

Fire Dex







PROPOSAL FOR

CITY OF VANCOUVER FIRE DEPARTMENT



LIGHT-DUTY RESCUE





SCOPE AND GENERAL REQUIREMENTS

It is the intent of the manufacturer to provide a new fire apparatus that will withstand the continuous use encountered in the emergency firefighting service. The apparatus shall be of the latest type, symmetrically proportioned and constructed with due consideration of the load to be sustained.

All parts not specifically mentioned herein, but which are necessary in order to furnish a complete fire apparatus, shall be furnished and shall conform to the best practices known to the fire apparatus industry.

The unit is to be of current year manufacture and is to be new and unused. The bid price shall not include any local, State, or Federal taxes. The Bidder shall not be liable for any State or Federally mandated tax or program after the sale of this apparatus.

These specifications shall be construed as minimum. Should the manufacturer's current published data or specifications exceed these, they shall be considered minimum and be furnished.

PRIME BIDDER, MANUFACTURER

The manufacturer shall be prime bidder and shall identify the location of their facility.

BIDDERS BACKGROUND

Bids are requested from responsible manufacturers who are engaged in the manufacture of fire apparatus. To insure reliable and complete acceptance of the apparatus, bidder shall have been in operation for a minimum of twenty (20) years in the manufacturing of fire apparatus.

The manufacturer of the apparatus must be fully owned and managed by a Parent Company, Corporation, or Individual(s) that is 100% held by United States of America based Company, Corporation, or United States citizen(s).

Proposals from any manufacturer that is fully or partially owned and/or operated by a foreign company, Corporation or Individual(s) under any type of ownership, partnership, or any similar type of agreement will be immediately rejected.

If the manufacturer of the apparatus, or if any owner, shareholder, or immediate relative of an owner or shareholder that has previously been involved in or held ownership in any company that has filed bankruptcy or any other type of reorganization plan, it must be clearly stated in the bid proposal. The statement must include details and dates of all occurrences.

FAMA COMPLIANCE

The apparatus manufacturer must be a current member of the Fire Apparatus Manufacturer's Association (FAMA) and must provide certificate of membership.

FAIR, ETHICAL AND LEGAL COMPETITION

In order to ensure fair, ethical, and legal competition the apparatus manufacturer shall have ever been fined or convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.

PROPRIETARY PARTS

It is the intention of the purchaser for all bidders to furnish the apparatus with major parts commonly used by the heavy-duty truck manufacturers and open market vendors whereas replacement parts are more readily available and at reduced cost. The use of proprietary parts may not be acceptable to the purchaser.





MANUFACTURER'S DISCRETION

Materials, parts, or procedures used are subject to change at manufacturer's discretion at any time to provide equal or better products.

COOPERATIVE PURCHASING

The manufacturer shall be pleased to allow other public agencies to use the purchase agreement resulting from this invitation to bid unless the bidder expressly notes on the proposal form that prices are not available for tagon. The condition of such use by other agencies shall be that any such agency must make and pursue contact, purchase order/contract, and all contractual remedies with the successful bidder. Such tag-ons shall be done so that the purchaser has no responsibility for performance by either the manufacturer or the agency using the contract.

PRODUCT QUALITY AND WORKMANSHIP

The components provided and workmanship performed shall be of the highest quality available for this application. Special consideration shall be given to the following areas:

- A). Accessibility to various components that require periodic maintenance or lubrication checks.
- B). Ease of vehicle and pump operation.
- C). Features beneficial to the intended operation of the apparatus.

Construction of the complete apparatus shall be designed to carry the loads intended to meet the road and terrain conditions and speed requirements desired when specified by the purchaser.

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

INSURANCE REQUIREMENTS

Each bidder must submit with their bid proposal a Certificate of Insurance listing the proposed manufacturer's product liability insurance coverage. Liability insurance shall be a minimum amount of ten (10) million dollars. Submitted certificate shall name the apparatus manufacturer, insurance company, policy number, and effective dates of the insurance policy. Bids submitted without the required certificate will be considered nonresponsive and automatically rejected. <u>No exceptions are allowed to the minimum insurance coverage requirement.</u>

The manufacturer shall maintain full insurance coverage on the purchaser's cab and chassis from time of first possession by the manufacturer until the apparatus is delivered and accepted by the purchaser (No Exceptions). Purchaser reserves the right to require proof of insurance from the manufacturer's insurance carrier prior to entering into a contract for the apparatus.

PAYMENT TERMS

Full payment for the apparatus shall be made at time of delivery of the completed vehicle. Due to insurance liability, the apparatus will not be left at the purchaser's location without full acceptance and payment or prior agreement between the Purchaser and Bidder.

Final delivery price shall not include any Local, State or Federal taxes. The manufacturer shall not be liable for any State or Federal mandated tax or program after sale or delivery of the apparatus.





VEHICLE ACCEPTANCE AND DELIVERY

The customer shall pick up the vehicle at the manufacturing facility and shall supply evidence of sufficient insurance coverage to transport the vehicle.

FUEL TANK FILLED AT DELIVERY

The fuel tank and DEF tank (if applicable) shall be filled upon final delivery at the factory.

ONE YEAR APPARATUS WARRANTY

The complete apparatus detailed herein shall be warranted against defects in materials and workmanship for a period of twelve (12) months, effective upon pick up or delivery of the completed apparatus to the purchaser, as detailed in the respective warranty documents. Any unauthorized alterations or modifications to the apparatus shall void this warranty.

Other warrantees, as provided by individual component manufacturers may extend beyond this warranty.

APPARATUS BODY WARRANTY, TEN-YEAR

The apparatus body as detailed herein shall have a structural warranty against defects in materials and workmanship for a period of ten (10) years, effective upon final payment in full by the Purchaser, and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the body shall void this warranty.

PLUMBING WARRANTY, TEN-YEAR

A Stainless-Steel Plumbing/Piping warranty shall be provided by the apparatus manufacturer for products of its manufacture to be free from defects in material and workmanship, under normal use and service, for a period of ten (10) years effective upon final payment in full by the Purchaser and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the plumbing shall void this warranty.

PAINT WARRANTY, FIVE-YEAR

The finish paint as used on the proposed apparatus shall be warranted against defects in materials and workmanship for a prorated period of five (5) years, effective upon final payment in full by the Purchaser, and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the apparatus shall void this warranty.

APPARATUS ELECTRICAL WARRANTY, TWO-YEAR

The apparatus electrical system as detailed herein shall have an electrical warranty against defects in materials and workmanship for a period of two (2) years, effective upon final payment in full by the Purchaser, and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the electrical system shall void this warranty.

APPARATUS DIMENSIONS

These are standard truck dimensions. Changes in configuration or additional options may affect these dimensions. The contract specification shall contain the exact dimensions.

OVERALL HEIGHT

The overall height shall be less than 96.00".

City of Vancouver Fire Department 6-16-2021





OVERALL LENGTH

The overall length shall be no longer than 26.00'.

OVERALL WIDTH

The overall width of the body shall be 96.00" wide; chassis mirrors will extend out past this width.

ANGLE OF APPROACH

The angle of approach for the apparatus shall not be less than eight (8) degrees as specified by the current edition of NFPA 1901/ 1906.

ANGLE OF DEPARTURE

The angle of departure for the apparatus shall not be less than eight (8) degrees as specified by the current edition of NFPA 1901/ 1906.

COMPLIANCE

The fire apparatus shall be built to the purchaser's requirements in compliance to all State, Local, and Federal highway safety requirements. The vehicle is not intended to meet any or all standards of the NFPA.

CAB SAFETY SIGNS

The following safety signs shall be provided in the cab:

- One (1) FAMA 10 sign shall be visible to the driver. "Flying Object Crash Hazard. All equipment required to be used in emergency response must be securely fastened. Loose items may injure or kill during a crash."
- One (1) FAMA 07 sign shall be visible from each seat. "Crash Hazard. Occupants must be seated and belted when vehicle is in motion. Use only OEM approved belts. Unbelted occupants
- One (1) FAMA 15 sign shall be visible from each seat. "Crash Hazard. Do not wear helmet while seated. Serious head or neck injury may result from helmet use in cab. Failure to comply may injure or kill."
- One (1) FAMA 17 sign shall be visible to the driver. "Backing Hazard. Ensure that personnel are clear before driving in reverse. Always use a spotter when backing. Failure to comply may injure or kill.
- One (1) FAMA 42 sign shall be inside of the driver door. "Sirens produce loud sounds that may damage hearing. Roll up windows. Wear hearing protection. Use only for emergency response. Avoid exposure to siren sound outside of vehicle."
- "Do Not Move Apparatus When Light Is On" sign adjacent to the warning light indicating a hazard if the apparatus is moved (as described in subsequent section).

"NO RIDE" LABEL

A label shall be located on the vehicle at the rear step areas, and at any cross walkways, if they exist. The label(s) shall warn personnel that riding in or on these areas while the vehicle is in motion is prohibited.







COMMERCIAL CHASSIS SPECIFICATION CHASSIS PROVIDER

The chassis, as detailed in these specifications, shall be ordered and supplied by the apparatus manufacturer.

CHASSIS

One (1) new FORD F-550 rear axle drive 4x4, dual rear wheels (DRW), four (4) door crew cab and chassis with XL trim.

Wheelbase:	179.70"
Cab to Axle:	60.00"

POWERTRAIN

Powerstroke 6.7L V-8 OHV direct diesel injection 32 valve intercooled turbo diesel engine.

Rated Brake Horsepower: 300 HP @ 2800 RPM

Rated Torque: 660 lb.-ft. @ 1,600 rpm

Stationary Elevated Idle Control, SEIC

Exhaust System: horizontally mounted, discharge on right side aft of wheels

TRANSMISSION

TorqShift 10-speed automatic with selectable drive modes.

FIRE/ RESCUE PREP PKG w/EPA SPECIAL EMISSIONS (LPO)

Includes 7,000 lbs. max front springs/GAWR rating for configuration selected. Incomplete vehicle package - requires further manufacture and certification by a final stage manufacturer. Ford urges Fire/Rescue Vehicle manufacturers to follow the recommendations of the Ford Incomplete Vehicle Manual and the Ford Truck Body Builders Layout Book (and pertinent supplements). NOTE 1: Stationary Elevated Idle Control (SEIC) has been integrated into the engine control module. NOTE 2: Engine calibration significantly reduces the possibility of depower mode when in stationary PTO operation. NOTE 3: Operator commanded regen allowed down to 30% of DPF filter full, instead of 100%. NOTE 4: Must meet the definition of an Emergency Vehicle, an Ambulance or Fire Truck per 40 CFR 86.1803.01 in the Federal Register. NOTE 5: California Code of Regulations allows for the sale of Federally certified emergency vehicles in California.

Includes:

- Dual Extra Heavy-Duty Alternators (Total 377-Amps)
- Operator Commanded Regeneration (OCR) Includes active regeneration inhibit.

MANUAL REGENERATION

A push button switch on the dash to initiate manual DPF regeneration.

Fuel Tank: 40-gallon aft axle with auxiliary fuel tap, to provide fuel to an auxiliary truck body mounted diesel engine (if applicable).

REAR AXLE RATIO

The ratio of the rear axle shall be 4.10 limited slip.





FORD SUPERDUTY WARRANTY

Months/Distance
60 month/60,000 miles
60 month/unlimited mileage
60 month/60,000 miles
60 month/100,000 miles

CHASSIS PAINT COLOR

The cab shall be painted a single color by the chassis manufacturer.

Color: Ford Race Red

Paint Number: PQ

CHASSIS MODIFICATIONS

The following modifications and installations shall be performed on the chassis upon delivery to the apparatus manufacturer:

STEP BARS

One (1) set of black powder coated steel step bars shall be mounted to each side of the chassis. There shall be a slip resistant step pad located bellow each chassis door.

FRONT MOUNTED WINCH

A WARN model M12000 electric winch with 12,000 pound (5,440 kg) rated line pull shall be installed in the brush guard. The winch shall be equipped with 125.00' of 3/8" diameter wire rope, clevis hook and a 4-way roller fairlead. The winch shall be operated through a 12.00' pendant with a handheld control. The winch shall include an automatic mechanical cone brake. It shall feature an easy to use free-spooling rotating ring gear clutch.

GRILLE GUARD - STAINLESS STEEL

A Warn model 98205 Trans4mer Gen II grille guard shall be provided. The grille guard shall be provided with a <u>stainless-steel</u> finish.

WINCH CARRIER - LARGE FRAME - BLACK FINISH

A Warn model 90110 large frame winch carrier shall be installed in grille guard. It shall be capable of carrying Warn winch models 16.5ti, M15, M12, and M8274-50.

The winch carrier shall have a powder coated <u>black</u> finish.

TOWING HITCH RECEIVER

A trailer towing hitch receiver with safety chain anchors shall be installed at the rear of the apparatus.

The hitch receiver shall be constructed of heavy steel tubing and reinforced to the apparatus framework. The hitch receiver shall have a Class V rating of 16,000 pounds towing and 1,600 pounds tongue weight when used with a weight distributing hitch assembly.

The receiver shall accept a 2.00" hitch.

City of Vancouver Fire Department 6-16-2021





One (1) 7-prong connector with a weatherproof cover shall be supplied and mounted near the rear receiver tube.

TIRE PRESSURE MANAGEMENT

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

The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor will activate an integral battery-operated LED when the pressure of that tire drops 5 to 8 psi.

Removing the cap from the sensor will indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED will immediately start to flash.

WHEEL COVERS

Each wheel shall have one (1) stainless steel wheel cover installed.

CHASSIS TOW HOOKS

The front tow hooks shall be provided as detailed in the chassis specifications.

TOW HOOKS – REAR

Two (2) heavy-duty cast-iron tow hooks shall be installed at the rear of the body above the rear step. The tow hooks shall be installed, one (1) on each side, bolted to the chassis frame rails.

FRONT MUD FLAPS

A pair of black rubber mud flaps shall be provided as detailed in the chassis specifications.

REAR MUD FLAPS

A pair of black rubber mud flaps, with the Manufacturer's logo, shall be provided and installed behind the rear wheels.

CENTER CONSOLE

A center console fabricated from aluminum shall be furnished and shall be located between the driver and officer's seats.

The forward area of the console shall have a mounting surface for emergency lighting switch panels and/or electronic siren control boxes within reach of the driver or officer.

SEATING MODIFICATION

The center portion of the 40/20/40 split bench seat shall be removed to accommodate the installation of the specified console.

ROCKER SWITCH PANEL

A rocker type switch panel with a "Master Switch" and individual switches will be installed to provide the ability to de-activate individual lighting units, should the driver/officer require it. This panel will be lettered and lighted and conveniently mounted in the cab.





SWITCH PANEL LOCATION

The switch panel shall be located on the center console.

BATTERY SYSTEM

The battery system shall be supplied with the chassis.

MASTER BODY DISCONNECT SWITCH

A master body disconnect on/off switch shall be provided in the cab, near the driver's door. The switch shall disconnect the power to the apparatus body when the ignition switch is in the off position.

One (1) reset breaker shall be installed between the solenoid output and any electrical load.

One (1) indicator light shall be provided to indicate the apparatus 12-volt system is on. The light shall be located in the chassis cab and be visible from the driver's positions. The light shall be green in color and labeled "Master Battery".

BATTERY CHARGER, BUILT-IN BATTERY SAVER

One (1) Kussmaul Auto Charge 1000 PLC, model #091-215-12, 15-amp battery charger and 3 amp battery saver shall be installed.

The Auto Charge 1000 PLC with Parasitic Load Compensation (PLC) is a compact, microprocessor controlled, completely automatic, single channel battery charger designed for vehicles with a single battery system. The PLC charger is designed to withstand the shock and vibration encountered by vehicle mounted equipment.

The battery saver component shall eliminate drain on vehicle's battery system when vehicle is not in use. The system shall automatically disconnect auxiliary vehicle loads from battery when the charger is energized.

Parasitic Load Compensation feature is designed specially to meet the heavy duty requirements of emergency vehicles. Parasitic load compensation allows you to input the total number of parasitic load amps on the vehicle. Then the charger will shift the absorption stage set point so the battery voltage will drop to the float voltage when the desired current is reached. This will lead to a longer battery life and no overcharging or overheating.

The charger shall have the following operational specifications:

- 120 volts AC input at 3.5 amps
- Battery Charger: 12 volts DC output at 15 amps
- Battery Saver: 3 amps 12-volt DC output
- 8 Pin Selector Switch on front panel
 - Battery Type: Lead-Acid, Gel Cell, AGM or Odyssey
 - Float / 3-Step
 - Battery Saver ON/OFF
 - Parasitic Load Compensation
- AC power applied light on front panel
- System LED Status Indicator on front panel
- Dimensions of: 9.35" high x 5.9" wide x 4.725" deep and weighs 11 lbs.







120 VOLT SHORELINE CONNECTION - "SUPER" AUTO EJECT

One (1) Kussmaul "Super" Auto Eject model 091-55-20-120, automatic, 120-volt, 20-amp shoreline disconnect shall be provided for the on board, 120 volt battery charging systems.

AUTO-EJECT MATING PLUG

A Kussmaul model # 5-20P-H, 20 amp mating female cord end shall be shipped loose with the apparatus to allow the Fire Department to connect cord end to a Fire Department provided charging cord.

BATTERY CHARGER DISPLAY/ COVER

One (1) Kussmaul model 091-55-234-YW universal single battery bank voltage display/ auto eject cover shall be supplied with the charger.

The cover shall be <u>yellow</u> in color.

SHORELINE RECEPTACLE LOCATION

The shoreline receptacle shall be located on the left-hand side of the apparatus in a pre-determined location by the manufacturer.

BACK-UP ALARM

One (1) 97 DB back up alarm shall be provided and installed at the rear of the unit. It shall be wired to activate when the transmission is placed in reverse.

REAR PUMP "DROP IN"

The pump shall be mounted at the apparatus rear, mounted in the open rear cavity of the body.

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.

PORTABLE PUMP, GASOLINE

The pump shall be a CET DI-PFP-20hpHND-MR single stage centrifugal pump, bolted directly to the engine, with a 2.50" Victaulic suction inlet, and a 1.50" flange discharge outlet.

The volute and pump head shall be a lightweight, high strength, seawater resistant, aluminum alloy. The impeller shall be a bronze enclosed type for maximum efficiency, fully machined and balanced. The engine crankshaft shall serve as the pump shaft, with the impeller mounted directly on the crankshaft. The shaft seal shall be self-adjusting, self-lubricating, and mechanical type.

The pump piping shall be flexible to prevent any breakage caused by vibration.

The pump shall be capable of a maximum discharge volume of 275 GPM. at 50 PSI, and a maximum discharge pressure of 200 PSI while pumping 55 GPM.

The performances are based on a maximum altitude of 500-ft and any higher elevation will lower the pump performance. The standard engine performance drops 3% for every 1000 ft.







PUMP ENGINE

The pump shall be driven by a 4-stroke Honda gasoline powered, 20 horsepower engine. The engine shall be air-cooled, 12-volt electric start.

THREE YEAR FIRE PUMP WARRANTY

A three (3) year warranty for the CET fire pump shall be provided.

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.

REMOTE FUEL TANK

The pump engine shall be supplied by an external 3.00-gallon fuel tank. It will be large enough to run the pump motor for one (1) hour at its rated capacity and pressure as per NFPA 1906, 8.10.1. Tank will be mounted with ease of filling in mind.

PRIMER- EXHAUST

The pump engine shall be equipped with a quieter exhaust venturi type primer capable of 15.00' - 20.00' lift for fast positive priming. The control for the primer shall be capable of being operated by a person operating controls at the primary pump operator's position.

PUMP CONTROLS

A control panel shall be supplied and installed on the pump. The controls shall consist at a start switch, throttle and choke cable controls, hour meter, 2.50" diameter discharge pressure gauge and a work light.





OUTS BROS

HOSE THREADS

All hose threads shall be NST on all base threads on the apparatus intake and discharges, unless otherwise specified.

LABELS

All controls, inlets, and discharges shall be clearly labeled. The labels shall comply with applicable NFPA standards.

SUCTION PIPING

All piping on the suction side shall be made of stainless steel (welded joints), painted red. The suction piping, the pump and the discharge shall be tested to 400 PSI.

The suction piping shall consist of a 2.50" tank to pump line with a 2.50" flexible rubber hump hose to minimize flex and vibration between the pump and the tank.

RIGID PIPING SHALL NOT BE ACCEPTABLE.

Between the tank and the pump there shall be a 2.50" industrial valve. This valve shall remain open to pump from the tank.

This pipe shall have a tee into the suction side of the pump and shall continue to the rear of the truck for overboard suction where there shall be an additional 2.50" Industrial Valve.

To draft, the tank to pump valve shall be closed, a suction hose connected to the overboard suction connection and placed in a static water supply, and the primer activated.

The overboard suction connection shall have a 2.50" NST male adapter and a 2.50" NSTF cap with retaining cable.

DISCHARGE PIPING

All piping shall be stainless-steel piping or high-pressure flexible hose. A 2.50" X 2.50" square stainless-steel manifold shall be piped directly to the discharge outlet of the pump. Attached to this discharge manifold, by means of welded stainless-steel pipe nipples, shall be all the discharge valves. All piping shall be painted red to match the pump.

The discharge shall be equipped with a drain valve at the lowest point.

TANK FILL

There shall be a 1.00" valve piped from the discharge manifold as a means for refilling the tank. The valve shall be an industrial quarter turn valve handle and 1.00" NPT threads, and shall be connected to the tank fill port by 1.00" high pressure flexible hose.

One (1) 2.50" DISCHARGE TO REAR

There shall be One (1) 2.50" valve piped from the discharge manifold to the rear of the truck for connection of forestry hose. Each valve shall be an industrial valve with handle and terminate with a 2.50" male NST threads. Each valve shall be furnished with a 2.50" NST cap and chain.





1.50" DISCHARGE TO PRECONNECTED HOSETRAY

There shall be One (1) 1.50" valve piped from the discharge manifold to the hosetray One (1) discharge line(s).

The valve(s) shall be an industrial valve with handle and be connected to the hosetray(s) by high pressure flexible plumbing.

The pre-connected discharge shall terminate with a chicksan swivel adapter with 1.50" male NST threads.

DISCHARGE TO BOOSTER REEL

There shall be a 1.00" valve piped from the discharge manifold to the booster reel. The valve shall be an industrial, quarter turn valve handle and 1.00" NPT threads, and shall be connected to the reel by 1.00" high pressure flexible hose.

BOOSTER HOSE REEL

One (1) HANNAY painted steel booster reel with electric rewind shall be supplied and installed. The reel shall be capable of carrying 150.00' of 1.00" booster hose.

The reel shall have a 1.00" Female NPT inlet connection with a 90-degree ball bearing swivel joint. The reel shall have a 1.00" Male NST outlet.

The reel shall have an auxiliary gear-driven crank rewind that shall be easily accessible.

REEL LOCATION

The booster hose reel shall be installed on the center top of the water tank so the hose will exit either the right or left sides of the apparatus.

Two (2) hose reel rewind switches shall be installed, and properly labeled. Each switch shall be a weatherresistant momentary push button switch. They shall be located one (1) each side of the body, above the rear wheel well.

The reel shall have side facing guides and rollers to reduce hose wear and shall be capable of pulling off the leftand right-hand side of the unit.

Two (2) polished aluminum roller assemblies shall be provided, one (1) on each side of the apparatus body on top of the side compartments. The rollers shall be designed to allow hose from the center mounted hose reel to be unloaded to either side of the vehicle without snagging equipment on the apparatus. The distance between the rollers shall not exceed the width of the hose reel.

BOOSTER REEL HOSE

The booster reel shall be supplied with 150' of 1.00" NST <u>red</u> Reel-Lite booster lightweight woven TPU forestry reel hose. The hose shall have a minimum proof test pressure of 600 PSIG.

FOAM SYSTEM - CLASS A

There shall be a Scotty model 4171 around the pump foam eductor / mixer installed integral to the pump. The eductor shall be plumbed from the foam cell with 0.50" flexible reinforced tubing to throughout he eductor to a suction fitting on the pump impeller housing. The eductor shall be calibrated to educt foam concentrate of 0% to 3.75% at flow rates from 15 to 125 at 100 psi.





BOOSTER TANK

The tank shall have a capacity of 300 US gallons / 249 Imperial gallons / 1136 liters.

The tank shall be manufactured by CET.

WATER TANK

The water tank shall be constructed of 0.50" thick polypropylene sheet. The material shall be of a certified, high quality, non-corrosive, stress relieved thermos plastic, black in color with a textured finish, and UV stabilized for maximum protection. The skid type booster tank shall be of a standard configuration and shall be so designed to have complete modular slide in capability. All joints and seams are to be fully welded and electronically tested for maximum strength. The unit shall incorporate transverse partitions manufactured for 0.50" polypropylene which shall interlock with a series of longitudinal partitions constructed of 0.50" polypropylene. All swash partitions shall be so designed to allow for maximum water and air flow between compartments and are fully welded to each other as well as to the inside of the tank.

The passenger side rear wall of the tank shall have a standard built in sight gauge 2.00" in width, and 70% transparent.

Tank will be baffles in accordance with NFPA bulletin 1906 requirements, latest version.

FILL TOWER & TANK COVER

The tank shall be equipped with a combination vent/overflow and manual fill tower. The fill tower shall be an 8.00" round by 6.00" high with a molded drop-on type cover. The cover shall be fastened to the tower with a tether to prevent loss. The tower shall be located in the right rear corner of the tank. There shall be a vent / overflow installed inside and to the extreme rear of the tower approximately 2.00" down from the top. This vent / overflow shall be of a standard schedule 40 polypropylene pipe with minimum ID of 3.00". The vent / overflow shall be piped internally and exit out at the passenger side tank wall with a 1.00" extension past the wall.

The tank cover shall be constructed of 0.50" thick polypropylene, black in color, UV stabilized.

SUMP

The floor of the tank shall be manufactured from 0.75" polypropylene. There shall be one (1) sump as standard per tank. The sump shall be integral to the tank floor and be a minimum of 0.625" deep recessed into the floor. The sump shall not be visible from or protrude through the bottom of the tank.

TANK OUTLETS

There shall be two standard tank outlets located in the same vertical plane on the driver side rear wall of the tank. One (1) 2.50" female NPT tank to pump suction fitting and one (1) 1.50" female NPT tank fill fitting with flow deflector.

1.00" TANK DRAIN

There shall be a 1.00" tank drain to the rear side of the tank with a plug.

TANK MOUNTING BLOCKS

The cover shall incorporate two (2) booster reel mounting blocks that shall be to accommodate two (2) each sliding nut fasteners. These mounting blocks shall be welded to the covers running from the rear edge of the tank forward.





SKID BASE

There shall be a full width skid base manufactured of 0.75" polypropylene welded to the tank. This base shall be 48.00" wide by 96.00" long and shall extend 34.00" past the tank in the rear to allow for pump mounting. The pump mounting area shall be supported by 0.50" polypropylene gussets 15.00" high by 32.00" long. The gussets shall be equipped with 2.00" holes to assist in lifting the unit.

FOAM TANK - 10 US GALLONS - CLASS A

A foam tank shall be installed inside the main water tank. The foam tank shall have a capacity of <u>10 U.S. gallons</u> for Class A foam.

CET WATER TANK WARRANTY LIMITED LIFETIME

CET Fire Pumps, Mfg. warrants each CET water and/or foam tank to be from manufacturing defects in material and workmanship for the service life of the original vehicle. Every CET tank shall be thoroughly inspected and tested for leaks before leaving our facility and must be installed in accordance with the CET Fire Pumps, Mfg. installation guidelines.

CET will repair or, at its option, replace the tank with a new tank. CET will cover customary and reasonable costs to remove and install the tank. This warranty will not cover the tanks that have been improperly installed, misused, or abused. The serial number must not have been altered, defaced or removed. CET will not cover any unauthorized third-party repairs or alterations. Any of these actions may void the warranty.

There are no warranties, expressed or implied, which extend beyond the description of the face, hereof. There is no express or implied warranty of merchantability or a warranty of fitness for a particular purpose. Additionally, this warranty is in lieu of all other obligations or liabilities on the part of CET Fire Pumps, Mfg.

This warranty contains the entire warranty. It is the sole warranty and price agreements or representation, whether oral or written, are either merged herein or expressly canceled. CET Fire Pumps, Mfg. neither authorizes any person supposing to act on its behalf to change, nor assume for it, any warranty or liability concerning its product.

In no event will CET Fire Pumps, Mfg. be liable for an amount in excess of the currently published retail price plus installation and removal cost of the tank, for any loss or damage, whether direct or indirect, incidental, consequential, or otherwise arising out of failure of its product.

This warranty gives you the specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow exclusion or limitation of incidental or consequential damage, so the above limitation or exclusion may not apply to you. Since some states do not allow limitations on the length of an implied warranty, the above limitation may not apply to you.

The warranty is transferable within the United States and Canada at the discretion of CET Fire Pumps, Mfg. by notifying CET Fire Pumps, Mfg. within thirty (30) days of the vehicle transfer date. At that time, CET will, at its discretion, provide a transfer of ownership form.

BODY AND RELATED COMPONENTS FIRE BODY & RELATED COMPONENTS OVERALL DIMENSIONS

The body shall be 108.00" Long x 94.00" wide x 64.125" high with fender well positioned for a 60.00" cab-to-axle dual rear wheel chassis. The cargo bed floor width shall be 49.75" wide.





FLOOR AND UNDERSTRUCTURE

The compartment floor shall be a single piece design made of .1875" aluminum tread bright. The floor shall be supported by front and rear extruded 6061 aluminum alloy 2.00" x 4.00" x .250" wall structural tube crossmembers and incorporating flange style direct body mounting plates. The center section of the floor shall be supported by two (2) additional crossmembers of 2.00" x 2.00" x .250" structural aluminum tube, interlocked with three (3) longitudinal 2.00" x 2.00" x .250" sections of structural aluminum tube, connecting the front most and rearmost crossmembers. The front of the body shall be closed in with a .125" aluminum bulkhead panels the same height as the body, creating a 47.0" high cargo bed between the side compartments.

COMPARTMENT CONFIGURATION

There shall be a total of six (6) flush floor body side compartments; three (3) on each side comprised of a front vertical and rear vertical compartment, separated by a horizontal center compartment, over the wheel well. A rear access open top cargo compartment shall run the length of the body, between the side compartments.

The compartments shall be completely formed of .125" 5052-H32 aluminum alloy and shall have a tested floor area load of 300 pounds combined with a shelf load of 250 pounds.

ALUMINUM TREADPLATE CARGO FLOOR

The center cargo floor shall be 3003 alloy .1875"embossed aluminum treadplate.

FENDER PANELS

A single piece wheel well panel made of .125" aluminum shall be installed with no sharp edges to cut or damage cleaning equipment used in the wheel well area. The wheel well design shall provide for maximum wheel jounce and for use of tire chains without contacting the fender panel.

TREADPLATE AND TRIM

All Tread Brite overlays shall be 3003-H14 bright aluminum.

REAR WHEELWELL LINERS

The rear wheelwells shall be equipped with replaceable circular liners to prevent road debris damage to adjacent side compartments. The liners shall be made from a single circular panel of .090" smooth aluminum and shall be the full depth of the side compartments. They shall be bolted in place and shall feature end flange bottom drains.

COMPARTMENT VENTS

Each body side compartment shall be properly vented in a manner that will minimize the possibility of moisture and road dirt entering the compartment. Venting shall be to atmosphere for front and rear side compartments. The center wheel well compartments shall be vented to the front and rear compartments.

ADJUSTABLE SHELVING TRACKS

All side body compartments be furnished with adjustable shelving track installed. The shelving track shall include a minimum of four (4) aluminum Uni-strut style channel tracks, mounted vertically on compartment side walls or vertical partitions. There shall be one (1) formed aluminum shelf angle bracket per shelving track to mount each shelf, tray, or adjustable storage module. Shelving hardware shall be heavy-duty commercial quality, providing unlimited vertical position adjustments.





ADJUSTABLE TRAYS

Adjustable trays shall be installed as directed by the purchaser. Trays shall be made of .125" smooth aluminum with a 2.00" high perimeter retaining lip with welded corners. Trays shall have a rated capacity of 300-lbs. and shall be supported by a minimum of two (2) heavy-duty shelf brackets. Trays shall have a maintenance free mill finish.

BODY FRONT WALL OVERLAY

There shall be .125" polished aluminum Tread Brite provided for the entire front of the body to protect the paint from road debris and paint chipping.

COMPARTMENT TOP PROTECTION

There shall be .125" embossed aluminum treadbrite overlays provided for the apparatus side compartment tops. The compartment top overlays shall incorporate outer edges formed down at an angle to provide a drip eave above the compartment doors. Inner edges shall be formed up, providing a scuff flange for the side panels.

REAR BODY FENDERETTES

A roll-formed, polished stainless steel fenderette shall be installed around the outboard edge of the rear wheel well openings to protect the body sides from road debris. They shall be bolted to the body and shall be replaceable.

BODY SIDE RUB RAILS

Replaceable extruded aluminum channel rub rails, 2.00" high x 1.00" deep x 0.125"wall, shall be provided below the lower side compartments. Each rub rail shall have a black rubber bumper strip and mounting stand-off spacers. All rub rail ends shall be angle cut, back toward the body to eliminate the possibility of snagging crew clothing or equipment.

ROLL-UP DOORS

All lower compartment doors shall be equipped with AMDOR brand roll-up doors. The slats shall be 1.00" double wall aluminum with continuous ball and socket hinge joints designed to prevent water ingression and weather tight recessed dual durometer seals.

The interior door curtains shall be smooth to prevent equipment hang-ups. The door tracks and side frames shall each be one-piece aluminum. Each side seal shall be recessed, and non-marring with UV stabilizers to prevent warping.

The bottom panel flange shall have cut-outs for ease of access with gloved hands. The door strikers shall provide support beneath the lift bar to prevent door curtain bounce and potential false door ajar indications.

The roll-up doors shall not be supplied with locks.

COMPARTMENT LIGHT(S)

One (1) full height Luma Bar LED strip light(s) shall be installed inside each of the body compartments.

The compartment light(s) shall be controlled by a magnetic "On-Off" switch located on each compartment door.







LEFT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, L1

There shall be one (1) full height compartment ahead of the rear wheels, approximately 27.00" wide x 53.00" high x 22.00" deep. The clear door opening shall be approximately 25.13" wide x 45.94" high.

The compartment shall have a roll up door. The door shall have a satin finish.

COMPARTMENT LIGHT(S)

One (1) full height Luma Bar LED strip light(s) shall be installed inside the compartment.

The compartment light(s) shall be controlled by a magnetic "On-Off" switch located on each compartment door.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

ADJUSTABLE SHELF

There shall be One (1) adjustable shelf located in the compartment.

LEFT SIDE ABOVE WHEEL COMPARTMENT, L2

There shall be one (1) standard height compartment above of the rear wheels, approximately 49.75" wide x 32.00" high x 22.00" deep. The clear door opening shall be approximately 47.88" wide x 24.94" high.

The compartment shall have a roll up door. The door shall have a satin finish.

COMPARTMENT LIGHT(S)

One (1) full height Luma Bar LED strip light(s) shall be installed inside the compartment.

The compartment light(s) shall be controlled by a magnetic "On-Off" switch located on each compartment door.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

ADJUSTABLE SHELF

There shall be One (1) adjustable shelf located in the compartment.

LEFT SIDE COMPARTMENT BEHIND REAR WHEELS, L3

There shall be one (1) full height compartment behind of the rear wheels, approximately 21.00" wide x 53.00" high x 22.00" deep. The clear door opening shall be approximately 19.13" wide x 45.94" high.

The compartment shall have a roll up door. The door shall have a satin finish.

COMPARTMENT LIGHT(S)

One (1) full height Luma Bar LED strip light(s) shall be installed inside the compartment.

The compartment light(s) shall be controlled by a magnetic "On-Off" switch located on each compartment door.

City of Vancouver Fire Department 6-16-2021



ADJUSTABLE SHELVING TRACKS

FOUTS BROS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

ADJUSTABLE SHELF

There shall be One (1) adjustable shelf located in the compartment.

RIGHT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, R1

There shall be one (1) full height compartment ahead of the rear wheels, approximately 27.00" wide x 53.00" high x 22.00" deep. The clear door opening shall be approximately 25.13" wide x 45.94" high.

The compartment shall have a roll up door. The door shall have a satin finish.

COMPARTMENT LIGHT(S)

One (1) full height Luma Bar LED strip light(s) shall be installed inside the compartment.

The compartment light(s) shall be controlled by a magnetic "On-Off" switch located on each compartment door.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

ADJUSTABLE SHELF

There shall be One (1) adjustable shelf located in the compartment.

RIGHT SIDE ABOVE WHEEL COMPARTMENT, R2

There shall be one (1) standard height compartment above of the rear wheels, approximately 49.75" wide x 32.00" high x 22.00" deep. The clear door opening shall be approximately 47.88" wide x 24.94" high.

The compartment shall have a roll up door. The door shall have a satin finish.

COMPARTMENT LIGHT(S)

One (1) full height Luma Bar LED strip light(s) shall be installed inside the compartment.

The compartment light(s) shall be controlled by a magnetic "On-Off" switch located on each compartment door.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

ADJUSTABLE SHELF

There shall be One (1) adjustable shelf located in the compartment.

RIGHT SIDE COMPARTMENT BEHIND REAR WHEELS, R3

There shall be one (1) full height compartment behind of the rear wheels, approximately 21.00" wide x 53.00" high x 22.00" deep. The clear door opening shall be approximately 19.13" wide x 45.94" high.

City of Vancouver Fire Department 6-16-2021





The compartment shall have a roll up door. The door shall have a satin finish.

COMPARTMENT LIGHT(S)

One (1) full height Luma Bar LED strip light(s) shall be installed inside the compartment.

The compartment light(s) shall be controlled by a magnetic "On-Off" switch located on each compartment door.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

ADJUSTABLE SHELF

There shall be One (1) adjustable shelf located in the compartment.

REAR BODY CONFIGURATION, OPEN

The cargo area of the apparatus body shall be left uncovered for the installation of a skid unit.

UPPER BODY SIDE PRE-CONNECT HOSE TRAY, LH SIDE

One (1) upper body pre-connect hose tray shall be provided atop the left side of the body with dimensions of approximately 108.00° long x 21.00° wide x 8.00° tall. The hose tray shall contain the pre-connect listed in the plumbing section.

The hose tray shall be constructed entirely of .125" aluminum tread plate on all exterior surfaces and shall be enclosed on three sides with an open rear area with a hose securement safety strap.

The hose tray shall have a lift-up door installed, that shall open towards the outside of the body. The door shall have a stainless-steel hinge and a gas shock strong enough to hold the door open at 90 degrees. Two (2) draw style latches shall be installed to hold down the door.

There shall be a vinyl cover installed at the rear of tray. The cover shall be secured with a black shock cord/ hook system on the bottom and permanently secured on the top.

The cover shall be black in color.

UPPER BODY SIDE COMPARTMENT, RH SIDE

One (1) coffin box approximately 108.00" L x 21.00" W x 8.00" T shall be mounted atop the right side of the body.

The compartment shall be constructed entirely of .125" aluminum tread plate on all exterior surfaces.

The compartment shall have a lift-up door installed, that shall open towards the outside of the body. The door shall have a stainless-steel hinge and a gas shock strong enough to hold the door open at 90 degrees. Two (2) draw style latches shall be installed to hold down the door.

FUEL FILL W/ ACCESS DOOR

One (1) Cast Products aluminum fuel fill with a hinged access door shall be installed in the left-hand side wheel well rear of the axle. It shall be labeled "Ultra Low Sulfur Diesel Fuel Only".





DEISEL EXHAUST FLUID FILL

The deisel exhaust fluid fill shall be located in between the body and the chassis on the left-hand side. It shall be labeled "Diesel Exhaust Fluid Only".

REAR PLATFORM STEP

A modular bolt-on rear platform step made of .188" embossed aluminum Tread Brite shall be installed on the rear of the apparatus to provide a full width step area with sufficient support to prevent deflection when in use by several crew members. The outside edges of the rear platform shall be flush with the side body rub rails to maintain a uniform appearance. The step shall protrude 10.00" back from the rear of the body and shall be spaced away from the body to allow water run-off.

REAR STEP RISER

A full width, one-piece aluminum treadplate step riser shall overlay the area at the rear of the body, between the lower edge of the cargo area floor and the top of the rear step.

EXTERIOR GRAB RAILS

Each grab rail shall be non-slip, 1.25" diameter extruded polished aluminum grab rails with rubber inserts designed to provide maximum gripping ability, strength, and durability. The rails shall comply with NFPA 1901-2009.

GRAB RAILS, REAR STEP, VERTICAL

Two (2) extruded aluminum non-slip grab rails, approximately 24.00" in length, shall be provided and vertically mounted on the rear of the apparatus, one (1) on each side of the body.

12 VOLT ELECTRICAL SYSTEM

The truck shall have a 12-Volt electrical system. All wiring will be run in convoluted high temperature plastic loom. The wiring shall be color-coded, numbered, and function imprinted for permanent identification. All wiring devices shall be rated to carry 125% of the maximum ampere load for which the circuit is protected. All added electrical equipment shall be served by circuits separate and distinct from the chassis circuits. All solenoids, relays, and terminal blocks will be located in an easily accessible area. All circuits provided shall have properly rated low voltage over current protective devices. All electrical will be accordance with modern automotive wiring standards. All under side terminal junctions shall be fully enclosed in sealed plastic weatherproof boxes.

ELECTRICAL SYSTEM (CHASSIS OEM)

The commercial chassis electrical system shall be furnished and installed by the chassis manufacturer and shall not be altered in any way so as to void or diminish the manufacturer's warranty responsibilities. Body builder wiring interface harnesses shall be specific to the chassis being utilized and the apparatus specifications with all such harnesses, circuits and connections being documented by the body builder and made part of the electrical schematics provided with the completed apparatus.

ELECTROMAGNETIC INTERFERENCE PROTECTION

The apparatus shall incorporate modern electrical system design, installation procedures, grounding techniques and wave generating components to provide the highest level of protection against electromagnetic (EMI) and radio wave frequency (RFI) interferences.





The apparatus shall be designed to operate and correctly function in congested municipal environments as well as industrial or concentrated commercial scenes without adverse effects from either EMI or RFI. Communications equipment installed after the apparatus is delivered shall be immediately tested by the installer for reception and transmission signal quality.

CHASSIS GROUND LIGHTS

LED ground lights with outward facing angle brackets shall be installed, one (1) under each chassis door.

FRONT OF BODY GROUND LIGHTS

Two (2) LED ground lights with outward facing angle brackets shall be installed under the front of the body. One (1) light shall be located on the driver side and one (1) light shall be located on the officer side of the apparatus.

REAR STEP GROUND LIGHTS

Two (2) LED ground lights with outward facing angle brackets shall be installed under the rear step of the apparatus, one (1) each side.

GROUND LIGHT SWITCHING

The cab and body ground lights shall activate by engaging the parking brake.

HAZARD LIGHT

One (1) Whelen model 0SR00FCR flashing red LED light, located in the driving compartment, the light shall be illuminated automatically whenever any compartment door is ajar.

The hazard light shall be marked with a sign that reads "Do Not Move Apparatus When Light is On".

The warning light shall be interlocked to the parking brake and shall only alert the driver when the parking brake is released. The light shall also be used to signal that other ancillary equipment such as racks light towers etc. are not in their "ready for transport" position.

REAR DIRECTIONALS

Rear directional lighting shall be supplied as follows:

Two (2) Whelen model M6BTT LED brake/taillights shall be installed on the rear of the body. Each light shall have a red lens.

Two (2) Whelen model M6T Amber LED turn signal lights with a populated arrow shall be installed on the rear of the body. Each light shall have a color lens.

Two (2) Whelen model M6BUW LED reverse lights shall be installed on the rear of the body.

HOUSINGS FOR DIRECTIONALS

The two (2) sets of Whelen rear signal lights shall each be housed in a vertical chrome plated housing, designed to hold four (4) lights each. The lower section of each casting shall contain the rear lower warning lights as described in the emergency lighting specifications.





DOT MARKER LIGHTS AND REFLECTORS

LED marker lights shall be installed on the vehicle in conformance to the Department of Transportation requirements. All marker lights shall be incorporated into the headlight circuit of the cab/chassis.

MARKER LIGHTS

LED marker lights shall be installed on the vehicle in conformance to the Department of Transportation requirements. The side and rear of the body will be provided with reflectors. All marker lights shall be incorporated into the headlight circuit of the cab/chassis.

Two (2) amber reflectors shall be provided on the apparatus body lower side, as far forward and low as practical, one (1) each side if the apparatus is 30 feet long or longer.

Four (4) red reflectors shall be provided on the apparatus rear, one (1) each side and two (2) on the rear.

LICENSE PLATE LIGHT

A license plate bracket with LED light shall be provided and installed on the rear of the body. It shall be wired to come on with the headlights.

TRAFFIC ADVISER WARNING LIGHT

One (1) Whelen LED "Traffic Advisor", model TAL85 48.00", rear directional light shall be installed. The light shall be equipped with eight (8) lamps.

The traffic advisor shall be activated by the Whelen TACTL5 control head. The control head shall be conveniently located near the driver's position.

The traffic advisor shall be surface mounted at the rear of the apparatus body. It shall be located as close to the centerline of the body as possible.

WORK LIGHT, PUMP AREA, 12V

One (1) 12V adjustable 4.00" round LED work light shall be mounted at the rear of the skid unit to provide light during nighttime operations. The light(s) shall have a black housing with a black rear cover. The light(s) shall have six (6) ultra-bright white LEDs, and shall operate at 12 volts DC, draw 0.60 amps, and generate 700 lumens.

WORK LIGHT SWITCH

The pump area work light shall be wired to the electric start on the pump.

UPPER LEFT SCENE LIGHTS

One (1) pair of Whelen model M6ZC LED scene lights shall be installed, one (1) each side on the upper left-hand side of the apparatus body.

The light(s) shall be supplied and installed with a chrome bezel.

UPPER RIGHT SCENE LIGHTS

One (1) pair of Whelen model M6ZC LED scene lights shall be installed, one (1) each side on the upper righthand side of the apparatus body.

The light(s) shall be supplied and installed with a chrome bezel.

City of Vancouver Fire Department 6-16-2021





UPPER REAR SCENE LIGHTS

One (1) pair of Whelen model M6ZC LED scene lights shall be installed, one (1) each side on the upper rear of the apparatus body.

The light(s) shall be supplied and installed with a chrome bezel.

UPPER FRONT SCENE LIGHTS

One (1) pair of Whelen model 6SC0ENZR LED scene lights shall be installed, one (1) each side on the upper front of the apparatus body.

The light(s) shall be supplied and installed with a chrome bezel.

SCENE LIGHT AVTIVATION

The scene lights shall be activated by a switch located in the cab. Each side shall be activated separately.

LED TELESCOPIC BOTTOM RAISE FLOODLIGHTS

Two (2) Akron SceneStar LED model ELSS-SLDC telescopic lights shall be installed. The light pole shall be anodized aluminum and have a knurled twist lock mechanism to secure the extension pole in position. The extension pole shall rotate 360 degrees. The outer pole shall qualify as an NFPA compliant handrail.

The lamphead shall have eight (8) ultra-bright white LEDs. It shall operate at 12 volts DC, draw 13 amps, and generate 14,000 lumens. The lamphead and mounting arm shall be powder coated white.

An on/off switch with weatherproof boot shall be provided on the lighthead. Choose mounting location for pole lights.

NFPA AUDIBLE AND LIGHTING WARNING PACKAGE

The following warning light package shall include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1901/1906. The lighting as specified shall meet the requirements for both "Clearing Right of Way" and "Blocking Right of Way" which includes disabling all white warning lights when the apparatus is in "Blocking Right of Way" mode.

LIGHTBAR

One (1) WHELEN model JE2NFPA 56.00" LED lightbar shall be supplied and mounted. The lightbar shall have clear lenses and contain the following modules:

Four (4) RED LIN6 LED modules, two (2) on each corner. Four (4) RED CON3 LED modules, across the front Two (2) WHITE CON3 LED modules, on the front

The forward-facing white lights shall be automatically disabled for the "Blocking Right of Way" mode.

LIGHT BAR ACTUATION

The light bar shall be controlled by a switch in the cab.





UPPER LEFTSIDE WARNING LIGHTS

One (1) pair of Whelen model M6R LED warning lights shall be installed, one (1) each side on the upper left side of the apparatus body.

The lights shall be red in color with red lens.

The light(s) shall be supplied and installed with a chrome bezel.

UPPER RIGHTSIDE WARNING LIGHTS

One (1) pair of Whelen model M6R LED warning lights shall be installed, one (1) each side on the upper right side of the apparatus body.

The lights shall be red in color with red lens.

The light(s) shall be supplied and installed with a chrome bezel.

UPPER REAR WARNING LIGHTS

One (1) pair of Whelen model M6R Super LED warning lights shall be installed, one (1) each side on the upper rear of the apparatus body.

The lights shall be red in color with red lens.

The light(s) shall be supplied and installed with a chrome bezel.

UPPER WARNING LIGHT ACTIVATION

The lights shall be controlled by a switch in the cab.

LOWER FRONT WARNING LIGHTS

One (1) pair of Whelen model M4 Series LED warning lights shall be installed, one (1) each side one the front of the chassis cab.

The driver side warning light shall be a Whelen Model M4R red LED with red lens.

The officer side warning light shall be a Whelen Model M4R red LED with red lens.

Each light shall be mounted with a Whelen Model M4FC chrome flange.

LOWER INTERSECTION WARNING LIGHTS

One (1) pair of Whelen model M4 LED warning lights shall be installed, one (1) each side of the chassis cab.

The driver side warning light shall be a Whelen Model M4R red LED with red lens.

The officer side warning light shall be a Whelen Model M4R red LED with red lens.

Each light shall be mounted with a Whelen Model M4FC chrome flange.







LOWER MID-BODY WARNING LIGHTS

One (1) pair of Whelen model M7 Series LED warning lights shall be installed, one (1) each side of the apparatus, mid-body.

The driver side warning light shall be a Whelen Model M7R red Super-LED with red lens.

The officer side warning light shall be a Whelen Model M7R red Super-LED with red lens.

Each light shall be mounted with a Whelen Model M7FC chrome flange.

LOWER REAR WARNING LIGHTS

One (1) pair of Whelen model M6 Series LED warning lights shall be installed, one (1) each side of the lower rear of the apparatus body.

The driver side warning light shall be a Whelen Model M6R red Super-LED with red lens.

The officer side warning light shall be a Whelen Model M6R red Super-LED with red lens.

The warning lights on the rear of the body shall be mounted in lower section of each taillight casting.

LOWER WARNING LIGHT SWITCHING

One (1) rocker switch with indicator shall be installed on the switch panel in the cab to control the lower warning lights. The switch shall be labeled "LOWER WARNING". The switch shall only be active when the master warning switch is engaged.

ELECTRIC SIREN AND CONTROL

One (1) Whelen model #295SLSA1 electronic siren shall be mounted in the cab. This unit shall feature an electronic air horn, wail, yelp, hi-lo and shall have a hard-wired PA microphone.

ELECTRONIC SIREN SPEAKER

One (1) Whelen model SA315P 100-watt speaker shall be provided. The speaker shall produce a minimum sound output of 120 dB at 10 feet to meet current NFPA 1901/1906 requirements.

The speaker shall be located on the right-hand side of the bumper.

BODY PAINT PROCESS

All bright metal fittings, if unavailable in stainless steel shall be heavily chrome plated. Iron fittings shall be copper plated prior to chrome plating.

All seams shall be caulked both inside and along the exterior edges with a urethane automotive sealant to prevent moisture from entering between any body panel.

The body and all parts shall be thoroughly washed with a grease cutting solvent (PPG DX330) prior to any sanding. After the body has been sanded and the weld marks and minor imperfections are filled and sanded, the body shall be washed again with (PPG DX330) to remove any contaminants on the surface.





The first coating to be applied is a pre-treat self-etching primer (PPG DX1787) (.5 to 1.0 dry film build) for maximum adhesion to the body material. The next two to four coats (depending on need) shall be an acrylic urethane primer surfacer (PPG K36). The film build shall be 4-6 mils when dry. The primer surfacer coat, after appropriate dry time, shall be sanded with 320-600 grit sandpaper to ensure maximum gloss of the paint. The last step is the application of at least three coats of PPG Delfeet polyurethane two-component color (single stage). The film build being 2-3 mils dry. The single stage polyurethane, when mixed F3270 catalyst (PPG F3260) shall provide a UV barrier to prevent fading and chalking.

All products and technicians are certified by PPG every two (2) years.

CHASSIS PAINT

The chassis shall be painted by the OEM Chassis Manufacturer.

PRIMING

All surfaces to be painted shall be primed with three (3) parts PPG F3993 Primer mixed with one (1) PPG F3996 Primer Hardener, and a half (.5) part PPG Thinner F3320.

Two (2) applications of primer shall be applied. The first application shall be four (4) coats and the second application shall be three (3) coats.

A final application of sealer shall be applied using Primer Filler.

PAINT FINISH

The body shall be painted with a PPG Delfleet Evolution Paint System.

As part of the curing process the painted body shall go through a baking process. The painted components shall be baked at 185 degrees for 3 hours to achieve a complete coating cure on the finished product.

After bake and ample cool down time, the coated surface shall be sanded using 3M 1000, 1200, and or 1500 grit sandpaper to remove surface defects. In the final step, the surface shall be buffed with 3M Super-duty compound to add extra shine to coated surface. No more than .5 mil shall be removed in this process.

All products and technicians shall be certified by PPG every two (2) years.

SIDE COMPARTMENT FINISH, ZOLATONE

The apparatus side compartment interiors are to be coated with Zolatone, a polychromatic, modified nitrocellulose coating with a flat background color with accenting fleck colors. The compartments shall be cleaned with a grease remover, and then the surface sanded and prepared for painting. The Zolatone finish is washed and waxed like paint and is resistant to man solvents and wear.

PAINT COLOR

The apparatus body paint shall be "cross referenced" from the chassis paint and shall be painted to match the main chassis color as close as possible.

REFLECTIVE STRIPING

Reflective striping shall be applied to the perimeter of the truck. Size and design shall be determined by the department.





CHEVRON STRIPING

At least 50% of the rear of the unit shall be covered with Red and Yellow alternating 6" stripe in an inverted Chevron pattern.

LETTERING

Reflective lettering shall be applied to the cab doors at the direction of the purchaser.

Photos or drawings of the lettering and striping layout shall be provided by the purchaser prior to construction.

FOUTS BROS. LOGO PLATE(S)

Three (3) Fouts Bros. logo plate(s) will be affixed to the finished apparatus.

LOOSE EQUIPMENT

The following items shall be provided and shipped loose with the completed apparatus at the time of delivery: