

## Chubbuck Fire Department, ID

One (1)

Y\_\_N\_\_

### CHASSIS

2005 Ford Super Duty 550, 4x4, 2 Door Extended Cab

84" cab to axle

17,500 GVW

Standard XLT Equipment Package includes:

- Aft of Axle 36 gallon fuel tank

- 4 Wheel ABS Brakes

- Trailer Towing package

- Telescoping Mirrors

- Roof Clearance Lights

- Optional Heavy Duty Vinyl Bucket Seats

6.0L Power Stroke Diesel Engine with Block Heater

5-Speed Automatic Transmission with PTO Provision

Ambulance Prep Package includes:

- Air Conditioning

- Dual 130 Amp Alternators

- Driver & Passenger Air Bags

4.88 Limited Slip Rear Axle

Front & Rear Stabilizer Bars

Full Function Electronic Engine Idle Control with Charge Protect

LCD Readout

Convenience Package includes:

- Tilt Steering Wheel

- Speed Control

- AM/FM Stereo with Cassette and Clock

XLT Decor Package includes:

- Chrome Front Bumper

- Jewel Halogen Headlights

LT 225/70Rx19.5 Traction Tires (All Season Standard)

Color to be Red

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## CHASSIS ADDITIONS AND MODIFICATIONS

- One (1) **ELECTRIC WINCH** Y\_\_N\_\_
- A Warn, model M12000, 12-volt electric winch, with 12,000 lb. capacity shall be provided and mounted behind the front bumper of the chassis. The winch shall be secured directly to the chassis frame rails by a heavy steel support structure designed to with stand the pulling force of the winch.
- The winch shall include 100 ft. 3/8" galvanized cable with clevis hook, 12 foot remote control pendant, 4-way roller fairlead through the bumper.
- Access shall be provided in the top of the front bumper gravel shield to access the winch controls.
- One (1) **ALUMINUM RUNNING BOARDS** Y\_\_N\_\_
- There shall be a set of aluminum running boards furnished on each side of the two-door commercial chassis that extend from behind the front wheel to the rear of the two-door cab. The running boards shall have slip resistant overlay material installed on each step surface.
- One (1) **REAR MOUNT FUEL TANK** Y\_\_N\_\_
- There shall be a rear mounted fuel tank furnished with the chassis. The fuel fill shall be located on the left rear of the apparatus.
- One (1) **WHEEL LINERS** Y\_\_N\_\_
- Stainless steel wheel liners shall be provided and installed on all four chassis wheels and shall include chrome lug nut and axle covers.
- One (1) **REAR MUD FLAPS** Y\_\_N\_\_
- Heavy-duty, black colored, rubber mud flaps shall be furnished and installed behind the rear wheels of the vehicle. Mud flaps shall extend the full width of the rear duals and are to be attached with stainless steel fasteners.
- One (1) **HORIZONTAL CHASSIS EXHAUST** Y\_\_N\_\_
- The chassis exhaust system shall be extended to the rear of the right rear wheel.
- One (1) **ALTERNATOR** Y\_\_N\_\_
- The alternator shall be of adequate size to meet the NFPA requirements and to accommodate the specific apparatus electrical load.

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## APPARATUS BODY SPECIFICATIONS

One (1)

Y\_\_\_N\_\_\_

### ALUMINUM BODY

The body shall be fabricated of aluminum extrusions, smooth aluminum sheet and aluminum treadplate.

The aluminum extrusion alloy shall be 6061 with a temper rating of T6, and have a tensile strength of 45,000 PSI and yield strength of 40,000 pounds. The aluminum extrusions shall 3" x 3" aluminum tubing and specially designed extrusions where applicable.

The smooth aluminum sheet material alloy shall be 5052 with a temper rating of H32, and have a tensile strength of 33,000 PSI and yield strength of 28,000 pounds.

The aluminum treadplate alloy shall be 3003 with a temper rating of H22, and have a tensile strength of 30,000 PSI and yield strength of 28,000 pounds.

The extrusions shall be designed as structural-framing members with the smooth aluminum and treadplate fabricated to form compartments and floors. All aluminum material shall be welded together using the latest mig spray pulse arc welding system.

Compartments to be sweep out design and to be water and dust proof. All compartments shall be made to the maximum practical dimensions to provide maximum storage capacity.

All exterior compartments shall have polished aluminum drip moldings installed above the doors where necessary to prevent water from entering the compartments.

Wheel well panels shall be double break formed smooth aluminum that is welded in place. There shall be no visible bolt heads, retention nuts or fasteners on the exterior surface of the panel. To fully protect the wheel well area from road debris and to aid in cleaning, a full depth radius wheel well liner shall be provided. The frame side of the wheel well area on each side of the opening shall be attached to the frame side of the front and rear compartments. All seams on the frame side of the body shall be welded and caulked to prevent moisture from entering the compartments.

The rear wheel wells shall be radius cut for a streamlined appearance. A polished aluminum fenderette shall be furnished at each rear wheel well opening, held in place with stainless steel fasteners.

### FASTENERS

All aluminum and stainless steel components shall be attached using stainless steel fasteners.

Compartment door hinges, handrails and running boards shall be attached using minimum 1/4" diameter machine bolt fasteners.

3/16" diameter fasteners shall only be used in nonstructural areas such as; door handles, trim moldings, gauge mounting, etc.

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One (1) Y\_\_N\_\_

### **CS 1/8" ALUMINUM BODY**

The aluminum sheet material used in fabricating the body shall be a minimum of .125 (1/8") in thickness.

One (1) Y\_\_N\_\_

### **BODY DIMENSIONS**

Apparatus body shall be up to 144" long and 95" wide, reference drawing for actual body length. Body compartments shall be full depth from top to bottom. Each compartment shall be approximately twenty-three and one-half inches in depth. The area between the body sides shall be 52" wide.

One (1) Y\_\_N\_\_

### **ALUMINUM SUB-FRAME**

The main body sub-frame shall be extruded aluminum and be fully welded to the longitudinal frame rail extrusions that are mounted parallel to the chassis frame rails.

The main body sub-frame shall be constructed of no less than four (4) extruded aluminum tubes running full width of the apparatus body. A minimum of two (2) full body width tubes shall be provided ahead of and behind the rear axle forming the main body support cross members. The main cross tubes shall be fully welded to the vertical and horizontal extrusions forming the body super-structure, described elsewhere herein.

For added strength and rigidity, no less than six (6) intermediate body cross members shall be provided constructed extruded aluminum tubes.

The intermediate structural cross members shall be interconnected and welded to the main body tubular cross members forming a fully welded support grid for the body super-structure compartments.

The sub frame cross members shall be attached to the chassis frame rails using heavy "U" bolt fasteners to allow removal of the sub frame and body assembly from the chassis. There shall be a barrier provided between the sub frame and body to prevent electrolysis.

One (1) Y\_\_N\_\_

### **COMPARTMENT VENTS**

All body compartments shall have a minimum of one (1) louvered panel bolted into a wall to provide the proper airflow inside the compartment. There shall be a filter installed behind the louvered panel. The filter shall be accessible for cleaning by removing the louvered panel on the interior of the compartment.

One (1) Y\_\_N\_\_

### **WHEEL WELL PANELS AND FENDERETTES**

For ease of accessibility and maintenance, wheel well panels shall be smooth aluminum painted job color that is welded in place.

The rear wheel wells shall be radius cut for a streamlined appearance. A polished aluminum fenderette shall be furnished at each rear wheel well opening, held in place with concealed stainless steel fasteners.

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One (1) Y\_\_N\_\_

### **WHEEL WELL LINER**

To fully protect the wheel well area from road debris and to aid in cleaning, a full depth (minimum of 25.00") radius wheel well liner shall be provided. Wheel well liner shall be smooth aluminum material to prevent corrosion.

One (1) Y\_\_N\_\_

### **REAR TOW EYES**

There shall be two tow eyes furnished under the rear of the body and attached directly to each chassis frame rail. There shall be a reinforcement spreader bar connecting the two tow eyes. Tow eyes are to be constructed of 3/8" plate steel with a 4" I.D. hole, large enough for passing through a tow chain end hook.

One (1) Y\_\_N\_\_

### **APPARATUS COMPARTMENTATION**

There shall be large enclosed compartments on both sides of the body, starting at the front of the body and continuing to the rear of the apparatus. These compartments shall be as large as possible, using all available space.

The aluminum treadplate compartmentation tops on each side of the body shall be extended out and downwards a minimum of .50" over the compartment doors forming a drip rail. Corners shall be TIG welded.

Lower or rear face compartments, if specified shall be provided with polished aluminum drip rails.

One (1) Y\_\_N\_\_

### **SIDE BODY COMPARTMENT ROLL-UP DOOR CONSTRUCTION**

Exterior side equipment compartments so specified shall be equipped with roll-up shutter doors to be installed as specified herein.

The drum assembly shall be fully enclosed and protected from the elements. Pendant plates supporting the door roll assembly shall be bolted in place, adjustable and capable of being removed with common hand tools. Pendant plates and supports that are welded in place do not meet the maintenance and service criteria of these specifications.

One (1) Y\_\_N\_\_

### **NATURAL FINISH ROLL UP DOORS**

The roll-up doors on each side of the apparatus body shall be natural finish aluminum.

One (1) Y\_\_N\_\_

### **ROLL UP DOORS**

R.O.M. Robinson brand extruded aluminum shutter style doors with lift bar latch mechanisms and associated hardware shall be provided and installed as specified.

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One (1)

Y\_\_N\_\_

### **BODY COMPARTMENTS**

Driver side and passenger side compartments shall be furnished as follows:

- One transverse compartment ahead of the rear wheels with full height roll-up door on each side. The lower level of the front compartments on each side shall be approximately frame deep with the upper level extending across the chassis frame rails.
- One compartment above rear wheels, extending in depth to the rear compartment, with a roll-up door on each side.
- One compartment behind the rear wheels extending in depth to the rear compartment with full height roll-up door on each side.
- One compartment in rear of body extending in depth to the back wall of the front compartment with roll-up door.

The lower level of the front and rear compartments on each side shall be approximately frame deep with the upper level extending across the chassis frame rails.

Top of all body compartments shall be fabricated of polished aluminum treadplate.

The clear door opening width of the compartment above the rear step at the rear of the body shall be 50" wide.

One (1)

Y\_\_N\_\_

### **FLAT BACK BODY**

The rear vertical surface of the body shall be flat from side to side.

One (1)

Y\_\_N\_\_

### **BACKBOARD / STRETCHER STORAGE**

Storage areas shall be provided for three (3) backboards, a scoop stretcher, and a 4" x 6" wooden beam in the front transverse compartment, all three supplied by the fire department. A vertical partition shall be installed from the compartment ceiling to the transverse floor full width of the compartment. The backboards and scoop stretcher shall be located in the forward portion of the divided compartment. The scoop stretcher shall be mounted on edge and located behind the backboard storage area and above the fixed shelf in the upper most portion of this compartment. The backboards shall be mounted on edge and be located in a single pocket at the front of this compartment and above the storage area for the wooden beam. The backboards shall be accessed from either side of the body.

The space needed for the backboards shall be

The space needed for the backboards, scoop stretcher, and beam shall be as follows:

Backboard slot: 17"H x 7"W  
Scoop Stretcher: 25"H x 8"W  
Wooden Beam: 5"H x 7"W

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One (1) Y\_\_N\_\_

### **SHELF FLOOR COVERING**

All shelving in compartments with exterior opening doors on the apparatus body shall be covered with black colored rigid Turtle Tile for improved ventilation and added scuff protection for the compartment floor.

One (1) Y\_\_N\_\_

### **ADJUSTABLE SHELVES**

Compartment shelves shall be constructed of .125" smooth Aluminum. Shelves shall have formed edges on three sides for added strength. Shelves shall be fully adjustable, with extruded aluminum unistrut channels provided on the front and rear compartment walls.

One (1) shelf shall be provided and located in the compartment behind the rear wheels on the passenger's side of the apparatus body.

Two (2) Y\_\_N\_\_

### **SLIDE-OUT TRAY**

Slide-out trays shall be constructed of 3/16" aluminum material. Trays shall have with heavy-duty roller bearing slides with a latch to hold the tray in the "open" and "closed" positions. Tray shall have capacity of 500 pounds.

One slide-out tray shall be located in the compartment behind the rear wheels on the driver's side for department supplied Hurst equipment.

One slide-out tray shall be located on the floor of the compartment behind the rear wheels on the passenger's side for the generator.

One (1) Y\_\_N\_\_

### **HEAVY DUTY SLIDE-OUT TRAY**

The transverse slide-out tray shall be constructed of 3/16" aluminum material. Tray shall have heavy-duty roll bearing slides with a latch to hold the tray in the "open" and "closed" position. Tray shall have capacity of 500 pounds. The tray will extend out approximately 2/3 of the length of the tray trough.

The transverse slide-out tray shall be located on the floor of the front compartment behind the backboard and scoop storage area, and below both of the slide-out/tilt down trays.

Location; floor of the front compartment behind the backboard and scoop stretcher storage area, and below both of the slide-out/tilt down trays.

One (1) Y\_\_N\_\_

### **HEAVY DUTY SLIDE-OUT TRAY**

The slide-out tray shall be constructed of 3/16" aluminum material. Tray shall have heavy-duty roll bearing slides with a latch to hold the tray in the "open" and "closed" position. Tray shall have capacity of 500 pounds. The tray will extend out approximately 2/3 of the length of the tray trough.

The slide-out tray shall be located on the floor of the rear compartment.

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Five (5)

Y\_\_N\_\_

### ROLL-OUT AND DOWN EQUIPMENT TRAY

Roll-out and down type equipment tray shall be provided. Each roll-out and down tray shall be constructed of formed .125" aluminum and have extruded aluminum guide tracks on each side. The extrusion shall include a specially sized channel at both sides of the drawer for the installation of two (2) high quality stainless steel ball bearing rollers. These bearings shall provide support of the outside front of the tray. A second set of stainless steel ball bearing rollers shall be provided for the inside rear of the tray. These rollers shall be bolted to the rear of the drawer and shall slide on two (2) extruded aluminum tracks that are angled to provide an out and down action of the tray. Mounting of the drawer slide mechanisms shall be to the specified shelf tracks to allow for future adjustment and removal.

A total of five (5) roll-out and down trays shall be provided and located as follows:

One (1) in the rear portion of the front compartment, on the driver's side.

One (1) in the rear portion of the front compartment, on the passenger's side.

One (1) in the compartment over the rear wheels, driver's side. The tray shall be located in the rear portion of the compartment behind the SCBA brackets.

One (1) in the compartment over the rear wheels, passenger's side.

One (1) in the top portion of the compartment behind the rear wheels, passenger's side next to the electric cord reel.

One (1)

Y\_\_N\_\_

### AIR BOTTLE STORAGE RACK IN COMPARTMENT

An air bottle storage rack is to be fabricated and installed on the floor of a compartment, per Fire Department instructions. The rack shall be designed to hold a minimum of four (4) spare air cylinders. Bottle scuff protection shall be provided as required. There shall be an area recessed into the rear wall to allow adequate depth for air bottles.

The rack shall be located at the rear bottom portion of the front compartment, below the fixed shelf on the driver's side of the body.

Two (2)

Y\_\_N\_\_

### SCBA BRACKETS

SCBA mounting bracket(s) shall be provided and mounted in the enclosed storage compartments as per instructions of Fire Department.

Two (2) brackets shall be provided and located in the forward portion of the compartment over the rear wheels on the driver's side of the body.

Model #'s of the SCBA bottles shall be provided by the fire department prior to construction.

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One (1) Y\_\_N\_\_

## LADDER MOUNTING

A pocket for a Little Giant ladder shall be provided in the rear compartment. The pocket shall be either located horizontally at the top of the compartment or vertically at the side of the compartment for maximum utilization of the compartment.

One (1) Y\_\_N\_\_

## EXTRUDED ALUMINUM RUB RAILS

Full body length polished aluminum rub rails shall be bolted in place on the right and left body sides and in the pump panel area. The rub rails shall extend outward beyond the body sides for protection of the compartments and doors. There shall be a bolt on aluminum corner casting on each rear corner to blend the rear tailboard assembly with the side rub rails.

One (1) Y\_\_N\_\_

The side rub rails shall be a heavy extruded aluminum "C" channel.

## SIDE AND REAR OVERLAYS

Overlay panels shall be constructed of 3003 polished aluminum treadplate. Polished aluminum overlay shall be provided and installed in the following areas:

- The front face of each side compartment.
- The rear body face and vertical area above tailboard.
- Driver's side and passenger compartment top extending down over side to the compartment doors then forming a drip rail above doors.
- Front face of hose bed above booster tank.

One (1) Y\_\_N\_\_

Overlay shall be installed with "Aluminized" stainless steel bolts to prevent corrosion.

## POLISHED COMPARTMENT TOP WELDS:

One (1) Y\_\_N\_\_

The compartment top welds to be polished.

## SLIP-RESISTANT WALKWAY SURFACE

All exterior surfaces designated as stepping, standing, and walking areas shall have an aluminum slip-resistant overlay material installed. The slip-resistant overlay material shall have a raised serrated surface that will allow moisture to drain out either side. The recessed surface shall be one piece solid material to prevent road spray and debris from entering the top surface from below. The slip-resistant overlay material shall meet the requirements of NFPA 13-7.3. The slip-resistant surface shall be installed in the following areas of the apparatus body:

- Step areas of the side running boards.
- Rear step running board step.
- Walkway and standing platforms

One (1) Y\_\_N\_\_

## REAR STEP/RUNNING BOARDS

The apparatus body running boards and rear step shall be constructed with slip-resistant surface and shall have bright aluminum treadplate trim around the outside

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edges. Side running boards and rear step shall be removable for ease of service in case of damage.

One (1) Y\_\_N\_\_

### REAR STEP/TAILBOARD

A single piece .188 rear step/tailboard shall be furnished that is a minimum of 8.00" deep and full width of the apparatus body, from rub rail to rub rail. The tailboard shall be provided with a removable casting on each corner for a pleasing appearance.

One (1) Y\_\_N\_\_

### HANDRAILS

Access handrails shall be 1 1/4" in diameter extruded aluminum with rubber insert. Access rail escutcheons and brackets shall be chrome plated and attached with stainless steel bolts. Anchoring of posts and framing members for railings of all types shall be of such construction that the completed railing structure shall be capable of withstanding a load of at least 225 pounds applied in any direction at any point along the rail.

One (1) Y\_\_N\_\_

### REAR HANDRAILS

Two (2) vertical access handrails shall be provided and mounted on the rear of the apparatus body, one on each side. Each rear handrail to be approximately 48" long.

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One (1)

### **ELECTRICAL**

Y\_\_N\_\_

Electrical wiring, hydraulic lines, air system tubing, and control cables shall be fastened to the frame or body structure of the apparatus and shall be furnished with protective looms, grommets, or other devices, so that any such connector and/or wiring will be protected from shear or tear.

The body 12-Volt electrical system shall be designed specifically for the apparatus body. Automatic reset circuit breakers shall be provided and installed in all circuits.

Wiring data shall be provided with the completed apparatus.

One (1)

The following electrical equipment and lights shall be provided and installed:

Y\_\_N\_\_

### **WIRING SYSTEM**

All electrical wiring shall be 14-gauge heavy strand copper with type GXL crosslink high temperature insulation, being circuit function printed every three-inches along its entire length.

Wiring data shall be provided with the completed apparatus.

One (1)

The following electrical equipment and lights shall be provided and installed:

Y\_\_N\_\_

### **TAIL & STOP LIGHTS**

Two (2) Weldon #2010 rectangular red stop/tail lights shall be provided and mounted at the rear of the body, one on each side.

One (1)

### **DIRECTIONAL LIGHTS WELDON 2010**

Y\_\_N\_\_

Two (2) Weldon #2010, rectangular amber directional signal lights with black arrows shall be provided and mounted at the rear of the body, one on each side below the stop/tail lights.

One (1)

### **BACKUP LIGHTS WELDON 2010 (RECT)**

Y\_\_N\_\_

Two (2) Weldon #2010, rectangular clear backup lights shall be provided and mounted, one on each side at the rear of the body. The backup lights shall be mounted below the rear stop/tail and directional lights.

One (1)

### **TAIL LIGHT TRIM**

Y\_\_N\_\_

A polished cast aluminum three hole taillight bezel/housing shall be provided. The specified rear lighting units shall be installed in the bezel/housing and secured. The completed assembly is to be bolted to the apparatus body, one each side.

One (1)

### **CLEARANCE LIGHTS**

Y\_\_N\_\_

There shall be clearance marker lights installed meeting all DOT requirements. The vehicle clearance lights shall be recess mounted within the rear center tailboard step.

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One (1)	<b>LICENSE PLATE BRACKET</b>  A license plate mounting bracket shall be provided complete with a chrome-plated shielded indirect type light. Bracket shall be mounted at the rear of the apparatus body.	Y__N__
One (1)	<b>BACKUP ALARM</b>  An automatic, electronic reverse alarm shall be provided and installed. An alarm shall activate whenever the reverse gear is selected in the transmission.	Y__N__
One (1)	<b>LOAD MANAGER</b>  The apparatus shall be equipped with a Kussmaul model 091-79 Automatic Load Shedding System for performing continuous electrical load management. The Load Manager shall have the following features: <ul style="list-style-type: none"><li>• Monitor 12-volt system and detect low voltage.</li><li>• Capability to control two (2) loads.</li><li>• Automatic reset when voltage rises.</li><li>• Adjustable voltage setpoint.</li></ul> The load manager shall be protected against reverse polarity and shorted outputs, and be enclosed in a metal enclosure to enhance EMI/RFI protection. CSFA shall provide for all electrical loads in excess of the NFPA minimum electrical requirements that exceed the alternator output.	Y__N__
One (1)	<b>HIGH IDLE SYSTEM</b>  There shall be a high idle system furnished and installed on the apparatus. The high idle system shall have an on/off switch located in the chassis on the switch console. The system shall have an interlock that will disable the solenoid if the parking brake is not completely set.	Y__N__
Fourteen (14)	<b>COMPARTMENT LIGHTING</b>  All side and rear exterior equipment compartments shall be provided with one (1) clear compartment light mounted to the side walls of the compartment. Compartment lights shall switch on automatically when the compartment door is opened and switch off when the door is closed.	Y__N__
One (1)	A second light shall be provided in each compartment to provide additional lighting. <b>OPEN COMPARTMENT/HAZARD WARNING LIGHT</b>  A red flashing, warning light shall be provided and installed in the driver's compartment to indicate an open passenger or apparatus compartment door. The hazard light shall also be attached to folding equipment racks and light towers as specified. Light shall be properly marked and identified.	Y__N__

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One (1)

### **BATTERY DISCONNECT SWITCH**

Y\_\_N\_\_

A master battery on/off switch shall be provided and mounted in a convenient location to the driver. The master battery switch shall disconnect the batteries from all chassis and body accessories.

One (1)

A "Battery-On" pilot light shall be provided, visible to the driver.

Y\_\_N\_\_

### **BATTERY CONDITIONER**

A 110-volt Kussmaul Auto-Charge 1200, single system, 40-amp, automatic battery charger shall be provided and installed within the chassis cab and wired to the battery system. Battery charger shall be 40-amp HIGH OUTPUT type designed to automatically charge the battery system when shoreline power is connected. The charger shall be equipped with a bar graph type charge level indicator to indicate the charge rate, and a remote voltage sensing device to compensate the charger output for the voltage drop in the charging wires.

One (1)

### **AUTO-EJECT**

Y\_\_N\_\_

A Kussmaul "Super Auto-Eject" 20-amp automatic disconnect device shall be provided and installed on the 110 volt shoreline connection complete with weatherproof cover and matching plug. The Auto-Eject shall be activated by the chassis starter switch to disconnect the plug. The Super Auto-Eject shall be completely sealed to prevent contamination of the mechanism by inclement weather and road conditions. The Super Auto-Eject shall have an internal switch to open and close the A.C; circuit after the mating connector is inserted and before the connector is removed.

One (1)

The Auto-Eject shoreline shall be located at the front bumper area on the driver's side of the apparatus.

Y\_\_N\_\_

### **ELECTRICAL CONSOLE WITH EMERGENCY LIGHT SWITCH PANEL**

An electrical console shall be constructed of .125" smooth aluminum material and mounted in the cab of the truck chassis. Console shall be designed and installed between the driver and passenger seats. The top face of the console shall be designed as the switch panel for all emergency light switches. The switch panel shall be hinged for easy access to the switch connections.

All emergency light switches shall be lighted, rocker style. Switches shall be internally lit when the switch circuit is in the on position. A plug-in identification label is to be provided and installed adjacent to each rocker switch with backlighting provided behind the label.

A rocker style internally lighted switch shall be provided and wired through a heavy-duty relay to activate power to the emergency lights. The emergency lights shall be activated by a single "MASTER SWITCH" on the electrical console.

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One (1)	<b>MAP LIGHT</b>	Y__N__
	One (1) flexible "gooseneck" type map light shall be provided and mounted on the cab dash panel complete with a switch on the light fixture base.	
One (1)	<b>SPOTLIGHT</b>	Y__N__
	One high intensity hand held spotlight shall be provided and mounted in the chassis cab on the passenger side and wired to the chassis 12-volt system. Spotlight shall be "Blue Eye" type.	
One (1)	<b>REAR STEP LIGHTS</b>	Y__N__
	Two (2) chrome plated lights shall be furnished and installed on the rear face of the body to illuminate the rear step area. Lights shall be wired to the panel light switch at the pump operator's panel.	
One (1)	<b>ENGINE COMPARTMENT WORK LIGHT</b>	Y__N__
	An engine compartment work light shall be provided complete with a switch mounted on the light head.	
One (1)	<b>UNDER CAB LIGHTING</b>	Y__N__
	There shall be two (2) lights furnished below the chassis cab, one on each side below each door. The lights shall be wired to switch on and off automatically when the cab doors are opened.	
One (1)	<b>UNDER BODY LIGHTING REAR STEP</b>	Y__N__
	There shall be two (2) lights furnished below the rear step, one on each side. The lights shall be wired to turn on and off with a switch located on the driver's side pump panel.	
Two (2)	<b>SCENE LIGHT</b>	Y__N__
	There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted at the rear of the body. Light shall be mounted on an 18-degree downward angled, polished aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Rear Scene Light".	
	Two (2) scene lights shall be provided above the tail lights, one on each side of the body.	
Two (2)	<b>DRIVER SIDE SCENE LIGHT</b>	Y__N__
	There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted on the driver side of the body. Light shall be mounted on an 18-degree downward angled, polished aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Driver's Side Scene Light".	

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- Two (2) scene lights shall be provided on the driver's side of the body, inboard of the two warning lights located at the front and rear corners. Y\_\_N\_\_
- Two (2) **PASSENGER SIDE SCENE LIGHT**
- There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted on the passenger side of the body. Light shall be mounted on an 18-degree downward angled, polished aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Passenger's Side Scene Light".
- Two (2) scene lights shall be provided on the passenger's side of the body, inboard of the two warning lights located at the front and rear corners. Y\_\_N\_\_
- One (1) **TRAFFIC DIRECTION BAR**
- A Code 3, Model AS-10S, 47" ten-lamp Arrowstik traffic direction light shall be provided and installed facing the rear of the apparatus with the control head mounted in the truck cab. Y\_\_N\_\_
- One (1) **RECESS MOUNTED TRAFFIC ADVISOR**
- The traffic advisor shall be recess mounted into the rear of the apparatus body. Y\_\_N\_\_
- One (1) **ELECTRONIC SIREN**
- A Code 3 Model 3692 V-CON, 200-watt electronic siren with Hi-Lo and hardwired microphone shall be provided and mounted in the cab. Y\_\_N\_\_
- One (1) **SPEAKER**
- DYNAMAX, 100-watt speaker shall be provided and recess mounted in the front bumper of the chassis. The speaker shall be connected to the electronic siren control unit. Y\_\_N\_\_
- One (1) **HEADLIGHT FLASHER**
- The headlight circuit of the chassis shall be provided with a heavy-duty headlight flasher system designed for emergency vehicles. Flasher shall include override for high beam headlights and controlled by switch located on the electrical module in the chassis cab. Headlight flasher to be turned off when the park brake is set. Y\_\_N\_\_
- One (1) **RADIO ANTENNA**
- There shall be a universal base for the radio antenna installed on the chassis cab roof. The power and ground wires for the radio shall also be installed. Y\_\_N\_\_
- One (1) **EMERGENCY LIGHTING**
- The upper and lower zones "A", "B", "C", "D" of the apparatus shall have the following emergency lighting equipment:

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One (1)

### LIGHT BAR

Y\_\_N\_\_

One (1) Code 3 model 647NFPA1 47" mounted on chassis cab roof to meet the NFPA upper zone A lighting requirement. Light bar to have the following equipment.

- (2) 50-watt standard rotators
- (1) 50-watt fast rotator
- (2) 3-step cascade mirrors

One (1)

### REAR LIGHTS

Y\_\_N\_\_

Six (6) Code 3 model 81X 9"x 7" flashing halogen lights mounted on the upper corners of the body to meet the NFPA Zone B, C, D upper level lighting requirement. The lights shall be activated through the master emergency light switch located on the electrical console. Two (2) on rear, two (2) on each side with the following equipment.

- (1) 50-watt halogen bulb.
- (1) Flasher assembly.
- Red lens on each.

One (1)

### ZONE A FRONT LIGHTS

Y\_\_N\_\_

There shall be two (2) Code 3 model 4135 halogen flashing lights furnished on the front grill to meet the NFPA Zone A lower level lighting requirement. The lights shall be connected to a relay be activated through the master emergency light switch located on the electrical console.

One (1)

### ZONE B & D SIDE LIGHTS

Y\_\_N\_\_

There shall be two (2) Code 3 model 4135BZ halogen flashing lights with bezels furnished on each side of the apparatus to meet the NFPA Zone B & D lower level lighting requirement. One light mounted as far forward as possible and one light mounted as far to the rear as possible. The halogen lights shall be connected to a flasher and be activated through the master emergency light switch located on the electrical console.

One (1)

### ZONE C REAR LIGHTS

Y\_\_N\_\_

There shall be two (2) Code 3 model 4135BZ halogen flashing lights with bezels furnished on the rear of the apparatus body to meet the NFPA Zone C lower level lighting requirement. The halogen lights shall be activated through the master emergency light switch located on the electrical console.

One (1)

### 12 VOLT ELECTRICAL CERTIFICATION

Y\_\_N\_\_

The low voltage electrical system shall be tested and certified per NFPA 1901 requirements.

A certificate of compliance shall be provided with the completed vehicle upon delivery.

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Minimum electrical load consists of the total amperage required to simultaneously operate the following in a stationary mode at the incident scene.

- The propulsion engine and transmission.
- All Clearance and marker lights.
- The communication radio. (Default of 5.0 amps used for testing).
- Illumination of all walking surfaces, the ground at all egress points, controls and instrument panels and 50% of the total compartment lighting load.
- Minimum warning lights required for "Blocking Right of Way" mode.
- The current to simultaneously operate any fire pump, aerial device & hydraulic pumps.
- Anything defined by the purchaser to be critical to the mission of the apparatus.

The first test for the electrical system is the **Reserve Capacity Test**. All the above listed components operate with the engine shut off. After 10 minutes all electrical loads are shut off and the battery system must have adequate reserve power to start the engine.

The second test is the **Alternator Performance Test at Idle**. All the above listed components operate with the engine at an idle. There can be no current draw from the batteries of the apparatus.

The third test is the **Alternator Performance Test at Full Load**. All electrical components shall be activated with the engine operating at governed RPM for two hours. During the test the system voltage can not drop below 11.7-volts or have excessive battery discharge for more than 120 seconds. Any loads not listed in the minimum electrical load may be load managed in order to pass the test.

All of the above tests must be conducted with the engine compartment at approximately 200 degrees.

One (1)

Y\_\_N\_\_

### GENERATOR

A Honda EM-5000SXX1, 5000-watt, 120/240-volt generator shall be provided. The unit shall have an air cooled 11HP gasoline engine equipped with low oil pressure shutdown. The unit shall be three wire, single phase 60-hz with full rated power available from a single 120-volt outlet. The oil drain, oil dip stick, fuel filter and oil filter for the generator must be easily accessible for maintenance.

An integral 4.5-gallon fuel tank, with electric and recoil starter shall be furnished with the generator.

Electric start provisions shall be furnished for the generator from the chassis battery system. Generator start/stop switches shall be provided at the generator.

One (1)

Y\_\_N\_\_

### CIRCUIT BREAKER PANEL

A circuit breaker panel shall be provided and mounted with four (4) manual reset circuit breakers properly labeled.

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A portable generator shall be connected to the circuit breaker panel with S/O cord and quick disconnect plug. A permanent mount generator shall be hard wired to the circuit panel.

The circuit breaker panel shall be located in a compartment as close to the generator as practical, and mounted to not interfere with shelves or trays if specified. Circuit breaker panel shall be mounted toward the bottom of the compartment just above the compartment floor. Breaker panel cover shall be accessible with hand tools.

One (1)

Y\_\_N\_\_

All AC wiring to be installed in liquid tight conduit.

One (1)

Y\_\_N\_\_

### GENERATOR MOUNTING

The generator shall be mounted in the right rear lower compartment

Two (2)

Y\_\_N\_\_

### REAR BODY 110 VOLT RECEPTACLES

All 110-volt receptacles shall be provided with weather proof covers. Receptacle shall be mounted on the rear area of the apparatus body.

Two (2) 110-volt receptacles shall be provided.

One (1)

Y\_\_N\_\_

### ELECTRIC CORD REEL

A Hannay Model ECR1616-17-18 electric rewind cord reel(s) shall be supplied and installed in a compartment on the apparatus body, location to be determined at preconstruction conference. The cable reel(s) shall be a 12-volt electric rewind type complete with a four-way roller assembly and a push button rewind switch, properly labeled.

The reel shall be mounted at the top of the compartment behind the rear wheels on the passenger's side of the body.

One (1)

Y\_\_N\_\_

### ELECTRICAL CORD

150-Feet of 12/3 SO cord shall be installed on each reel complete with a HS-3 ball stop and female receptacle.

One (1)

Y\_\_N\_\_

### CAPTIVE ROLLERS FOR CORD REEL

There shall be a captive roller system furnished for the cord reel. The roller mounting brackets shall be attached to guide the cord on and off the reel assembly.

Two (2)

Y\_\_N\_\_

### TELESCOPING QUARTZ LIGHTING

A quartz light shall be provided and mounted on the apparatus, wired to the 110-volt power source. The light shall be UL listed as "Scenelights for Fire Service Use". Light shall be controlled by a switch located on the light head.

Light shall be a Fire Research 500W/110V Nightmaster.

The light shall be attached to a side mounted, bottom raise telescoping, anodized aluminum pole. The telescoping pole shall have a four (4) foot extension with friction

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lock mechanism. The telescoping pole shall be prewired with heavy-duty retractile cord with pigtail extending out the bottom of the lower tube.

The telescoping pole shall be Fire Research model 530.

The 500 watt quartz lights shall be located at the front of the body, one each side.

Two (2)

Y\_\_N\_\_

### HYDRAULIC REEL

A Hurst equipment compatible reel with 100-feet of dual hydraulic hose shall be supplied and installed in a compartment on the apparatus body, location to be determined at preconstruction conference. The reel(s) shall be 12-volt electric rewind with a bush button rewind switch and be properly labeled.

Two (2) electric hydraulic hose reels shall be provided. The reels shall be mounted at the top of the compartment behind the rear wheels on the driver's side of the body.

Two (2)

Y\_\_N\_\_

One (1) Hurst pigtail hose connection for dual hydraulic hose shall be supplied.

Two (2)

Y\_\_N\_\_

### CAPTIVE ROLLERS FOR HYDRAULIC REEL

There shall be a captive roller system furnished for the hydraulic reel. The roller mounting brackets shall be attached to guide the hose on and off the reel assembly.

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One (1)

Y\_\_N\_\_

### PAINTING

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 an automotive sealant to prevent moisture from entering between any body panels.

The body and all parts shall be thoroughly washed with grease cutting solvents prior to any sanding. After the body has been sanded and the minor imperfections filled and sanded, the body shall be washed again with a solution to remove any contaminants on the surface. The first coating to be applied is a self-etching primer for maximum adhesion to the body metal. The next three coats shall be an acrylic, urethane, primer surfacer. The primer surfacer coat is to be hand sanded with 600-grit sandpaper to insure maximum gloss of the paint. The last step is the application of at least three coats of Concept Acrylic Urethane two component color.

The fire pump and all rigid discharge and suction plumbing shall be painted silver in color.

While constructing the truck body, all aluminum parts shall be properly fitted on the body. The backside of all aluminum parts shall be sanded smooth of any burrs and sharp edges.

All aluminum parts shall be bolted to the body using stainless steel fasteners. Cadmium plated fasteners are not acceptable.

During reassembly of the apparatus, care shall be exercised in fitting and fastening the parts back in their respective position on the vehicle.

One (1)

Y\_\_N\_\_

### NATURAL FINISH ROLL UP DOORS

The roll-up doors on each side of the apparatus body shall be a natural finish aluminum.

One (1)

Y\_\_N\_\_

### UNDERCOATING

The body sub frame shall be undercoated with a heavy-duty automotive type undercoating before the rubber backing and the compartments are attached. After the body has been attached to the sub frame and all final items have been installed the entire body assembly shall be undercoated

One (1)

Y\_\_N\_\_

### INTERIOR COMPARTMENT LINER

The interior compartment walls shall be coated with a heavy spray on lining material. The lining material shall dry to form an impervious one-piece covering to protect the compartment interiors from damage. The lining material shall be dark gray in color.

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One (1) Y\_\_N\_\_

### WHEEL PAINTING

The exterior faces of the front and rear wheels, shall be finished painted to match the apparatus body. Wheels shall be properly prepared and finished with primer coats and topcoats as specified.

The outer two-inches of each outside wheel rim shall be painted Silver in color, unless otherwise specified.

One (1) Y\_\_N\_\_

### PAINT BODY TO MATCH CHASSIS

The apparatus body to be painted to match the chassis.

One (1) Y\_\_N\_\_

### LETTERING

Lettering shall be done in gold leaf mylar letters, shaded in black, and encapsulated in clear mylar. Lettering to be placed on each cab door as directed by fire department. Maximum of fifty (50) letters.

One (1) Y\_\_N\_\_

### LETTERING SHALL BE AS FOLLOWS

Exact lettering requirements shall be provided by the fire department prior to construction.

One (1) Y\_\_N\_\_

### REFLECTIVE SAFETY STRIPE

A 4" wide 3M brand Scotchlite #680-10 reflective stripe shall be affixed to the perimeter of the vehicle. Striping shall be placed up to 60" above ground level and shall conform to NFPA reflectivity requirements. At least 60% of the perimeter length of each side and width of the rear, and at least 40% of the perimeter width of the front of the vehicle shall have reflective stripe.

The side stripe shall be applied in a "Z" design.

The stripe shall be white in color.

One (1) Y\_\_N\_\_

### IDENTIFICATION & SAFETY LABELS

A permanent plate shall be installed in the driver's compartment to specify the quantity and type of the following fluids in the vehicle:

1. Engine oil.
2. Engine coolant.
3. Transmission fluid.
4. Pump Transmission Lubrication Fluid.
5. Pump Primer Fluid (If applicable).
6. Drive Axle Lubrication Fluid.
7. Air-conditioning refrigerant.
8. Air-conditioning lubrication oil.
9. Power steering fluid.
10. Transfer case fluid.
11. Equipment rack fluid.

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12. Air compressor system lubricant.
13. Generator system lubricant.

When trucks have been UL certified, a permanent plate with pump performance data and serial numbers shall be installed on the pump panel.

A permanent plate shall be installed in the driver's compartment specifying the maximum number of personnel the vehicle is designed to carry per NFPA standards. It shall be located in an area visible to the driver.

An accident prevention sign stating "DANGER PERSONNEL MUST BE SEATED AND SEAT BELTS MUST BE FASTENED WHILE VEHICLE IS IN MOTION OR DEATH OR SERIOUS INJURY MAY RESULT". The warning sign shall be placed so it is visible from all seating positions.

An accident prevention sign stating "DANGER DO NOT RIDE ON REAR STEP WHILE VEHICLE IS IN MOTION, DEATH OR SERIOUS INJURY MAY RESULT". The warning sign shall be placed so it is visible from the rear step of the vehicle.

If an inlet located at the pump operator's position is valved, it shall be provided with a permanent label that states "WARNING SERIOUS INJURY Or DEATH COULD OCCUR IF INLET IS SUPPLIED BY A PRESSURIZED SOURCE WHEN THE VALVE IS CLOSED".

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One (1)

Y\_\_N\_\_

### WARRANTY

We warrant each new motorized fire apparatus manufactured by CENTRAL STATES FIRE APPARATUS for a period of ONE YEAR from the date of delivery, except for chassis and other components noted herein.

Under this warranty we agree to furnish any parts to replace those that have failed due to defective material or workmanship where there is no indication of abuse, neglect, unusual or other than normal service providing that such parts are, at the option of CENTRAL STATES FIRE APPARATUS, made available for our inspection at our request, returned to our factory or other location designated by us with transportation prepaid within thirty days after the date of failure or within one year from the date of delivery of the apparatus to the original purchaser, whichever occurs first, and inspection indicates the failure was attributed to defective material or workmanship.

The warranty on the chassis and chassis supplied components, storage batteries, generators, electrical lamps and other devices subject to deterioration is limited to the warranty of the manufacturer thereof and adjustments for the same are to be made directly with the manufacturer by the customer.

This warranty will not apply to any fire apparatus that has been repaired or altered outside our factory in any way, which in our opinion might affect its stability or reliability.

This warranty shall not apply to those items that are usually considered normal maintenance and upkeep services: including, but not limited to, normal lubrication or proper adjustment of minor auxiliary pumps or reels.

This warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liabilities on our part. We neither assume nor authorize any person to assume for us any liability in connection with the sales of our apparatus unless made in writing by CENTRAL STATES FIRE APPARATUS.

One (1)

Y\_\_N\_\_

### 5 YEAR ALUMINUM BODY WARRANTY

Central States Fire Apparatus LLC (CSFA) warrants to the original purchaser only, that the all aluminum body, fabricated by Central States Fire Apparatus, under normal use and with reasonable maintenance, be structurally sound and will remain free from corrosion perforation for a period of FIVE (5) years.

This warranty does not apply to the following items that are covered by a separate warranty: paint finish, hardware, moldings, and other accessories attached to this body. In addition, this warranty does not apply to any part or accessory manufactured by others and attached to this body.

CENTRAL STATES FIRE APPARATUS MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THE ALUMINUM BODY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND HEREBY DISCLAIMED.

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Central States Fire Apparatus will replace without charge, repair or make a fair allowance for any defect in material or workmanship demonstrated to its satisfaction to have existed at the time of delivery or not due to misuse, negligence, or accident. If Central States Fire Apparatus elects to repair this body, the extent of such repair shall be determined solely by Central States Fire Apparatus, and shall be performed solely at the Central States Fire Apparatus factory, or at an approved facility. The expense of any transportation to or from such repair facility shall be borne by the purchaser and is not an item covered under this warranty.

Central States Fire Apparatus will not be liable for damages and under no circumstances will its liability exceed the price for a defective body. The remedies set forth herein are exclusive and in substitution for all other remedies to which the purchaser would otherwise be entitled.

Central States Fire Apparatus will be given a reasonable opportunity to investigate all claims. The purchaser must commence any action arising out of, based upon or relating to agreement or the breach hereof, within twelve months from the date the cause of the action occurred.

One (1)

Y\_\_N\_\_

### PAINT WARRANTY

The PPG paint performance guarantee will cover the areas of the vehicle finished with the specified product for a period of FIVE (5) years beginning the day the vehicle is delivered to the purchaser.

The areas as outlined on the Guarantee Certificate, will be covered for the following paint failures:

#### GUARANTEE INCLUSIONS:

#### FULL APPARATUS BODY MANUFACTURED AND PAINTED BY CENTRAL STATES FIRE APPARATUS:

- \* Peeling or delamination of the topcoat and/or other layers of paint.
- \* Cracking or checking.
- \* Loss of gloss caused by cracking, checking, or hazing.
- \* Any paint failure caused by defective PPG Fleet Finishes which are covered by this guarantee.

All guarantee exclusions, limitations, and methods of claims are covered in the full certificate provided to the original purchaser.