

# Specification for: International CV515, 4 Door, Diesel, 4x4 Body, Rsq, Alum, 160

Submitted To:

**Skeeter, Bill** 201 Cercon Hillsboro, TX

> Specification **4956 May 15, 2020**

Prepared by: Bill Davidson Skeeter Brush Trucks, LLC

Skeeter Brush Trucks, LLC

# <u>Proposal</u>

We are pleased to submit the following specifications to you for a **Skeeter/Meritor IFS Type 5** 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 inhouse, 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. 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. 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. 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).

# 100044.1 - PAINT

- 1. Cab Color: Red
- 2. Cab Secondary Color: N/A
- 3. Description: Solid Red
- 4. Bumper Color: Brushed Aluminum
- 5. Wheel Color: Gray
- 6. Body Color: Polished Aluminum
- 7. Cab Steps: Black

#### 203953.1 - CHASSIS SPECIFICATIONS

One (1) International CV515 SFA Series, four wheel drive 4x4, four (4) door cab and chassis

GVWR: 23,000#

Wheelbase: 175"

Cab to Axle: 60"

Frame: High Strength Low Alloy Steel (50,000 PSI Yield), Straight Top Flange with Contoured Bottom, Height Transitions from 7.375" (187.325mm) to 9.125" (231.775mm) to 7.625" (193.675mm); Width: 3.079" (78.21mm); Thickness: 0.3125" (7.94mm); 383.3" (9735.8mm) Max OAL

Front Bumper: Omit

Tow Hooks: front

Front Driving Axle: Dana Spicer 60-256, 7,500#, Dana Spicer 60-256}

Front Suspension: 7,500#

Front Tires: (2) 225/70R19.5 Load Range H CROSSTRAC HA3 (CONTINENTAL), 649 rev/mile, 75 MPH, All-Position

Front Wheels: steel disc wheels

Transfer Case: Meritor 3203 Two-Speed, Gear Drive, 3,000 lb-ft Capacity with Electric Shifting Controls, without PTO Provision

Rear Axle: Dana Spicer S16-130 Single Reduction, 15,500-lb Capacity, 190 Wheel Ends Gear Ratio: 4.30

Differential, Locking Dana Spicer Truetrac Torque Proportioning Limited Slip

Rear Suspension: 15,500# Capacity, Vari-Rate Springs

Rear Tires: Four (4) 225/70R19.5 Load Range H CROSSTRAC HA3 (CONTINENTAL), 649 rev/mile, 75 MPH, All-Position

Rear Wheels: four (4) steel disc wheels

Gear Ratio: 4.30

Hydraulic Brake System: Bosch Split System, with Four Channel ABS, Traction Control, Hydromax Brake Booster and Master Cylinder

Engine: International 6.6 (Duramax) EPA 2017, 350HP @ 2700 RPM, 700 lb-ft Torque @ 1600 RPM, 2900 RPM

Engine Exhaust Brake: exhaust brake

Cooling System: -30 degrees Fahrenheit

Exhaust System: horizontally mounted right side

Fuel Tank: Top Draw, Plastic, Rectangular, 17" Tank Depth, 40 US Gal (151L), Includes Auxiliary Draw Port and Fuel Filler Assembly, Mounted Between Frame, Rails and Behind Rear Axle

Transmission: Allison 2700 EVS, 5th Generation Controls, Close Ratio, 6-Speed with Double Overdrive, with PTO Provision, Less Retarder, Includes Park Pawl, with 23,500-lb GVW and 26,000 GCW Max, On/Off Highway

Steering: Power

Batteries: International Maintenance-Free VARTA (2) 12-Volt 1300CCA Total

Battery Box Steel, with Plastic Cover, 2 Battery Capacity, Parallel to Rail, 28" Wide, Mounted Left Side Under Cab

Alternator: Denso SC6 Brush Type, 12 Volt 220 Amp. Capacity

Cab: Four (4) door, with tilting fiberglass front hood assembly

Cab accessories and features shall include:

- 1) Factory tinted glass in all windows
- 2) Amber DOT edge of roof clearance/marker lights
- 3) Gray interior trim with vinyl upholstery
- 4) Gray vinyl floor mat
- 5) Dual sun visors
- 6) Electric windshield washer
- 7) Electric windshield wipers with two speed switch with wash and intermittent
- 8) Exterior handrails at each cab door
- 9) High output heater and defroster system with electronic controls
- 10) Dual electric horns
- 11) Halogen headlights (MAY BE IN FRONT BUMPER due to DOT height requirements)
- 12) Front turn signal lamps

Cab Paint: International Fire Truck Red

Climate Control: heater, defroster, and air conditioning

Cab Mirrors: two (2) extended style mirrors, with convex mirrors

Cab Instruments: Standard Metric

Driver's Seat: High Back with Integral Headrest, with Recline, Vinyl, Fixed Lumbar

Front Passenger's Seat: High Back with Integral Headrest, with Recline, Vinyl, Fixed Lumbar

Rear passenger seat: Bench; Full Width; Vinyl, With Fixed Back

Front Seat Belts: -Point, Lap and Shoulder Belt Type

Rear Seat Belts: (3) Two 3-Point Shoulder Belts for Driver and Outer Passenger and One 2-Point Lap Belt for Center Passenger

Printed Manuals: one (1) printed chassis operation manual

#### 203809.1 - 84" CAB TO AXLE

The chassis Cab to Axle measurement shall be 84".

#### 100037.1 - POWER PACKAGE

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

# 203918.1 - CHASSIS FLEET/GOVERNMENT INCENTIVE DISCOUNT

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

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

# 100057.1 - SPARE TIRE MOUNT

There shall be no spare tire mount

# 100491.1 - FRONT BUMPER

The stock chassis front bumper shall be utilized.

# 537189.3 - REAR BUMPER

There shall be a custom fabricated bumper installed on the rear of the apparatus. The bumper shall be made of  $2" \times 3" \times .25"$  aluminum square tubing and shall span the width of the vehicle.

# 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.

# 204251.1 - CAB STEPS/COVERS

There shall custom aluminum diamond plate cab step covers, one (1) for each of the four doors. They shall conform to the outside of the battery box, fuel tank, DPF, etc, and be removable for component service.

# 204216.2 - CUSTOM FABRICATED CONSOLE AND SWITCH PANEL

A custom fabricated aluminum and poly face 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. The aluminum body shall be coated in a textured zolatone style paint .

# **100178.2 - REAR RECEIVER**

The rear of the chassis shall be equipped with one receiver assembly.

# **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.

# 204179.5 - CUSTOM FULL RESCUE ALUMINUM BODY, PAINTED

The body will be a custom fabricated severe service Rescue type, constructed of all aluminum. The body shall be 160" long by 100" wide by 80" high designed for a 84" cab to axle dimension.

The body shall be painted Red.

FLAT-BED SUB-STRUCTURE

The body shall have 8" x 1.75" structural aluminum channel main frame rails. The body frame rails shall be isolated from the truck frame by .500" industrial isolators.

#### FLAT-BED CROSS-MEMBER SUB-STRUCTURE The cross-members shall be 3" x 2 5/16"" structural aluminum I beams with cross-members on 12" centers.

#### FLAT-BED MOUNTING

The body shall be bolted to the chassis frame rails at the front, middle, and rear end of the frame. There shall be brackets installed at the middle of the body frame to prevent side to side movement.

SQUARE CORNERS -- BODY

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

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 .125" aluminum smooth plate on all exterior surfaces. 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 .190" smooth aluminum. The panel shall house the running lights, taillights, back-up lights, and emergency lights.

#### SIDE BODY COMPARTMENT, FRONT BODY -- DRIVER'S SIDE

A body equipment storage compartments shall be installed at the front of the body just behind the headache rack, one (1) each side of the apparatus. The dimensions Driver's side shall be approximately: 48" wide, 58" high, and 20" deep (lower).

#### SIDE BODY COMPARTMENTS, FRONT BODY -- PASSENGER'S SIDE

A body equipment storage compartments shall be installed at the front of the body just behind the headache rack, one (1) each side of the apparatus. The dimensions shall be approximately: 48" wide, 58" high, and 20" deep. There shall be an approximately 6' header above the roll-up door. The compartments shall be constructed of .125" aluminum smooth plate on all exterior surfaces. The doors shall be equipped with roll-up doors.

#### TRANSVERSE COMPARTMENT

The upper portion of the front vertical compartments shall be transverse. The dimensions shall be 48" wide x 44" high x 100" deep.

#### SIDE UPPER MIDDLE BODY COMPARTMENTS

There shall be two (2) side upper mid body compartments, one (1) each side. The dimensions shall be approximately: 42" wide, 36" high, and 17" deep. There shall be an approximately 6" header above the roll-up door. The compartments shall be constructed of .125" aluminum smooth plate on all exterior surfaces. Each compartment shall be equipped with roll-up doors.

#### 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 just behind the side upper body compartments, one (1) each side of the apparatus. The dimensions shall be approximately: 41" wide, 58" high, and 17-24" deep (differs due to rear body compartment). There shall be an approximately 6' header above the roll-up door. The compartments shall be constructed of .125" aluminum smooth plate on all exterior surfaces. Each compartment shall be equipped with roll-up doors.

#### REAR BODY COMPARTMENT

A body equipment storage compartments shall be installed at the rear of the body. The dimensions shall be approximately: 58" wide, 34" high, and 94" deep. There shall be an approximately 10' header above the roll-up door. The compartments shall be constructed of .125" aluminum smooth plate on all exterior surfaces. The compartment shall be equipped with a with roll-up door.

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

Each rear vertical compartment shall have two (2) adjustable shelves.

The compartment floors shall be lined with turtle tile.

Each Compartment shall be equipped with vents and led strip lights

#### ROLL-UP DOORS

The compartments shall be equipped with locking roll-up doors.

# 537192.3 - CHROME BODY TRIM

There shall be chrome fender flares installed on the fender wells on the body

There shall be chrome rub rails around the lower perimeter of the body

#### 537188.3 - GRAB HANDLES

There shall be two (2) back lit grab handles mounted on the rear of the rescue body

There shall be two (2) grab handles mounted at the front of the body. One (1) on the Drivers side and one (1) on the

passengers side of the apparatus.

# 537346.3 - ROLL-UP DOORS

Roll-Up Door Upgrade

QTY: 7

Lift style compartment door shall be upgraded to an Amdor Roll Up door.

The actual door opening shall be approximately 3" smaller in dimension on the sides, and 6" on the top.

DIMENSIONS:

SIDE BODY COMPARTMENT, FRONT BODY - Two (2) 48"W x 58"H Doors

SIDE UPPER MIDDLE BODY COMPARTMENTS - Two (2) 42"W x 36"H Doors

SIDE BODY COMPARTMENTS, REAR BODY - Two (2) 42"W x 58"H Doors

REAR BODY COMPARTMENT - One (1) 58"W x 34"H Door

# **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

# 100166.2 - REAR UNDER BODY 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.

# 203820.4 - SLIDE OUT TRAYS

There shall be a 1000 lbs capacity slide out tray installed in the front transverse compartment. The tray shall be approximately 92" long x 56" wide. It shall slide out both body sides.

There shall be a 500 lbs capacity slide out tray installed in the rear compartment. The tray shall be approximately 92" long x 46" wide. It shall slide out the rear of the body.

# 537182.3 - INTERIOR COMPARTMENT COATING

The interior of all compartments shall be coated with a zolatone style textured paint.

# **100160.1 - INTERIOR COMPARTMENT VENTILATION LOUVERS**

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

# **100720.1 - COMPARTMENT LIGHTING, STRIP LIGHTS**

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

# **100163.1 - 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.

# 204287.2 - SCBA BOTTLE STORAGE COMPARTMENT (Qty: 4)

Four (4) SCBA compartment shall be installed on the apparatus for storage of SCBA bottles.

Qty: FOUR (4)

Location:

Two (2) shall be mounted on the drivers side of the apparatus, one forward and one aft of the wheel well.

Two (2) shall be mounted on the passenger side of the apparatus, one forward and one aft of the wheel well.

# 203941.1 - COMPARTMENT FLOORING

Turtle Plastics Turtle Tile Compartment Matting shall be installed in all compartments and trays excluding the rear center under-body compartment. Turtle Tile shall be black in color and lock together design. <u>More</u>

# **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.

# **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 lighthead configuration shall consist of 18 red 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. The lighthead shall include 164 flash patterns including: a variety of CA Title 13 compliant, sinkable, left/right, top/bottom, in/out, and steady burn. The lightheads 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.

# 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.

# 537184.4 - REAR GROUND LIGHTING

There shall be a 40" LED strip light (PN: AY-LB-12HW040) installed under the rear of the body. The light shall be wired to the Cencom and be activated by the switch labeled "Ground Lights".

# 537186.4 - EMERGENCY LIGHTING GRILL

Two (2) Whelen Surface Mount ION LED emergency lights (PN: IONSMR) shall be installed in the front grill, one (1) on each side, wired to the Cencom, and activated by the position 2 switch. They shall have a black housing.

Dimensions: 1-11/16"H x 1-1/8"D x 5-5/16L

# 537361.3 - SCENE LIGHT, GUARDIAN ELITE SCENE LIGHT

Four (4) FireTech Guardian Elite (PN: FT-GESM) 7" x 9" 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

# 537187.3 - REAR SCENE LIGHTS

There shall be two (2) Whelen Perimeter Enhancement Lights (PN: PELCB) installed on the rear of the body, under the traffic advisor. The lights shall be wired to the Cencom, and activated by the Scene Lights switch. The lights shall be fully encapsulated to protect from environmental factors and shall have a black housing, with a molded rubber gasket.

#### 100438.1 - GPS UNIT

A Garmin NUVI 57 LM dash mounted GPS unit shall be installed. It has a 5" display, lane assist with junction view, displays speed limit with accurate arrival time, and spoken turn-by-turn directions.

# 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:

#### 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.

# 100311.1 - LIGHT BAR CAB ROOF MOUNT

The cab mounted lightbar shall be equipped with an aluminum protective cage . The light bar shall be properly sealed and watertight.

#### 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.

# **100582.2 - NFPA WARNING LIGHTS**

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

Two (2) Whelen M-7 Series Model #M7R 3" x 7" warning lights and a chrome flange 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 18 red Super-LEDs and a clear optic polycarbonate lens.

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

Two (2) Whelen M-7 Series Model #M7R 3" x 7" warning lights and a chrome flange shall be installed in upper rear side corner body area. The warning lights shall incorporate Linear Super-LED and Smart LED technology. The lighthead configuration shall consist of 18 red Super-LEDs and a clear optic polycarbonate lens.

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

Four (4) Whelen M-7 Series Model #M7R 3" x 7" warning lights and a chrome flange shall be lower rear of body. The warning lights shall incorporate Linear Super-LED and Smart LED technology. The lighthead configuration shall consist of 18 red Super-LEDs and a clear optic polycarbonate lens.

# 204066.3 - TRAFFIC ADVISOR,

A Whelen Traffic Advisor model # TAM85 shall be installed on the rear portion of the hose reel platform to provide rear directional flashing. The traffic advisor shall incorporate a rectangular extruded black powder coated aluminum chassis with six amber TIR3 Super-LED lights with waterproof connectors. The TIR3 lights shall be installed in a clear optic hard coated polycarbonate lens housing. The traffic advisor should be connected to the CenCom Carbide to operate with the light-bar traffic advisor.

# 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.

# 203904.1 - NO CAB ROOF LETTERING

# 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.

# 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.

# 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.

# **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.

# **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.

# **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.