.1 - SEATING**

There shall be a label identifying the number of seat belted locations on the unit.

#### **100042.1 - WARNING LABEL -- SEAT BELT USAGE**

A warning label for use of seat belts shall be installed in the cab by the chassis manufacturer.

#### **100043.1 - LOUD NOISE WARNING LABEL**

A final stage manufacturer shall install "hearing loss" potential warning labels on the vehicle in any areas or fixed equipment that produces excessive noise levels. (exhaust outlet, sirens and air horns shall not be required for such equipment.)

#### **100135.1 - WARNING LABEL -- NO RIDING ON REAR**

A warning label stating: "NO RIDING ON REAR OF APPARATUS" shall be installed on rear of the apparatus. The label shall be applied to the vehicle at the rear step area. The label shall warn personnel that riding in or on these areas, while the vehicle is in motion, is prohibited.

#### **100136.1 - SKEETER BRUSH TRUCK EMBLEMS**

Three (3) Skeeter Brush Trucks emblems will be affixed to the cab and body.

#### **100196.1 - FINAL ASSEMBLY AND APPARATUS FINISHING PREP SPECIFICATIONS**

The apparatus shall be assembled in a high quality and controlled environment. The fit, form, and finish of the body shall be to the highest level fire apparatus manufacturing standards. Upon completion, the apparatus shall be ready for final inspection and road testing as required herein.

#### **100361.1 - FIRE PUMP OPERATIONS TEST**

The fire pump shall have a operational pump test performed by a Skeeter Brush Trucks technician with a run time of one (1) hour to confirm proper operations of all pump related components.

\*\*\* NOTE: ALL TESTING SHALL BE DONE AND PERFORMANCE OBSERVED BETWEEN SEA LEVEL AND 1000' ELEVATION.

\*\*\* HIGH ALTITUDE PERFORMANCE MAY NOT REPRESENT TESTING RESULTS SHOWN.

#### **100362.1 - ELECTRICAL LOAD ANALYSIS**

A 12 volt electrical load analysis shall be performed in order to test response and stationary modes of electrical amp load.

#### **100363.1 - NFPA COMPLIANCE**

The fire apparatus shall be built to the purchaser's requirements stated in this specification in compliance with all state and federal highway safety requirements. The vehicle is designed to meet NFPA 1906.

Unless included in the specification, the customer will provide all the necessary equipment to comply with NFPA 1906 Section 10.2.

#### **100365.1 - ROAD TEST**

A road test will be conducted with the apparatus fully loaded and a continuous run of no less than ten (10) miles. During that time the apparatus will show no loss of power nor will it overheat. The transmission drive shaft or shafts and the axles will run quietly and be free of abnormal vibration or noise.

#### **100366.1 - APPARATUS WARRANTY SKEETER MANUFACTURED ITEMS**

A five (5) year parts and labor warranty on items manufactured by Skeeter Brush Trucks and a ten (10) year warranty on the structural integrity of the body. For warranty issues please contact your local dealer or Skeeter Brush Truck service center and request warranty from the service advisor at that location.

#### **100369.1 - WATER TANK WARRANTY**

MANUFACTURER'S LIMITED WARRANTY AND NOTICE OF DISCLAIMER OF EXPRESS AND IMPLIED WARRANTIES

Manufacturer issues this limited warranty to the customer who is the original retail purchaser ("Customer") of a polypropylene tank (the "Tank") (10 to 4000) gallons.

### **100368.1 - FIRE PUMP WARRANTY**

Hale Products, Inc., herein referred to as "Hale", warrants products of its manufacture to be free from defects in material and workmanship, under normal use and service, for a period of three years (3). 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 Hale or its designee. Items not manufactured by Hale shall bear only the limited warranties offered by their respective manufacturers.

The exclusive remedy for breach of this warranty shall be to give Hale written notice thereof and to request a Returned Goods Authorization. Upon receipt of the Returned Goods Authorization, the buyer will return the non-conforming material to Hale F.O.B. its plant within thirty days after the buyer has received the Returned Goods Authorization. Thereupon Hale at its own election shall repair or replace the same or repay the price thereof. No proximate, incidental, consequential or other damages shall be recoverable. Hale shall not be liable for consequential damages or contingent liabilities including; but not limited to, loss of life, personal injury, loss of crops, loss due to fire or water property damage, and consequential trade or other commercial loss arising out of the failure of Manufacturer's product.

HALE MAKES NO WARRANTIES OF FREEDOM FROM PATENT INFRINGEMENT, OF MERCHANTABILITY, OF FITNESS FOR A PARTICULAR PURPOSE OR ARISING FROM A COURSE OF DEALING OR USAGE OF TRADE OR OTHER LIKE OR DIFFERENT EXPRESS OR IMPLIED WARRANTIES EXCEPT AS MADE ABOVE. [More](#)

### **100351.1 - PRE-CONSTRUCTION MEETING**

A pre-construction meeting shall be conducted at the manufacturer's plant. The transportation to this meeting shall be the responsibility of purchaser.

### **100651.1 - DRAWINGS**

There shall be design drawings submitted to the customer prior to the pre-construct conference. The CAD drawings shall include all sides of the apparatus. The customer shall agree to the drawings reflecting the correct apparatus design and layout prior to construction.

### **100353.1 - TERMS OF PAYMENT AND PREPAYMENT PROVISIONS**

Terms of payment for the specified vehicle shall be only cash or equivalent on delivery and acceptance for the unit. No bid will be considered which requires the purchaser to deposit with the bidder a down payment, prepayment of chassis, or any other such consideration as a condition of the bid. Such a requirement shall be grounds for immediate rejection of the bid.

### **204229.1 - FINAL INSPECTION, MANUFACTURING PLANT**

Representatives from the purchaser and the dealer shall be present at Skeeter's manufacturing facility in Hillsboro, Tx for the final inspection of the apparatus. A factory representative will assist the purchaser with review of the specifications to confirm they match the apparatus.

Cost of transportation to and from the facility shall be the responsibility of the purchaser.

\*\*\* NOTE, UNLESS PRIOR APPROVAL BY SKEETER BRUSH TRUCKS, FINAL INSPECTION AT THE PLANT IS MANDATORY \*\*\*

### **100356.1 - DEMONSTRATION AND FAMILIARIZATION OF VEHICLE**

The bidder shall demonstrate and familiarize the purchaser regarding the vehicle's operation. This shall include operation of chassis, major components, review of delivery information and documentation. This demonstration shall be completed at Skeeter Brush Trucks factory location in Hillsboro, Texas.

### **100358.1 - DELIVERY REQUIREMENTS**

The apparatus shall be picked up at the manufacturer's plant by the purchaser.