



March 2, 2017

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TO: LOCSO Board of Directors

FROM: Josh Taylor, North Coast Battalion Chief

SUBJECT: Agenda Item 12C(a) – March 2, 2017 Board Meeting
Adopt Resolution Authorizing the Purchase of Replacement
Medic-Rescue Vehicle in an Amount Not to Exceed \$171,500

DESCRIPTION

The Medic-Rescue is an Emergency Response Vehicle used by the Fire Department that requires immediate replacement. Staff received bids and is requesting the Board to authorize the purchase to the most responsive bidder, Firematic Supply Company, a Pierce Manufacturing Company, not to exceed \$171,500.

STAFF RECOMMENDATION

Staff recommends that the Board adopt the following resolution:

Motion: I move that the Board adopts Resolution 2017-10 authorizing the purchase of a replacement Medic-Rescue Vehicle in an amount not to exceed \$171,500; and authorize the General Manager to execute the purchase with Firematic Supply Company, a Pierce Manufacturing Company and receive the vehicle.

DISCUSSION

At the June 2, 2016 Board of Directors meeting, Resolution 2016-18 was adopted authorizing for the immediate purchase of a replacement Medic-Rescue vehicle in FY 2016/2017. This item was discussed at the April 19, 2016 Emergency Services Advisory Committee (ESAC) Meeting and recommended by ESAC at the May 18, 2016 meeting.

The Medic-Rescue is expected to cost \$171,500.00 total for replacement. This amount includes a 10 year body warranty, 3 year or 36,000 mile chassis (motor) warranty, or whichever comes first, 1 year full warranty on all parts and workmanship.

On June 21, 2016, staff advertised bids for the vehicle to the listed agencies with the documented responses as follows:

Medic-Rescue Replacement

Dealer Name	Bid	Notes
Darley Fire Equipment	\$178,500	Built on the east coast with no local warranty options.
Ferrara Fire Equipment	\$115,000	Requested utilization of existing MR-15 storage area to be installed on new F550 chassis.
Pierce Manufacturing	\$171,500	Built on the east coast with warranty work available in Paso Robles.
Fire Trucks Unlimited	Did not bid	Requested utilization of existing MR-15 storage area to be installed on new F550 chassis.
Hi-Tech	Did not bid	
SVI Trucks	Did not bid	

FINANCIAL IMPACT

The FY 2016/2017 budget was approved by the LOCSD Board to enable the purchase of this replacement vehicle from Fund 301, General Ledger Code 3110 *Reserve for Replacement – Fire Vehicle or Equipment* not to exceed \$170,000. Staff is requesting an additional \$1,500 for costs associated with the purchase of the Pierce Rescue Truck Ford F550. Sufficient funds are available to cover the replacement cost of the Medic-Rescue vehicle.

As part of the agreement with Firematic Supply Company, a Pierce Manufacturing Company, a \$4,200 discount will be applied with a 100% cash pre-payment at contract signing.

Sincerely,

Scott Jalbert, Unit Chief
CAL FIRE/SLO County Fire Department



By Josh Taylor, North Coast Battalion Chief
CAL FIRE/SLO County Fire Department

Attachments:

- LOCSD Resolution No. 2017-10 (1 pg.)
- Pierce Rescue Truck Ford F550 Specifications (33 pgs.)

RESOLUTION NO. 2017-10

**A RESOLUTION OF THE BOARD OF DIRECTORS
OF THE LOS OSOS COMMUNITY SERVICES DISTRICT
AUTHORIZING THE PURCHASE OF A REPLACEMENT MEDIC-RESCUE VEHICLE**

WHEREAS, the Los Osos Community Services District is formed and operating in accordance with California Government Code Section 61100 et seq. to provide fire protection services, rescue services, hazardous material emergency response services in the same manner as a fire protection district, formed pursuant to the Fire Protection District Law, Part 2.7 (commencing with Section 13800) of Division 12 of the Health and Safety Code; and

WHEREAS, the District has developed a replacement schedule and reserve funding source for its critical vehicles and equipment within the Fire Department; and

WHEREAS, the District under its contract with CAL FIRE is required to replace its critical vehicles and equipment according to a reasonable replacement schedule, and if vehicle maintenance costs paid by the County Fire Department exceed a reasonable amount annually, then the District may be required to purchase replacement vehicles in advance of budgeted replacement schedules; and

WHEREAS, the District's Medic-Rescue vehicle has been in a state of disrepair and out of service an unacceptable number of times over the past two years and the frequency, complexity and severity of the failures of the Medic-Rescue vehicle have been increasing exponentially in the past six months; and

WHEREAS, delay in replacement of the Medic-Rescue vehicle is and will continue to negatively affect the quality of emergency response services provided by the department; and

WHEREAS, CAL FIRE staff and District management agree, and have recommended to and received a Board recommendation of vehicle replacement approval from the District Emergency Services Advisory Committee, with vehicle funding recommended to be allocated from the Fire Vehicle or Equipment Replacement Reserve; and

WHEREAS, the Los Osos Community Services District Board of Directors, at their June 2, 2016 meeting adopted Resolution No. 2016-18 authorizing the immediate purchase of a replacement Medic-Rescue vehicle meeting department standards with funds not to exceed \$170,000 from the Fire Vehicle or Equipment Replacement Reserves.

NOW THEREFORE BE IT RESOLVED that the Los Osos Community Services District Board of Directors authorizes \$1,500 for additional costs to allow for the immediate purchase of the Pierce Rescue Truck Ford F550; and authorizes the General Manager to sign the associated purchase order.

On the motion of Director _____, seconded by Director _____, and on the following roll call vote, to wit:

Ayes: _____
Nays: _____
Absent: _____
Conflicts: _____

The foregoing resolution is hereby passed, approved, and adopted by the Board of Directors of the Los Osos Community Services District this 2nd day of March 2017.

Jon-Erik G. Storm
President, Board of Directors
Los Osos Community Services District

ATTEST:

APPROVED AS TO FORM:

Renee Osborne
General Manager and Secretary to the Board

Roy Hanley
District Legal Counsel

CAL-FIRE / LOS OSOS Fire Department

San Luis Obispo, CA

Rescue Truck Ford F550 4-door

QUALITY AND WORKMANSHIP

Firematic has set the pace for quality and workmanship in the fire apparatus field. Our tradition of building the highest quality units with craftsmen second to none has been the rule right from the beginning. We currently have a "Quality Achievement Supplier" program to insure the vendors and suppliers that we utilize meet the high standards that we demand. That is just part of our overall "Quality at the Source" program at Pierce. Another part of this program is employing experts in their fields, like a Certified American Welding Society Inspector to monitor our weld quality.

MANUFACTURE LOCATION

The apparatus proposed shall be manufactured by Firematic Manufacturing in Long Island New York

INSPECTION TRIP(S)

Inspection trips shall be provided at mutually agreed upon times between the sales representative and the fire department. The inspection trips shall include, but not be limited to, a final inspection to verify proper performance of the completed unit as well as conformance to all specifications.

DELIVERY

The apparatus will be delivered under its own power to insure proper break-in of all components while the apparatus is still under warranty.

INFORMATION

At time of delivery, complete operation and maintenance manuals covering the apparatus will be provided. A permanent plate will be mounted in the driver's compartment specifying the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.

PERFORMANCE TESTS AND REQUIREMENTS

A road test will be conducted with the apparatus fully loaded and a continuous run of ten (10)

miles or more will be made under all driving conditions, during which time the apparatus will show no loss of power or overheating. The transmission drive shaft or shafts, and rear axles will run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. Vehicle will adhere to the following parameters:

- A) The center of gravity of the fully equipped and loaded vehicle will be no higher than the percentage of the rear track width as required by NFPA for the GVWR of the vehicle above the flat and level surface upon which the vehicle rests, with all wheels on the surface. The rear track will be measured from the center of the rear wheel assembly on one side to the center of the wheel assembly on the other side.
- B) The apparatus will meet all of the requirements of this standard while stationary on a grade of 20 percent in any direction.
- C) The fire apparatus will be designed to perform all functions in an ambient of 33 degrees Fahrenheit to 110 degrees Fahrenheit.
- D) The apparatus will be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine.
- E) The service brakes will be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway.
- F) The apparatus will be able to maintain a speed of at least 20 mph on any grade up to and including 6 percent.
- G) The vehicle will be capable of maneuvering across a 20 percent grade and up and down a 25 percent grade.

APPROVAL DRAWING

A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.

A "revised" approval drawing of the apparatus will be prepared and submitted by Firematic to the purchaser showing any changes made to the approval drawing.

WARRANTY

We warranty each piece of new fire or rescue apparatus to be free from defects in materials or workmanship under normal use and service. Our obligation under this warranty is limited to repairing or replacing, as the company may elect, any parts thereof which are returned to us with transportation costs prepaid, and as to which examination is disclose to the company's satisfaction to have been defective, provided such part, or parts will be returned to us not later than one (1) year for delivery of the apparatus. Such defective part or parts will be repaired or replaced free of charge and without charge for installation to the original purchaser.

This warranty will not apply to:

- 1) Normal maintenance and adjustments.
- 2) Any vehicle which has been repaired or altered outside of our factory in any way so that, in our judgment, to affect the stability, nor which has been subject to misuse, neglect, or accident, nor to any vehicle which will operate at any speed exceeding the factory rated speed, or loaded beyond the factory rated load capacity.
- 3) Commercial chassis and associated equipment furnished with the chassis, signaling devices, generators, batteries, or other trade accessories in which they are usually warranted separately by their respective manufacturers.

This warranty is in lieu of all other warranties, expressed or implied, all others representations to the original purchaser and all other obligations or liabilities, including liability for incidental or consequential damages on the part of the company. We neither assume nor authorize any other person to give or assume any other warranty or liability on the company's behalf unless made or assumed in writing by the company.

BODY WARRANTY

A copy of the fire apparatus manufacturer's warranty will be included with the final proposal package. The warranty will state that the body will be free of structural failures caused by defective design or workmanship for a warranty period of ten (10) years from the date the new vehicle is first delivered and that defective parts, under the warranty, will be repaired or replaced without charge to the original purchaser.

PRODUCT CHANGES AND IMPROVEMENTS

Our components and processes, as described in this proposal document, are as accurate as known at the time of bid submission, but are subject to change for the purpose of product or process improvements, or changes in industry standards providing the change does not affect the meaning or definition of the bid specifications.

PLACARDS, SIGNS, and LABELS

The following placards will be provided.

- Overall maximum height of the vehicle.
- Maximum number of passengers to be carried in the cab
- "OCCUPANTS MUST BE SEATED AND BELTED WHEN APPARATUS IS IN MOTION.
- Fuel fill to be labeled properly per the fuel requirements of the chassis manufacturer.

DESIGNATION LABEL

There will be a label in the cab that will state "**FOR ON / OFF ROAD USE**".

A permanent plate will be installed on the inside of the front driver's side compartment for the follow:

- List of all apparatus fluids to include:
 - Engine Oil
 - Engine Coolant
 - Transmission Fluid
 - Drive Axle Lubrication Fluid
 - Transfer Case Fluid
 - Power Steering Fluid
 - Air Conditioning Refrigerant
 - Front Tire Cold Pressure
 - Rear Tire Cold Pressure

ROAD SAFETY KIT

A road safety kit shall be provided with the completed apparatus. The road safety kit shall include the following:

- One (1) set of dual facing triangular warning signs with fold away base, and storage case.

- One (1) 2.5 lbs. ABC vehicle type extinguisher mounted in the cab.

CHASSIS

The chassis will be a Ford, Model F-550 Super Duty, four (4) door, four (4) wheel drive supplied with the following equipment:

WHEELBASE

The wheelbase of the vehicle will be no greater than 179.20", with a cab to axle distance of 60.00".

GVW RATING

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

FRAME

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

FRONT AXLE

The front axle will be a driving type with a 7,000 lb capacity rating at the ground. The front axle hubs will be manually operated.

TRANSFER CASE

A manually shifted transfer case will be provided.

FRONT SUSPENSION

The front suspension shall be as provided by the commercial chassis manufacturer. The front suspension shall include the following:

- Spring Coil Type
- Capacity at Ground: 7,000 lb
- Shock Absorbers: Double acting, 1.375" gas-type
- Front Stabilizer Bar

Shock absorbers will be provided on the front axle.

WHEEL HUBS, LOCKING

The front axle will be provided with manually locking hubs.

TIRES, FRONT

The front tires will be 225/70R19.50, radial all season tread.

WHEELS, FRONT

Wheels for the front axle will be 19.50" x 6.00" polished aluminum disc, eight (8)-hole pattern.

REAR AXLE

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

REAR BRAKES

The rear brakes will be hydraulic disc type.

PARKING BRAKE

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

REAR AXLE RATIO

The ratio of the rear axle will be provided by the chassis manufacturer.

REAR SUSPENSION

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

The rear stabilizer bar will be included.

TIRES, REAR

The rear tires will be 225/70R19.50 with an "all season" tread.

WHEELS, REAR

The exterior rear wheels will be 19.50" x 6.00" polished aluminum disc with an eight (8)-hole pattern. The interior wheels will be painted steel.

CHROME LUG NUT COVERS

Chrome lug nut covers will be supplied on front and rear wheels.

MUD FLAPS

Mud flaps with a Pierce logo will be installed behind the rear wheels.

TIRE PRESSURE MANAGEMENT

There will be a VECSAFE LED tire alert pressure management system provided that will monitor each tire's pressure. A chrome plated brass 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 20 and 120 psi. The sensor will activate an integral battery operated LED when the pressure of that tire drops eight (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 blinking.

ANTI-LOCK BRAKE SYSTEM

The vehicle will be equipped with an anti-lock braking system. The ABS will provide anti-lock braking control on both the front and rear wheels. It is to be a digitally controlled system that utilizes microprocessor technology to control the anti-lock braking system. Each wheel is to be monitored by the system. When any particular wheel begins to lockup, a signal is to be sent to the control unit. This control unit then will reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.

FRONT BRAKES

The front brakes will be hydraulic disc type.

WHEEL CHOCKS, PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2009 edition, section 6.7.3 requires two or more wheel chocks mounted in readily accessible locations, that together will hold the apparatus, when loaded to its GVWR or GCWR, on a hard surface with a 20 percent grade with the transmission in neutral and the parking brake released.

The wheel chocks are not on the apparatus as manufactured. The fire department will provide and install these wheel chocks.

WHEEL CHOCK BRACKETS, PROVIDED BY FIRE DEPARTMENT

The wheel chock brackets are not on the apparatus as manufactured. The fire department will provide and install the wheel chock brackets.

ENGINE

- Model: Power Stroke 6.65 Turbocharged Diesel, CGI (compacted graphite iron) block and aluminum heads
- Number of Cylinders: Eight (8), "V" configuration
- Bore and Stroke: 3.90 x 4.25 in
- Displacement: 6.7 liters (406 cu in)
- Compression Ratio: 16.2:1
- Rated Brake Horsepower: 300 @ 2800 rpm
- Peak Torque: 660 ft.-lb @ 1600rpm
- Turbocharger: VNT (Variable Nozzle Turbine) DualBoost
- Combustion System: High Pressure Bosch Fuel Injection System

ENGINE ACCESSORIES

- Air Cleaner: Dry type
- Governor: Limiting speed type
- Lube Oil Cooler
- Lube Oil Filter: Full flow
- Fuel Filter: Single fuel filter/water separator, heated
- Starting Motor: 12-volt
- Oil Fill and Level Gauge
- Block Heater: 1000 Watt

ENGINE WARRANTY

The engine only, will come with a **five (5) year or 100,000 mile** warranty provided by the engine manufacturer.

RADIATOR

The radiator shall include:

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

RUNDOWN PROTECTION SYSTEM

A rundown protection system will be provided by the chassis manufacturer that automatically increases the engine RPM when the batteries begin to lose voltage. This feature will prevent the batteries from being completely drained if the vehicle is left idling for a long period.

ELECTRONIC CRUISE CONTROL

The chassis will be provided with factory installed electronic cruise control. Switching will be provided on the steering wheel.

AIR INTAKE EMBER SEPARATOR

The air inlet will be equipped with a stainless steel mesh to separate water and burning embers from the air intake system such that particulate matter larger than 0.039" (1.0 mm) in diameter cannot reach the air filter element.

This will comply with NFPA 1901 and 1906 standards.

EXHAUST SYSTEM

The exhaust system will include a diesel particulate filter (DPF), a diesel oxidation catalyst and a selective catalytic reduction (SCR) to meet current EPA standards. The exhaust will terminate with a horizontal tailpipe and diffuser on the right side behind the rear wheels. A heat deflector shield will be provided where the tail pipe is routed under any side compartmentation.

OPERATOR COMMANDED EXHAUST REGENERATION

The operator commanded exhaust regeneration feature option will be provided on the chassis.

COOLANT LINES

Premium rubber hose will be used for all engine coolant lines

FUEL TANK

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

A minimum of one (1) auxiliary fuel tap will be provided.

As provided by the chassis manufacturer, there will be no means to drain the fuel tank. This apparatus will be non-compliant to NFPA 1901, Chapter 12.3.4.7, effective at time of contract execution.

DIESEL EXHAUST FLUID TANK

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

TRANSMISSION

A six (6)-speed automatic transmission shall be provided.

TRANSMISSION PTO PROVISION

The chassis transmission will include the provision for a PTO.

TRANSMISSION COOLER

A transmission oil cooler will be provided in the lower tank of the radiator.

DRIVELINE

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

STEERING

The steering will consist of a hydraulically driven steering system.

The steering gear ratio will be 20.30:1.00.

The steering wheel will be 15.00" in diameter and include tilt and telescoping adjustment.

BUMPER

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

TOW HOOKS

Two (2) painted, steel tow eyes will be provided by Ford.

BUMPER GAP

The standard bumper furnished with the chassis will be used.

CAB

The Ford cab shall be provided directly from the chassis manufacturer with the following items:

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

Construction: Welded steel

Accessories:

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

XL TRIM PACKAGE

The chassis will be equipped with the Ford XL trim package. This trim package typically includes the following options.

- Black door handles
- Black painted front bumper
- Dual beam jewel effect headlamps
- Rear fixed window
- Solar tinted windows
- Black vinyl floor covering
- Tilt/telescoping steering wheel
- Door trim with armrest, grab handle, and reflector
- Vinyl sunvisors: single driver with pocket, single passenger with mirror insert
- Interval control windshield wipers

CAB INTERIOR TRIM LEVEL

The cab trim level will be the standard "XL" level by Ford. The upholstery will be a vinyl in a "steel gray" color. The flooring will be a black vinyl mat.

CAB GRILLE

The cab grille will be a chromed high impact plastic with a horizontal/vertical channel design.

MIRRORS

The mirrors will be black, power, foldaway type. The mirror face will be power controlled, and the mirror head will manually telescope in/out (extendable) for view adjustment.

CAB ACCESS STEPS RUNNING BOARDS

Cab step running boards will be provided for each side of the vehicle. They will be constructed of steel support channels and covered with bright aluminum treadplate.

STEP LIGHTS

There will be two (2) Whelen 0AC0EDCR step lights installed low on the rear wall of the body.

The lights will be activated when the adjacent door is opened.

AIR CONDITIONING

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

ENGINE COMPARTMENT LIGHTS

Two (2) engine compartment lights will be installed under the engine hood, of which the switches are an integral part.

CENTER STORAGE CONSOLE - FRONT

All electrical switching to be mounted in a center console with two (2) sections for map storage and room for two (2) 2-way radios supplied and mounted by the customer and also an open area to mount two (2) portable radios. The console will be mounted between the bucket seats.

The console will be constructed out of smooth aluminum and powder coated black.

POWERPOINTS – 12 VOLT

There will be a total of six (6), 12-volt powerpoints as a combination of Firematic supplied and Ford supplied.

Ford standard locations are two (2) in the dash, (1) in the 2nd row, and (1) in the front center under the seat. The two (2) not located in the dash panel will be relocated on the center console.

The locations required are two (2) in the front dash panel, one (1) at the rear of the center console and the remaining three (3) front of the center console.

The Firematic supplied 12-volt powerpoints are to be fused separately from the Ford supplied.

RADIO ANTENNA MOUNT

One (1) antenna mounting base, Model MA with 17 feet of coax cable and weatherproof cap, will be provided for the customer radio. The mount will be located on the cab roof just to the

rear of the front cab seats. The cable will be routed to the center console with enough cable for the customer to route to the instrument panel if needed.

Locations of the powerpoints shall be determined at the preconstruction meeting.

12-VOLT RADIO WIRE

One (1) 12-volt power and ground cable will be provided inside the center console for customer installed 2-way radio. The 12-volt radio pre-wire shall terminate adjacent to the antenna mount cable.

KUSSMAUL AUTO EJECT FOR SHORELINE

One (1) shoreline will be provided to operate the dedicated 120-volt circuits on the truck without the use of the generator.

The shoreline receptacle will be provided with a NEMA 5-15, 120 volt, 20 amp, straight blade Kussmaul auto eject plug with a black weatherproof cover. The cover is spring loaded to close, preventing water from entering when the shoreline is not connected.

Both receptacle and graph will be located on the driver's side rear fender well area just in front of the rear wheels.

A solenoid wired to the vehicle's starter is energized when the engine is started. This instantaneously drives the plug from the receptacle.

The shoreline will be connected to the battery charger and any 120 volt receptacles identified at the preconstruction meeting.

A mating connector body will also be supplied with the loose equipment.

BATTERY CHARGER

There will be a Kussmaul 1200, Model 091-187-12 battery charger provided and mounted on the front wall of the driver's side forward compartment high and behind the roll-up compartment door roller.

A bar graph display indicating the state of charge will be provided on the vertical wall of the center cab console facing the driver's door opening.

The charger shall have a maximum output of 40 amps and a fully automatic regulation. The battery charger shall be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.

120 VOLT RECEPTACLE AT CENTER CONSOLE

One (1) receptacle will be provide it will be a NEMA 5-20, 120 volt, 20 amp, three (3) wire duplex household type connector to the shoreline through the battery charger.

To be mounted on the rear wall of the front console.

A mounting bracket will be provided for mounting the customer supplied two (2) hand chargers. This mounting bracket will be located on the rear wall of the front console.

SEATING CAPACITY

The seating capacity in the cab will be four (4).

SEATING – DRIVER and OFFICER

Seating inside the cab will consist of a 40-20-40 vinyl bench style seat. The center seat will be removed for the center console location.

REAR SEATING – CREW CAB

A vinyl fold-forward rear bench seat will be delivered wit the vehicle.

SEAT BELT WEB LENGTH

NFPA 14.1.3.2 and 14.1.3.3 requires effective seat belt web length for a Type 1 lap belt for pelvic restraint to be a minimum of 60.00", and a Type 2 pelvic and upper torso restraint-style seat belt assembly to be a minimum of 110.00".

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

SEAT BELTS

NFPA 1901, 2009 edition, section 14.1.3.4 requires the seat belt webbing to be bright red or bright orange in color, and the buckle portion of the seat belt will be mounted on a rigid or semi-rigid stalk such that the buckle remains positioned in an accessible location.

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

CAB INSTRUMENTS

Instrumentation display includes the following:

- Engine Temperature Gauge
- Engine Oil Pressure Gauge

- Transmission Fluid Temperature Gauge
- Speedometer with Odometer
- Engine Tachometer
- Engine Hourmeter
- Fuel Level Gauge
- Exterior Temperature
- Systems Monitor
- Trip Odometer

Warning Indicators Include:

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

EMERGENCY SWITCH PANEL

An emergency switch panel will be provided in the cab. The switch panel will be located on the floor mounted console.

"DO NOT MOVE APPARATUS" INDICATOR

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

OPEN DOOR INDICATOR LIGHT

A red "open door" indicator light will be provided inside the cab, in clear view of the driver, to warn of an open compartment door.

WIPER CONTROL

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

BATTERY SYSTEM

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

The battery system will have a total of 1500 CCA.

MASTER BATTERY SWITCH

A master battery switch, to activate the battery system, will be provided inside the cab within easy reach of the driver.

The master battery disconnect switch will be wired between the starter solenoid and the remainder of the electrical loads on the apparatus.

A green "battery on" indicator light, visible from the driver's position, will be provided.

ELECTRICAL SYSTEM

The 12-volt electrical system will be maintained by a dual alternator set-up provided by the chassis manufacturer. The dual alternators combined will provide a total output of 357 amperes.

FORD POWER EQUIPMENT GROUP

The electrical power equipment group will be provided on the chassis. The option package will include power door locks, power side windows and a momentary down driver's window.

HEATED POWERED MIRRORS

Heated and electric powered mirrors will be provided on the chassis.

EXTERIOR LIGHTING

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

Front headlights will be halogen type and comply to all FMVSS requirements.

Five (5) clearance/marker lights will be installed across the leading edge of the cab.

BACK-UP ALARM

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

COMPARTMENT CONSTRUCTION

The body and compartments will be fabricated of .125", 5052-H32 aluminum with a tensile strength range of 31,000 to 38,000 psi.

The body is a modular design welded to heavy duty support frame work. There is a minimum of four (4) cross members that extend the full width of the body door frames to support the compartments. The rigid main body support frame consist of 6061 – T6 AL extruded square tubing 2.00" x 2.00" x .25" and 2.00" x 3.00" x .25" thick aluminum.

Aluminum storage compartments three (3) each side. Complete body width is approximately 96" from side to side and 120" long.

Compartment flooring will be of the sweep out design.

The top of the compartments will be covered with bright aluminum treadplate rolled over the edges on outward side to prevent water from entering the compartments.

The front facing compartment walls will be covered with .125" bright aluminum treadplate.

All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury.

Body design to fit a Ford F550 chassis with a cab to axle measurement of 60".

Rear fender panels will be constructed from smooth .125" aluminum painted job color.

The rear body wall will be constructed from .125" sheet aluminum and painted job color so that Chevron striping can be applied.

COMPARTMENT CONFIGURATION

The truck body will be constructed in the following compartment configuration:

FRONT TRANSVERSE COMPARTMENT

"D-3" / "P-3"

A full height, transverse, roll up style door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 32.25" wide x 61.50" high x 22.00" deep on each side and 32.25 wide x 35.00" high and 50.00" across the transverse area.

The height of the side compartments will be measured from compartment floor to the bottom edge of ceiling above the door. The depth of the compartment will be calculated with the compartment door closed. The compartment interior will be fully open from the compartment ceiling to the compartment floor and above the chassis frame.

The clear door openings of this compartment will be 51.75" high x 31.75" wide.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

COMPARTMENTATION, DRIVER'S SIDE

"D-2"

A lift up, lap style door, compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 40.00" wide x 36.50" high x transverse.

The height of the compartment will be measured from compartment floor to the bottom edge of the ceiling above the door. The depth of the compartment will be calculated with the compartment door closed.

The clear door opening of this compartment will be 38.00" wide x 29.50" high.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

"D-1"

A full height, lift up style door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 35.75" wide x 61.50" high x 22.00" deep.

The height of the compartment will be measured from compartment floor to the bottom edge of ceiling above the door.

The depth of the compartment will be calculated with the compartment door closed. The compartment interior will be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections.

The clear door opening of this compartment will be 33.75" wide x 51.75" high.

A removable wall to protect the wire for the DOT and warning lights will be provided on the back wall. This will reduce the working space inside the compartment to 32.00" wide.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

COMPARTMENTATION, PASSENGER'S SIDE

"P-2"

A lift up, lap style door, compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 40.00" wide x 36.50" high x transverse.

The height of the compartment will be measured from compartment floor to the bottom edge of the ceiling above the door. The depth of the compartment will be calculated with the compartment door closed.

The clear door opening of this compartment will be 38.00" wide x 29.50" high.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

"P-1"

A full height, lap style door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 35.75" wide x 61.50" high x 22.00" deep

The height of the compartment will be measured from compartment floor to the bottom edge of ceiling above the door.

The depth of the compartment will be calculated with the compartment door closed. The compartment interior will be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections.

The clear door opening of this compartment will be 33.75" wide x 51.75" high.

A removable wall to protect the wire for the DOT and warning lights will be provided on the back wall. This will reduce the working space inside the compartment to 32.00" wide.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

COMPARTMENTATION, REAR

"R-1"

A full height, lap style door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 50.00" wide x 44.00" high x 28.00" deep.

The height of the compartment will be measured from compartment floor to the bottom edge of ceiling above the door.

The depth of the compartment will be calculated with the compartment door closed. The compartment interior will be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand

DOORS, SIDE AND REAR COMPARTMENTS

All compartment doors will be ROM aluminum roll up doors. The doors will have a brushed finish and will be non locking. The doors will come with integrated dual sided LED light strips.

UNDERBODY SUPPORT SYSTEM

Due to the severe loading requirements of this Brush style truck a method of body and compartment support suitable for the intended load will be provided.

The backbone of the support system will be the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads.

The support system will include 6061 – T6 AL extruded square tubing 2.00" X 3.00" X 0.25" thick aluminum tubing supports clamped to the chassis frame rails.

This support system will support up to 4000 lbs. in the bed area and 1000 lbs. of equipment in each side set of compartments with a maximum load of 400 lbs. In any one compartment the actual load capability of the completed unit may be limited by the GVWR.

BODY MOUNTING

Rubber cushions, .75" thick x 3.00" wide x length of the body, will be placed on the main body supports that lay on the chassis frame. The body is held in place by three (3) sets of .50" "U" bolt clamps with self-locking nuts.

All mounting hardware will be painted black.

LOUVERS

All body compartments will have a minimum of one (1) set of louvers stamped into the rear wall to provide the proper airflow inside the compartment. The louvers will be designed to prevent water from dripping into the compartment. The louvers will be formed into the metal and not added to the compartment as a separate plate. The louvers shall direct airflow from inside the compartments into the open bed area at the center of the body.

AGGRESSIVE WALKING SURFACE

All exterior surfaces designated as stepping, standing, and walking areas shall comply with the required average slip resistance of NFPA section 13-7.3. Step surfaces such as running boards, tailboards, wedge steps, and corner steps shall have an aggressive edge break to increase traction when stepping on and off the apparatus.

REAR STEP

The rear step will be constructed of .125" bright aluminum treadplate. The rear step will be a minimum of 8.00" deep.

TOW EYES

Two (2) rear painted tow eyes will be located at the rear of the apparatus and will be mounted directly to the chassis frame rails. The inner and outer edges of the tow eyes will have a radius.

HANDRAILS

Two (2) handrails will be installed at the rear of body at the rear compartment. Handrail material will be extruded aluminum with a non-slip surface.

BODY FENDER CROWNS

Polished aluminum fender crowns will be provided around the rear wheel openings.

A rubber welting will be installed between the body and the crown to seal the seam and restrict moisture from entering.

A dielectric barrier will be provided between the fender crown fasteners (screws) and the fender sheet metal to prevent corrosion.

LOWER BODY TRIM

Bottom edge of the side compartments will be trimmed with a bright aluminum extruded rub rail.

Trim will be 2.12" high with 1.38" flanges turned outward for rigidity.

The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.

EXTENDED COMPARTMENT FLOOR

A quantity of two (2) bolt-in style extended compartment floors will be provided. The floor of the transverse compartments located forward of the rear wheels will be extended outward toward the doors and will match the level of the over-the-frame section. This will allow the installation of full width slide-out trays, tool boards and other long equipment. Each extension will also provide a protected space below this floor section for the installation or storage of small or delicate equipment and tools.

TWO-WAY UTILITY TRAY

A two-way slide-out utility type tray will be provided.

The capacity rating will be 500 pounds minimum in the extended position.

Interior tray dimensions will be 85.00" long x 3.00" deep.

Tray will slide out to either side of the vehicle; two-thirds of its length.

The vertical location of the tray within the compartment will be adjustable.

The construction will consist of .188" thick aluminum for the tray bottom, and special aluminum extrusions for the tray sides, end, and tracks.

Corners will be welded to form a rigid unit.

Tray will be supported with a minimum of eight (8) ball bearing rollers; each rated for a minimum 500 pound load.

Automatic locks will be provided for both the in and out tray positions.

There will be one (1) provided.

The transverse tray will be located in compartment D3/P3 lowered as low as possible to the frame and floor extension.

TOOL BOARD

An aluminum tool board will be provided.

It will be a minimum of .188" thick with .20" diameter holes in a pegboard pattern with 1.00" centers between holes.

A 1.00" x 1.00" aluminum tube frame will be welded to the edge of the board.

The board will be installed on adjustable tracks on a slide out tray. The tracks will allow side to side adjustment. The board will be as high as space permits and full length of the tray. The tray is not included in this option.

There will be one (1) toolboard provided, will be painted to match the compartment interior and installed the full width of the transverse tray in compartment D3/P3.

ADJUSTABLE SHELF TRACKS

Adjustable shelf tracks will be provided in all six (6) of the side body compartments.

ADJUSTABLE SHELVES

The construction will consist of .125" thick aluminum formed to provide a 2.00" high wall around the perimeter.

Corners will be welded to provide a rigid unit.

Shelving will be secured within the compartment by means of adjustable threaded fasteners. These fasteners will slide in an extruded aluminum track to provide height adjustment.

Six (6) shelves will be provided with locations to be determined at the pre-construction meeting.

ELECTRICAL

All 12-volt electrical equipment installed by the apparatus manufacturer will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run in loom or conduit where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids. Electrical wiring and equipment will be installed utilizing the following guidelines:

- (1) All holes made in the roof will be caulked with silicon. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof.
- (2) Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area is defined as any location outside of the cab or body.
- (3) Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.
- (4) Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug).
- (5) All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area.
- (6) All electrical terminals in exposed areas will have silicon (1890) applied completely over the metal portion of the terminal. All emergency light switches will be mounted on a separate panel installed in the cab. A master warning light switch and individual switches will be provided to allow preselection of emergency lights. The light switches will be "rocker" type with an internal indicator light to show when switch is energized. All switches will be properly identified and mounted in a removable panel for ease in servicing.

Identification of the switches will be done by either printing or etching on the switch panel. The switches and identification will be illuminated.

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments.

An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.

The results of the tests will be recorded and provided to the purchaser at time of delivery.

REAR FMVSS LIGHTING

The rear stop/tail and directional LED lighting will consist of the following:

- Two (2) Whelen Model M6BTT red LED stop/tail lights.
- Two (2) Whelen Model M6T amber LED arrow turn lights.

Each light will be installed in a housing and include colored lenses.

Four (4) red reflectors will be provided.

A 16 gauge stainless steel license plate bracket will be mounted on the driver's side above the warning lights.

An LED step lamp will illuminate the license plate. A polished stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.

BACKUP LIGHTS

There will be two (2) Whelen Model M6BUW LED backup lights provided in the tail light housing.

LIGHTING BEZEL

Whelen, model M6FCV2P, four (4) light housings will be provided for the rear stop/tail, directional, backup, and lower warning lights. The bezels shall be provided with a chromed finish.

REAR ID/MARKER DOT LIGHTING

There will be one (1) Truck-Lite Model 15050R three (3) LED light kit used as identification lights located at the rear of the apparatus per the following:

- As close as practical to the vertical Centerline.
- Centers spaced not less than six (6) inches or more than twelve (12) inches apart.
- Red in color.
- All at the same height.

There will be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following:

- To indicate the overall width of the vehicle.

- One (1) each side of the vertical centerline.
- As near the top as practical.
- Red in color.
- To be visible from the rear.

There will be two (2) LED lights installed on the side of the apparatus as close to the rear as practical per the following:

- To indicate the overall length of the vehicle.
- One (1) each side of the vertical centerline.
- As near the top as practical.
- Red in color.
- To be visible from the side.

PERIMETER SCENE LIGHTS, CAB

There will be a 4.00", LED, grommet mount weatherproof light provided for each cab door. Lighting will be designed to provide illumination on areas under the driver, officer, and crew cab riding area exits, which will be activated automatically when the exit doors are opened, by the door jam switch and by the same means as the body perimeter lights.

The lighting will be capable of providing illumination at a minimum level of two (2) foot-candles on ground areas within 30.00" of the edge of the apparatus in areas which personnel climb in or out of the apparatus or descend from the apparatus to the ground level.

PERIMETER SCENE LIGHTS, BODY

There will be a total of four (4) 4.00" LED lights provided on the apparatus. Each light will consist of a 4.00" weatherproof LED light, rubber mount, and pigtail kit.

The lights will be mounted in the following locations:

Two (2) lights will be provided under the rear step area.

One (1) light will be provided each side under the front transverse compartment area.

The lighting will be capable of providing illumination at a minimum level of two (2) foot-candles on ground areas within 30.00" of the edge of the apparatus in areas designed for personnel to climb onto the apparatus or descend from the apparatus to the ground level.

The lights will be activated by a cab and crew cab door switch and a switch on the center console

COMPARTMENT LIGHTING

All compartment lights will be ROM LED full height strip lights. There shall be two (2) strip lights provided horizontally in each compartment one (1) on each side of the opening.

Opening the compartment door will automatically turn the compartment lighting on.

ELECTRONIC SIREN AND LIGHT CONTROL

One (1) Whelen Cencom Sapphire siren head will be provided in the center console. It will have a 3 position slide switch to control the different warning zones and lightbar.

Siren will be actuated from the siren head only.

SPEAKER

There will be One (1) Cast Product, 100 watt corner speakers provided. Connection will be to the siren head.

The speaker will be mount one (1) under the bumper.

SIDE ZONE LOWER LIGHTING

Whelen, model M4* flashing LED red lights with clear lenses will be located at the following positions:

- Two (2) lights mounted on front cab fenders one (1) each side.
- Two (2) lights mounted on the rear body fender well area just in front of rear wheels one (1) each side.

The above four (4) lights will be required to meet the lower level optical warning and optical power requirements of NFPA.

The lights will be controlled by a lighted switch on the center console.

These lights will be mounted in chrome flange kits.

FRONT WARNING LIGHT

One (1) pair of Whelen, model M4* flashing LED lights with flange kit will be mounted to the chassis grill.

The color of the lights will be red with clear lenses and mounted with chrome bezels.

One (1) switch located in the cab on the switch panel will activate these lights.

REAR ZONE LOWER LIGHTING

Two (2) Whelen, model M6* flashing red LED lights with clear lenses will be located at the rear of the apparatus, required to meet the lower level optical warning and optical power requirements of NFPA.

One (1) switch in the cab on the switch panel will control these lights.

These lights will be mounted in the chrome flange kits provided for the stop/tail, directional, and backup lights.

WARNING LIGHTS (Rear of Truck)

Two (2) Whelen M6 red LED warning beacons will be provided at the rear of the truck, located one (1) on each side.

One (1) switch located in the cab on the switch panel will control these lights.

The color of the lights will be red with clear domes.

LIGHTBAR

There will be one (1) 54.00" Whelen® Model Liberty™ “SP”, LED lightbar

This will be mounted on the front of the body for a low profile mount.

The lightbar will include the following:

- Two (2) red flashing LED modules facing forward on the driver’s side.
- Two (2) blue flashing LED modules facing forward on the passenger side.
- One (1) red flashing front corner LED modules, on the driver’s side.
- One (1) blue flashing rear corner LED modules, on the passenger side.
- One (1) red flashing front corner LED modules, on the driver’s side.
- One (1) blue flashing rear corner LED modules, on the passenger side.
- Two (2) white dual LED take down lights.
- One (1) white LED alley light in the driver's side end.
- One (1) white LED alley light in the passenger's side end.

The color of the lenses will be clear

The white LED take down lights, and the white LED alley lights may be load managed when the parking brake is applied.

12 -VOLT SCENE LIGHTING - FRONT

There will be six (6) Whelen M6 scene lights.

The lights will be located two (2) each side of the body on the upper front and rear corners.

Also two (2) lights will be located below the rear body warning lights.

All sides will have separate switching in the cab console.

The lights will be hooked to the "Do Not Move Truck" light in the cab.

LOOSE EQUIPMENT

The following equipment will be furnished with the completed unit:

One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.

CHASSIS WHITE

The chassis will be ordered **Ford WHITE** and not repainted.

PAINT, COMPARTMENT INTERIOR

The compartment interior will be painted with a gray spatter finish for ease of cleaning and to make it easier to touch up scratches and nicks.

BODY PAINT COLOR WHITE TO MATCH THE CHASSIS - WHITE

The exterior custom body painting procedure will consist of a seven (7) step finishing process as follows:

1. Manual Surface Preparation - All exposed metal surfaces on the custom body will be thoroughly cleaned and prepared for painting. Surfaces that will not be painted include all chrome plated, polished stainless steel, anodized aluminum and bright aluminum treadplate. Each imperfection on the exterior metal surface will be removed or filled and then sanded smooth for a smooth appearance. All seams will be sealed before painting.
2. Chemical Cleaning and Treatment - The aluminum surfaces will be properly cleaned using a 4-phase, high pressure and high temperature acid etching system. All steel surfaces will be properly treated using a 3-phase, high temperature, cleaning/phosphatizing system. Surfaces are chemically cleaned to remove all dirt, oil, grease and metal oxides to ensure the subsequent coatings bond well. An ultra pure water final rinse of 25 parts per million solids or less, will be applied to final rinse all metal surfaces at the conclusion of the metal treatment process. This final rinse ensures all chemical residues are removed and that no minerals, (salts), from the water dry onto the metal surface and remain under the primers

and topcoats. These salts can lead to blistering and under film corrosion.

3. Primer/Surfacer Coats - A minimum of two (2) mil dry, (.002), of two component urethane primer/surfacer will be hand applied to the chemically treated metal surfaces to provide a strong corrosion protective base coat and to smooth out the surface. The primer is a high solids and low VOC paint.

4. Hand Sanding to Ultra Fine Finish The primer/surfacer coat is lightly sanded with mild abrasive paper to an ultra smooth finish. This hand finish process is critical to produce the smooth mirror like finish in the topcoat.

5. Sealer Primer Coat A two- (2) component sealer primer coat is applied over the sanded primer to again build toward the final smooth finish. This layer of primer sealer also gives additional corrosion protection.

6. Topcoat Paint Two (2) coats of an automotive grade, two component acrylic urethane paint are applied to provide the lasting beauty and durability. The acrylic urethane topcoat contains a clear coat resin chemistry that creates the high gloss and depth of image. This type of topcoat provides the best resistance against acid rain and other more common chemicals.

7. Clearcoat - Two (2) coats of an automotive grade two (2) component urethane will be applied. Lap style doors will be clear coated to match the body. Roll-up doors will not be clear coated and the standard roll-up door warranty will apply.

A cyclic corrosion test, (General Motors test GM-9540), of 40 cycles will be required before making changes to the exterior coating process. Exterior coating systems, (excluding the undercarriage components), must achieve a 1/16 or less maximum creep from the scribe for aluminum and an 1/8 or less maximum creep from the scribe for galvalume after 40 cycles in the General Motors GM-9540 test.

Each batch of color topcoat, together with the finish painted vehicle, is tested for precise color match. Visual color match will be checked following ASTM D-1729, (American Standard Testing Methods), procedures using CIE, (International Commission on Illumination), D75 Northern Daylight light source. Instrumental color match will follow ASMT D-2244 procedures with a maximum delta E of 1.0 for whites, 1.4 for yellows, blues, greens and 1.5 for reds.

All removable items such as brackets, compartment doors, door hinges, trim, etc. will be removed and painted separately to insure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly.

PAINT - ENVIRONMENTAL IMPACT

Contractor will meet or exceed all current State (his) regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions:

- Topcoats and primers will be chrome and lead free.
- Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals.
- Particulate emission collection from sanding operations must have a 99.99% efficiency factor.
- Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter means is used, it must have an efficiency rating of 98.00%. Water wash systems will be 99.97% efficient.
- Water from water wash booths will be reused. Solids will be removed mechanically on a continual basis to keep the water clean.
- Paint wastes are disposed of in an environmentally safe manner. They are used as fuel in kilns used in the cement manufacturing process - thereby extracting energy from a waste material.
- Empty metal paint containers will be cleaned, crushed and recycled to recover the metal.
- Solvents used in clean-up operations will be collected, recycled on-site, or sent off-site for distillation and returned for reuse. Residue from the distillation operation will be used as fuel in off-site cement kilns.

GRAPHICS

Graphics to match existing fire department's apparatus.

REFLECTIVE BAND

A 6.00" reflective band will be provided across the front of the vehicle and along the sides of the body.

LETTERING

Forty-one (41) to sixty (60) genuine gold leaf lettering, 3.00" high, outlining and shading will be provided.

CHEVRON/INVERTED "V" STRIPING ON REAR WALL DIAMOND GRADE

All vertical surfaces of the rear body will be chevron striping.

There will be alternating inverted “V” chevron striping located on the rear wall of the apparatus to include the rear bulkheads.

The striping will consist of the following colors:

The first color will be Diamond grade RED

The second color will be Diamond grade YELLOW

The size of the striping will be 6”.

MANUAL, CHASSIS OPERATION

One (1) chassis operation manual will be provided with the completed unit.

WARRANTIES

ONE (1) YEAR MATERIAL AND WORKMANSHIP

Each new piece of apparatus will be provided with a minimum one (1) year basic apparatus material and workmanship limited warranty. The warranty will cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.

A copy of the warranty certificate will be submitted with the bid package.

CHASSIS WARRANTY

The basis chassis warranty will be for a total of three (3) years or 36,000 miles, whichever comes first. The chassis warranty shall be provided by Ford.

PAINT WARRANTY

The commercial chassis manufacturer's paint warranty will apply to the paint on the chassis only.

TRANSMISSION WARRANTY

The transmission will have the standard warranty as supplied by the chassis manufacturer.

CAB INTEGRITY

NFPA 14.3.2 requires cabs on an apparatus with a GVWR greater than 26,000 lb meet the requirements of SAEJ2420, *COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks* and SAEJ2422, *Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks*, or ECE Regulation Number 29 *Uniform Provisions Concerning the Approval of Vehicles with Regard to the Protection of the Occupants of the Cab of a Commercial Vehicle*. Certified cab designs meet an established roof, roof corner, and frontal impact strength criteria and may provide additional occupant protection during a crash.

The commercial cab provided does not meet this requirement. Per Fire Department specification request of this commercial chassis, the apparatus will be non-compliant to NFPA 1901 standards at time of contract execution.

BODY WARRANTY

The warranty will state that the body will be free of structural failures caused by defective design or workmanship for a warranty period of ten (10) years from the date the new vehicle is first delivered and that defective parts, under the warranty, will be repaired or replaced without charge to the original purchaser.

END OF SPECIFICATIONS