

Fouts Bros Fire Equipment



HEAVY DUTY RESCUE UNIT

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Fouts Bros Fire Equipment

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SCOPE AND GENERAL REQUIREMENTS

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

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

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

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

PRIME BIDDER, MANUFACTURER

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

BIDDERS BACKGROUND

Bids are requested from responsible manufacturers who are engaged in the manufacture of fire apparatus. To insure reliable and complete acceptance of the apparatus, bidder shall have been in operation for a minimum of thirty (30) years in the manufacturing of fire apparatus.

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

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

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

FAMA COMPLIANCE

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

FAIR, ETHICAL AND LEGAL COMPETITION

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

PROPRIETARY PARTS

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

MANUFACTURER'S DISCRETION

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

PRODUCT QUALITY AND WORKMANSHIP

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

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

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

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

INSURANCE REQUIREMENTS

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

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

PAYMENT TERMS

Full payment for the apparatus shall be made at time of delivery of the completed vehicle. Due to insurance liability, the apparatus will not be left at the purchaser's

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location without full acceptance and payment or prior agreement between the Purchaser and Bidder.

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

VEHICLE ACCEPTANCE AND DELIVERY

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

FUEL TANK FILLED AT DELIVERY

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

OVERALL HEIGHT

An overall height restriction has not been specified for this apparatus.

OVERALL LENGTH

No overall length restriction has been specified for this apparatus.

OVERALL WIDTH

No overall width restriction has been specified for this apparatus.

OVERALL WHEELBASE

No overall wheelbase restriction has been specified for this apparatus.

ANGLE OF APPROACH

No angle of approach restriction has been specified for this apparatus.

ANGLE OF DEPARTURE

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No angle of departure restriction has been specified for this apparatus.

NFPA 1900 COMPLIANCE

The National Fire Protection Association standard #1900 (most recent edition) is hereby adopted and made a part of these specifications, the same as if they were written out in full detail, insofar as they apply with the exception of any sections dealing with "Equipment Recommended for Various Types of Apparatus". Bidders are to provide only the equipment requested herein and the Department will supply the rest before the apparatus is put into service. The unit shall comply with all federal, state, ICC, and DOT motor vehicle regulations, standards, and laws relating to commercial vehicles as well as to fire apparatus on the date of the bid.

The apparatus being furnished under these specifications shall conform to the requirements specific to pumper fire apparatus NFPA Booklet 1900 version current at time of contract

ROLLOVER STABILITY - NFPA 1900: CHASSIS ESC SYSTEM

The apparatus shall meet the rollover stability criteria defined in NFPA 1900 by being equipped with an Electronic Stability Control (ESC) system as provided by the chassis manufacturer.

ROAD TEST CERTIFICATION

A road test shall be conducted with the finished apparatus fully loaded. During this time, the apparatus shall not show loss of power and/or overheating. The transmission drive shaft or shafts and rear axle shall run free from abnormal vibration or noise throughout the operating range of the apparatus. The apparatus, when loaded, shall have not less than 25% or more than 45% of the weight on the front axle and not less than 55% or more than 75% on the rear axle.

- A). The apparatus must 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.

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- B). The apparatus must be capable of accelerating from a steady speed of 15 mph to a true speed of 35 mph within 30 seconds. This shall be accomplished without moving the gear selector.
- C). The fully loaded apparatus shall be capable of obtaining a speed of 50 to 55 mph on a level concrete highway.
- D). The manufacturer shall furnish copies of the engine installation approvals signed by the appropriate engine company upon delivery of the chassis to the Fire Department.
- E). The manufacturer shall furnish copies of the transmission approval signed by the transmission manufacturer upon delivery of the chassis to the Fire Department.
- F). The manufacturer shall furnish copies of the front and rear axle approvals upon delivery of the apparatus to the Fire Department.

ROAD TEST FAILURE

In the event the apparatus fails to meet the test requirements of these specifications on the first trials, second trials may be made at the option of the manufacturer within thirty (30) days of the first trials. Such trials shall be final and conclusive and failure to comply with changes, as the purchaser may consider necessary to conform to any clause of the specifications within thirty (30) days after notice is given to the manufacturer of such changes, shall be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser, or its use by the purchaser during the above-specified period with permission of the manufacturer, shall not constitute acceptance.

VEHICLE TOP SPEED

The rear axle shall be geared for a top speed of 68 mph at engine governed RPM.

NFPA TOP SPEED STATEMENT

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Per NFPA 1900 section 7.16.2, the maximum top speed of fire apparatus with a GVWR over 33,000 lbs. shall not exceed either 68 MPH or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower.

Per NFPA 1900 section 7.16.3, if the combined water tank and foam agent tank capacities on the fire apparatus exceed 1250 gallons, or the GVWR of the vehicle is over 50,000 lbs., the maximum top speed of the apparatus shall not exceed either 60 MPH or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower.

CHASSIS DATA LABELS

The following information shall be on labels affixed to the vehicle:

Fluid Data:

- Engine oil
- Engine coolant
- Chassis transmission fluid
- Pump transmission lubrication fluid
- Pump primer fluid (if applicable)
- Drive axle(s) lubrication fluid
- Air conditioning refrigerant
- Air conditioning lubrication
- Power steering fluid
- Cab tilt mechanism fluid (if applicable)
- Transfer case fluid
- Equipment rack fluid (if applicable)
- Air compressor system lubricant
- Generator system lubricant (if applicable)

Chassis Data:

- Chassis Manufacturer
- Production Number
- Year Built

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- Month Manufactured
- Vehicle Identification Number

Location shall be in the driver's compartment of the chassis cab.

OVERALL HEIGHT, LENGTH, GVW DATA PLAQUE

A "high visibility" plate shall be permanently mounted in the cab, visible to driver when seated.

The plate shall show the overall height of the completed apparatus in feet and inches, the overall length of the completed apparatus in feet and inches.

The plate shall also show the gross vehicle weight rating (GVWR) in tons.

Text shall also be supplied on the plate, indicating that the information shown is current upon completion of the apparatus. If the overall height of the apparatus changes after the apparatus is put into service, then the purchaser must revise the dimensions on the plate.

FAMA SAFETY GUIDE

One (1) copy of the latest edition of FAMA's Fire Apparatus Safety Guide shall be provided with the completed apparatus.

CUSTOM CHASSIS SPECIFICATION

CHASSIS PROVIDER

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

WHEEL TRIM

The front wheels shall include stainless steel lug nut covers and stainless steel baby moons shipped loose with the chassis for installation by the apparatus builder. The baby moons shall have cutouts for oil seal viewing when applicable.

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The rear wheels shall include stainless steel lug nut covers and band mounted spring clip stainless steel high hats shipped loose with the chassis for installation by the apparatus builder.

The lug nut covers, baby moons, and high hats shall be RealWheels® brand constructed of 304L grade, non-corrosive stainless steel with a mirror finish. Each wheel trim component shall meet D.O.T. certification.

EXHAUST SYSTEM

The chassis exhaust system shall be provided as detailed in the chassis specifications. NO modifications shall be made by the apparatus manufacturer.

HOT EXHAUST DANGERS LABEL - FAMA# 04

A permanent label shall be provided near any hot exhaust surface that warns of potential injury or death that could be caused by contact with the surface. The label shall also state precautions that should be taken while working on or around the surface.

FRONT BUMPER

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

REAR MUD FLAPS

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

DUAL USB PORT

One (1) Kussmaul model # 091-219-5 shall be installed in the console. It shall contain two (2) 2.4 amp USB charging ports.

BODY DESIGN AND CONSTRUCTION

The body shall be modular in design, allowing it to be removed and remounted on a new chassis. The body shall be fabricated using aluminum extrusions, angle, smooth aluminum sheet and aluminum treadplate.

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UNDERSTRUCTURE

The body super structure shall be an all welded configuration utilizing a combination of 3.00" x 1.50" X 0.25" and 4.00" x 2.00" x 0.25" 6061-T6 thick walled structural tubing.

BODY MOUNTING

The body subframe shall be fastened to the chassis frame with a minimum of six (6) spring loaded body mounts. The brackets shall be fabricated of heavy duty 0.50" thick steel. Each mounting assembly shall utilizing two (2) 0.625" diameter x 9.00" long grade 8 bolts and two (2) heavy duty springs.

BODY AND COMPARTMENT FABRICATION - 3/16" ALUMINUM

All compartment panels and body side sheets will be fabricated entirely of 0.1875" 5052-H32 aluminum.

COMPARTMENT CONSTRUCTION

The compartments shall be completely formed of 0.1875" aluminum. The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.

COMPARTMENT FLOORS

Compartment floors will be welded to the compartment walls and have a sweep out design for easy cleaning.

ACCESS PANELS

Removable access panels will be provided to access fuel tank sender, electrical junction compartment and rear body mounts.

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Protective panels will be located in the rear compartments providing access to the lights and associated wiring. The covers will also serve as protective covers to prevent inadvertent damage to lights or wiring from tools or equipment located in the compartment.

COMPARTMENT LOUVERS

Ventilation between compartments to atmosphere shall be provided and located to avoid water entry into compartments.

COMPARTMENT SHELF TRACKS - ALUMINUM

All side body compartments be furnished with adjustable shelving track installed. The shelving track shall include a minimum of four (4) aluminum Uni-strut style channel tracks, mounted vertically on compartment side walls or vertical partitions.

FENDER PANELS

A single piece wheel well panel made of 0.1875" aluminum sheet shall be installed with no sharp edges to cut or damage cleaning equipment used in the wheel well area. The wheel well design shall provide for maximum wheel jounce and for use of tire chains without contacting the fender panel.

REAR WHEEL WELL LINERS

The rear wheel wells shall be equipped with replaceable circular liners to prevent road debris damage to adjacent side compartments. The liners shall be made from a single circular panel of 0.125" smooth aluminum and shall be the full depth of the side compartments. They shall be bolted in place and shall feature end flange bottom drains.

REAR BODY FENDERETTES

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

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BODY FRONT WALL OVERLAY

The front face of the body will be overlaid with a full height aluminum tread plate protection panel.

BODY SIDE RUB RAILS

Replaceable extruded aluminum channel rub rails, 2.00" high x 0.75" deep x 0.125" wall, shall be provided below the lower side compartments. Each rub rail shall have a black rubber bumper strip and mounting stand-off spacers. All rub rail ends shall be angle cut, back toward the body to eliminate the possibility of snagging crew clothing or equipment.

TOW HOOKS – REAR

Two (2) painted tow eyes will be furnished on the rear of the vehicle. The tow eyes will be made from plate steel and will be bolted directly to the chassis frame rails with grade 8 bolts and will extend below the body.

BODY LENGTH DIMENSION

The body shall be 218.00" long.

BODY HEIGHT DIMENSIONS

The body shall be 106.00" tall with the upper 20.50" reserved for horizontal storage compartments.

The vertical compartment dimensions shall be as follows:

<u>AHEAD OF REAR AXLE</u>	<u>DIMENSION</u>
A. Overall Compartment height:	81.00
B. Compartment height above subframe:	62.00"
C. Compartment height below subframe:	17.1875"
D. Vertical Door Opening:	73.50"
 <u>ABOVE REAR AXLE</u>	 <u>DIMENSION</u>
A. Overall Compartment height:	51.625

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B. Vertical Door Opening: 43.50"

	<u>AHEAD OF REAR AXLE</u>	<u>DIMENSION</u>
A.	Overall Compartment height:	81.00
B.	Vertical Door Opening:	73.50"

	<u>REAR OF BODY</u>	<u>DIMENSION</u>
A.	Overall Compartment height:	81.00
B.	Compartment height above subframe:	62.00"
C.	Compartment height below subframe:	17.1875"
D.	Vertical Door Opening:	73.50"

BODY WIDTH DIMENSIONS

The body shall be 100.00" wide, and 102.00" wide at the rub rails. Interior compartment depth dimensions shall be approximately:

	<u>SIDE COMPARTMENTS</u>	<u>DIMENSION</u>
E.	Transverse above subframe:	96.00"
F.	Compartment depth below subframe:	24.625"

	<u>REAR COMPARTMENT</u>	<u>DIMENSION</u>
A.	Above subframe:	45.00"
B.	Compartment depth below subframe:	29.50"

ROLL-UP DOORS

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

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

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

COMPARTMENT DOOR FINISH

The roll up doors shall have a satin finish.

COMPARTMENT LIGHT(S)

Two (2) full height Luma Bar LED strip light(s) shall be installed inside each of the body compartments.

COMPARTMENT LIGHT ACTIVATION

Each compartment light shall be controlled by a magnetic "On-Off" switch located on each compartment door.

DOOR LOCKS- KEYED, MANUAL

Each roll-up door shall have a cylindrical lock installed by the roll-up door manufacturer.

The lock key type shall be: J-236

DOOR PULL STRAP

One (1) Flex-HD pull-down strap shall be installed on each roll-up door. The strap shall be fastened to the lower left inside door sill of each compartment.

DRIP PAN W/ DRAIN

Each door shall be supplied with a drip pan for protection. A drain hose will be attached to each drip pan and shall be routed below the body.

SEVEN (7) UPPER BODY COMPARTMENTS

There shall be seven (7) compartments parallel to the sides of the body, four (4) on the left hand side and three (3) on the right hand side. The left hand side

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compartments shall be 46.00" long x 24.00" wide x 20.00" deep. The right hand side compartments shall be 47.00" long x 24.00" wide x 20.00" deep. The side compartments shall be open under each door sill to allow for long equipment. Each compartment shall have a lift-up type compartment door hinged on the outboard side. The doors shall be fabricated from 0.1875" aluminum tread plate, and have two (2) pneumatic type cylinders, one (1) at each end to hold the door in both the opened and closed positions.

LADDER STORAGE -LEFT HAND SIDE UPPER COMPARTMENTS

There shall be storage for three (3) ground ladders in the left hand side upper compartments. The ladders shall be stored horizontally in an aluminum rack with poly scuff strips. A horizontally hinged door with two (2) SouthCo latches shall be supplied at the rear of the left hand side upper compartment to access the ladder storage.

The aluminum ladder mounting tracks shall be installed on uni-strut track and shall be removable if not required by the purchaser.

The ladder storage shall have capacity for the following:

- One (1) Alco-Lite aluminum 24 ft. two-section extension ladder, model # PEL-24.
- One (1) Alco-Lite aluminum 14 ft. two-section extension ladder, model # PEL-14.
- One (1) Alco-Lite aluminum 14 ft roof ladder, model # PRL-14.

FOLDING LADDER MOUNT

- One set of Zico model # FLBA folding ladder mounting brackets shall be supplied and mounted in the walkway.

COMPARTMENT LIGHT(S)

Each compartment shall have one (1) 18.00" OnScene Solutions Access LED strip light mounted horizontally.

AUTOMATIC COMPARTMENT DOOR LIGHT SWITCH

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Each light and NFPA door ajar system shall be automatically activated by an individual switch per compartment.

LIGHT TOWER/ GENERATOR TOP DUNNAGE AREA

The light tower & hydraulic generator dunnage area shall be located at the top, front of the body, and recessed into the roof structure. The compartment shall measure approximately 62.00" long x 70.75" wide x 20.1875" deep. The floor of the dunnage area shall be fabricated from 0.125" embossed aluminum tread plate.

UPPER BODY WALKWAY

A 45.75" wide upper body walkway shall be provided at the center of body and recessed into the roof structure. The walkway shall be fabricated from 0.125" embossed aluminum tread plate.

WALKWAY LIGHTS

There shall be four (4) OnScene Solutions Rough-Service 8.00" LED lights provided to illuminate the walkway. Each light shall be mounted in an anodized aluminum housing to protect against damage from personnel or equipment.

WALKWAY LIGHT(S) ACTIVATION

The walkway light(s) shall be wired to activate with the parking brake.

WALKWAY EXTENSION STEP

There shall be an intermediate step located on the rear of the apparatus body. The step shall be approximately 8.00" deep and 54.00" wide. The intermediate step shall be fabricated from 0.1875" embossed aluminum tread plate.

ROOF ACCESS LADDER - LH SIDE

An access ladder shall be provided at the left hand side rear of the apparatus. The ladder shall be a Zico Quic-Ladder Model # RL15-2-6. The ladder shall be 15.00" wide and shall be capable of extending off the body to provide a more

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comfortable climbing angle. It shall have a two (2) rung fold-down section and a six (6) rung main ladder section. The rungs shall be constructed of cast aluminum rungs and have a flat, non-skid surface to provide traction and safety. The handrails shall be constructed of 1.25" heavy-walled aluminum tubing and shall be covered in a rough grip black powder coat.

WALKWAY LANDING AREA

A step landing area shall be provided in front of rear access ladder on the left hand side of the body. The landing area shall be approx. 17.00" deep x 25.00" wide and shall allow for an easier transition from the ladder to the upper compartment walkway.

GRAB RAIL, VERT, REAR LANDING, 15.00"

One (1) 15.00" extruded aluminum grab rail shall be vertically mounted on the upper left hand rear of the body directly above the ladder.

BUMPER STEP

The rear step shall be 12.00" deep and 100.00" wide. The outside corners will have a 45-degree chamfer to avoid injuries. The step will be bolted into place with a minimum 0.50" clearance gap between the step and rear body panel.

The step will be fabricated from .1875" embossed aluminum treadplate.

LEFT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, L1

There shall be one (1) full height compartment ahead of the rear wheels. The compartment shall be transverse and have an approximate clear door opening of 40.25" wide x 72.00" high.

The following shall be located in the upper section of the compartment:

- The floor of the transverse area will be extended outward to the interior edge of the door opening. The floor shall have a 1.50" vertical lip and a 1.50" return to increase strength.

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- There shall be vertically mounted uni-strut shelf trac for shelving installation.
- There shall be one (1) Slide-Master model AM3 600 lbs. floor mounted slide-out tray with 100% extension installed. The tray shall be fabricated from 0.1875" 3003 aluminum with a 2.00" high flange on all four sides. The tray shall be 39.00" wide x 46.00" deep.

An "A-Frame" style vertical partition shall be provided on slide-out tray base dividing the tray into left and right sides. The vertical partition shall be fabricated from 0.1875" aluminum.

The following shall be located in the lower section of the compartment:

- There shall be one 250 lbs. (1) floor mounted roll-out tray with 100% extension installed. The tray shall be fabricated from .1875" 3003 aluminum with a 3.00" high flange on all four sides. The tray shall be 38.00" wide x 23.00" deep. The tray shall incorporate locking slides actuated by an Accuride EZ-Release front drawer release lift handle at the forward face of the drawer.

LEFT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, L2

There shall be one (1) full height compartment ahead of the rear wheels. The compartment shall be transverse and have an approximate clear door opening of 40.25" wide x 72.00" high.

- The floor of the transverse area will be extended outward to the interior edge of the door opening. The floor shall have a 1.50" vertical lip and a 1.50" return to increase strength.
- There shall be vertically mounted uni-strut shelf trac for shelving installation.
- There shall be one 250 lbs. (1) floor mounted roll-out tray with 100% extension installed. The tray shall be fabricated from .1875" 3003 aluminum with a 3.00" high flange on all four sides. The tray shall be 38.00" wide x 46.00" deep. The tray shall incorporate locking slides

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actuated by an Accuride EZ-Release front drawer release lift handle at the forward face of the drawer.

- There shall be One (1) Slide-Master model MT aluminum slide-out and tilt-down tray(s) rated for 200 lbs. The tray shall be fabricated from .1875" 3003 aluminum with a 2.00" high flange on all four sides. The tray shall be 35.50 wide x 46.00" deep. It shall be located above the level of the chassis frame rails and will be vertically adjustable in height.

The following shall be located in the lower section of the compartment:

- There shall be one 250 lbs. (1) floor mounted roll-out tray with 100% extension installed. The tray shall be fabricated from .1875" 3003 aluminum with a 3.00" high flange on all four sides. The tray shall be 38.00" wide x 23.00" deep. The tray shall incorporate locking slides actuated by an Accuride EZ-Release front drawer release lift handle at the forward face of the drawer.

LEFT SIDE ABOVE WHEEL COMPARTMENT, L3

There shall be one (1) full height compartment above the rear wheels. The compartment shall be transverse and have an approximate clear door opening of 72.00" wide x 42.00" high.

The following shall be located in the compartment:

- There shall be vertically mounted uni-strut shelf trac for shelving installation.
- A Rescue Tool Storage module shall be installed in the compartment. It shall contain mounts for the following equipment:
 1. wo (2) back boards, accessible from L3/ R3.
 2. ix (6) pike poles/ New York Hooks, can be stored in L3 or R3..
 3. One (1) set of air bags with match plywood base plates, accessible from L3 only.

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4. ne (1) rescue tri-pod, accessible from L3/ R3.
 5. ne (1) stokes bucket, accessible from L3/ R3.
 6. ive (5) sheets of 4' x 5' plywood, accessible from L3/ R3.
 7. ne (1) Little Giant folding ladder, accessible from R3 only.
 8. ourteen (14) 4" x 4" x 8' long posts, accessible from L3/ R3.
- There shall be one (1) Slide-Master model AH2-D 1,600 lbs. floor mounted dual direction slide-out tray with 70% extension installed in the rear half of the compartment. The tray shall be fabricated from 0.1875" 3003 aluminum with a 2.00" high flange on all four sides. The tray shall be 34.50" wide x 96.00" deep.

An "A-Frame" style vertical partition shall be provided on slide-out tray base dividing the tray into left and right sides. The vertical partition shall be fabricated from 0.1875" aluminum.

LEFT SIDE COMPARTMENT BEHIND REAR WHEELS, L4

There shall be one (1) full height compartment behind of the rear wheels. The compartment shall have an approximate clear door opening of 42.00" wide x 72.00" high.

The following shall be located in the compartment:

- There shall be vertically mounted uni-strut shelf trac for shelving installation.
- Two (2) slide-out tool board(s) shall be furnished in the compartment. The tool board(s) shall be fabricated from PAC Dual Trac Series Z72 panels that are 5.75" wide x 1.75" thick x the depth of the tool board. The tool board panels shall have integrated grooves or channels for use the PAC Track Lok inserts model 7016. The tool board(s) shall be approximately 24.00" deep x 63.50" The board(s) shall be mounted on two (2) 250 lb.

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capacity slides with 100% full extension. The tool boards shall have a gas shock to hold them in and out.

RIGHT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, R1

There shall be one (1) full height compartment ahead of the rear wheels. There shall be one (1) full height compartment ahead of the rear wheels. The compartment shall be transverse and have an approximate clear door opening of 40.50" wide x 72.00" high.

The following shall be located in the upper section of the compartment:

- The floor of the transverse area will be extended outward to the interior edge of the door opening. The floor shall have a 1.50" vertical lip and a 1.50" return to increase strength.
- There shall be vertically mounted uni-strut shelf trac for shelving installation.
- There shall be one (1) Slide-Master model AM3 600 lbs. floor mounted slide-out tray with 100% extension installed. The tray shall be fabricated from 0.1875" 3003 aluminum with a 2.00" high flange on all four sides. The tray shall be 39.00" wide x 46.00" deep.

An "A-Frame" style vertical partition shall be provided on slide-out tray base dividing the tray into left and right sides. The vertical partition shall be fabricated from 0.1875" aluminum.

The following shall be located in the lower section of the compartment:

- There shall be one 250 lbs. (1) floor mounted roll-out tray with 100% extension installed. The tray shall be fabricated from .1875" 3003 aluminum with a 3.00" high flange on all four sides. The tray shall be 38.00" wide x 23.00" deep. The tray shall incorporate locking slides actuated by an Accuride EZ-Release front drawer release lift handle at the forward face of the drawer.

RIGHT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, R2

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There shall be one (1) full height compartment ahead of the rear wheels. There shall be one (1) full height compartment ahead of the rear wheels. The compartment shall be transverse and have an approximate clear door opening of 40.50" wide x 72.00" high.

- The floor of the transverse area will be extended outward to the interior edge of the door opening. The floor shall have a 1.50" vertical lip and a 1.50" return to increase strength.
- There shall be vertically mounted uni-strut shelf trac for shelving installation.
- There shall be one 250 lbs. (1) floor mounted roll-out tray with 100% extension installed. The tray shall be fabricated from .1875" 3003 aluminum with a 3.00" high flange on all four sides. The tray shall be 38.00" wide x 46.00" deep. The tray shall incorporate locking slides actuated by an Accuride EZ-Release front drawer release lift handle at the forward face of the drawer.
- There shall be One (1) Slide-Master model MT aluminum slide-out and tilt-down tray(s) rated for 200 lbs. The tray shall be fabricated from .1875" 3003 aluminum with a 2.00" high flange on all four sides. The tray shall be 35.50 wide x 46.00" deep. It shall be located above the level of the chassis frame rails and will be vertically adjustable in height.

The following shall be located in the lower section of the compartment:

- There shall be one 250 lbs. (1) floor mounted roll-out tray with 100% extension installed. The tray shall be fabricated from .1875" 3003 aluminum with a 3.00" high flange on all four sides. The tray shall be 38.00" wide x 23.00" deep. The tray shall incorporate locking slides actuated by an Accuride EZ-Release front drawer release lift handle at the forward face of the drawer.

RIGHT SIDE ABOVE WHEEL COMPARTMENT, R3

There shall be one (1) full height compartment above the rear wheels. The compartment shall be transverse and have an approximate clear door opening of 72.00" wide x 42.00" high.

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The following shall be located in the compartment:

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

RIGHT SIDE COMPARTMENT BEHIND REAR WHEELS, R4

There shall be one (1) full height compartment behind of the rear wheels. The compartment shall have an approximate clear door opening of 42.00" wide x 72.00" high.

The following shall be located in the compartment:

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

REAR CENTER COMPARTMENT, CR1

There shall be one (1) full height compartment at the rear of the body. The compartment shall have an approximate clear door opening of 44.00" wide x 72.00" high.

The following shall be located in the compartment:

- There shall be vertically mounted uni-strut shelf trac for shelving installation.
- There shall be one (1) Slide-Master model AM3 600 lbs. floor mounted slide-out tray with 100% extension installed. The tray shall be fabricated from 0.1875" 3003 aluminum with a 2.00" high flange on all four sides. The tray shall be 33.00" wide x 29.00" deep.
- There shall be One (1) Slide-Master model MT aluminum slide-out and tilt-down tray(s) rated for 200 lbs. The tray shall be fabricated from .1875" 3003 aluminum with a 2.00" high flange on all four sides. The tray shall be 39.00" wide x 29.00" deep. It shall be located above the level of the chassis frame rails and will be vertically adjustable in height.

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ADJUSTABLE SHELVING

Compartment shelving shall be constructed of 0.1875" brush finish aluminum with a 2.00" upward bend at front and rear, and side supports. Shelving shall be vertically adjustable with spring nuts in aluminum strut channel.

Adjustable shelves shall be located as follows:

ROLL-OUT AWNING LEFT HAND SIDE

A Carefree Mirage, 110 Volt AC powered, lateral arm acrylic patio awning with Direct Response Electronics shall be installed on the left hand side of the body. The Direct Response Electronics includes easy-to-use controls and a Motion Detection System. The awning shall have a system to detect canopy motion, the most important element to prevent wind/weather damage. The awning shall automatically retract when the canopy reaches a certain level of movement, you determine the movement level on the control panel.

Control shall be located in compartment L1.

The awning shall activate the door ajar warning system in the cab when not in the stowed position.

The awning shall be 17.00' wide with a 10.00' projection, (size refers to box length; actual fabric length will be 8.00" shorter.)

AWNING FABRIC

The awning fabric shall be fire resistant red in color.

AWNING HOUSING COLOR

The awning housing shall be painted job color.

ROLL-OUT AWNING RIGHT HAND SIDE

A Carefree Mirage, 110 Volt AC powered, lateral arm acrylic patio awning with Direct Response Electronics shall be installed on the right hand side of the body.

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The Direct Response Electronics includes easy-to-use controls and a Motion Detection System. The awning shall have a system to detect canopy motion, the most important element to prevent wind/weather damage . The awning shall automatically retract when the canopy reaches a certain level of movement, you determine the movement level on the control panel.

Control shall be located in compartment R1.

The awning shall activate the door ajar warning system in the cab when not in the stowed position.

The 110V motor shall be completely sealed and UL approved. The awning pitch shall be adjusted to up to 30.00"

The awning shall be 17.00' wide with a 10.00' projection, (size refers to box length; actual fabric length will be 8.00" shorter.)

AWNING FABRIC

The awning fabric shall be fire resistant red in color.

AWNING HOUSING COLOR

The awning housing shall be painted job color.

NFPA 1900 CERTIFIED 12 VOLT ELECTRICAL SYSTEM

The 12 V apparatus body electrical system shall be provided and be in compliance with NFPA 1900 testing and certification procedures as follows:

Tests shall be performed when the air temperature is between 0°F and 110°F. The three tests defined in NFPA shall be performed in the order in which they appear. Before each test, the batteries shall be fully charged until the voltage stabilizes at the voltage regulator set point and the lowest charge current is maintained for 10 minutes. Failure of any of these tests shall require a repeat of the sequence.

RESERVE CAPACITY TEST

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The engine shall be started and kept running until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged.

The engine shall be shut off, and the minimum continuous electrical load shall be activated for 10 minutes.

All electrical loads shall be turned off prior to attempting to restart the engine. Failure to restart the engine shall be considered a test failure of the battery system.

ALTERNATOR PERFORMANCE TEST AT IDLE

The minimum continuous electrical load shall be activated with the engine running at idle speed.

The engine temperature shall be stabilized at normal operating temperature.

The battery system shall be tested to detect the presence of battery discharge current. The detection of battery discharge current shall be considered a test failure.

ALTERNATOR PERFORMANCE TEST AT FULL LOAD

The total continuous electrical load shall be activated with the engine running up to the engine manufacturer's governed speed.

The test duration shall be a minimum of 2 hours.

Activation of the load management system shall be permitted during this test.

An alarm sounded by excessive battery discharge, as detected by the warning system_or a system voltage of less than 11.8 V for more than 120 seconds shall be considered a test failure.

LOW VOLTAGE ALARM TEST

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The following test shall be started with the engine off and the battery voltage at or above 12 V for a 12 V nominal system.

With the engine shut off, the total continuous electrical load shall be activated and shall continue to be applied until the excessive battery discharge alarm activates. The battery voltage shall be measured at the battery terminals.

The test shall be considered a failure if the alarm does not sound in less than 140 seconds after the voltage drops to 11.70 V for a 12 V nominal system.

The battery system shall then be able to restart the engine. Failure to restart the engine shall be considered a test failure.

CERTIFICATION DOCUMENTATION

At the time of delivery, the OEM shall provide the following documentation:

1. Documentation of the electrical system performance tests.
2. A written electrical load analysis, including the following:
 - ◆ The nameplate rating of the alternator.
 - ◆ The alternator rating under the conditions specified above.
 - ◆ Each of the component loads specified that make up the minimum continuous electrical load.
 - ◆ Additional electrical loads that, when added to the minimum continuous electrical load, determine the total continuous electrical load.
 - ◆ Each individual intermittent electrical load.

LOW VOLTAGE BATTERY CHARGER/ CONDITIONER TEST

If the apparatus is equipped with a low voltage battery charger/conditioner, it shall be tested as follows:

9. Low voltage batteries are fully charged to at least 12.66 V for a 12 V nominal system with the engine off and the shoreline disconnected.

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10. Connect a DC ammeter to each output of the low voltage battery charger/conditioner.
11. Connect the shoreline to power the low voltage battery charger/conditioner.
12. Perform the test with the engine off and the shoreline power cord connected.
13. Add or apply loads to each charger output so that the output current is between 80 percent and 100 percent of the rated output current for that output.
14. Record the low voltage battery voltage and output current for each charger output at the beginning of the test and every 20 minutes.
15. Maintain the load for 60 minutes.
16. Record the low voltage battery voltage and output current for each charger output at the end of the test with the load still applied and the charger/conditioner powered.
17. Remove any added load.

The test shall be considered a failure if the charger/conditioner does not maintain an output voltage of at least 12.54 V for a 12 V nominal system, or if it cannot maintain at least 80 percent of the rated output current for the duration of the test.

12 VOLT ELECTRICAL SYSTEM

The electrical system shall include all panels, electrical components, switches and relays, wiring harnesses and other electrical components. The electrical equipment installed by the apparatus manufacturer shall conform to current automotive electrical system standards, the latest Federal DOT standards, and the requirements of the applicable NFPA standards.

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All wiring shall be stranded copper or copper alloy conductors of a gauge rated to carry 125 percent of the maximum current for the protected circuit. Voltage drops in all wiring from the power source to the using device shall not exceed 10 percent. The wiring and wiring harness and insulation shall be in conformance to applicable SAE and NFPA standards. The wiring harness shall conform to SAE J-1128 with GXL temperature properties. All exposed wiring shall be protected in a loom with a minimum 289 degree Fahrenheit rating. All wiring looms shall be properly supported and attached to body members. The electrical conductors shall be constructed in accordance with applicable SAE standards, except when good engineering practice requires special construction.

The wiring connections and terminations shall use a method that provides a positive mechanical and electrical connection and shall be installed in accordance with the device manufacturer's instructions. Electrical connections shall be with mechanical type fasteners and large rubber grommets where wiring passes through metal panels.

There shall be no exposed electrical cabling, harnesses, or terminal connections located in compartments, unless they are enclosed in a junction box or covered with a removable electrical panel. The wiring shall be secured in place and protected against heat, liquid contaminants and damage. Wiring shall be uniquely identified every six (6.00") by color coding or permanent marking with a circuit function code.

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

The electrical system shall include the following:

- Electrical terminals in weather exposed areas shall have a non-conductive grease or spray applied. A corrosion preventative

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compound shall be applicable to all terminal plugs located outside of the cab or body.

- The electrical wiring shall be harnessed or be placed in a protective loom.
- Holes made in the roof shall be caulked with silicone. Large fender washers shall be used when fastening equipment to the underside of the cab roof.
- Any electrical component that is installed in an exposed area shall be mounted in a manner that will not allow moisture to accumulate in it.
- All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.

ROCKER SWITCHES

The warning lights and electrical functions shall be controlled by switch panels as detailed in the chassis specification.

CAB GROUND LIGHTS

The cab ground lights shall be supplied with the custom chassis.

FRONT OF BODY GROUND LIGHTS

Four (4) TecNiq model E10-WS00-1 LED ground lights with outward facing angle brackets shall be installed under the front of the body. Two (2) lights shall be located on the driver side and two (2) lights shall be located on the officer side of the apparatus.

REAR OF BODY GROUND LIGHTS

Two (2) TecNiq model E10-WS00-1 LED ground lights with outward facing angle brackets shall be installed under the rear of the body. One (1) light shall be located on the driver side and one (1) light shall be located on the officer side of the apparatus.

REAR STEP GROUND LIGHTS

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Two (2) TecNiq model E10-WS00-1 LED ground lights with outward facing angle brackets shall be installed under the rear step of the apparatus, one (1) each side.

GROUND LIGHT SWITCHING

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

HAZARD LIGHT

The hazard/ door ajar light shall be supplied with the custom chassis.

REAR DIRECTIONALS

Rear directional lighting shall be supplied as follows:

Two (2) Whelen model M62BTTC LED brake/tail lights shall be installed on the rear of the body. Each light shall have a clear lens.

Two (2) Whelen model M62T Amber LED turn signal lights shall be installed on the rear of the body. Each light shall have an amber lens.

Two (2) Whelen model M62BU LED reverse lights shall be installed on the rear of the body.

HOUSINGS FOR DIRECTIONALS

Each light shall be mounted in a Whelen model M6FC Chrome Flange.

Two (2) amber LED side marker and turn lights shall be provided on the apparatus lower side, forward of rear axle, one (1) each side if the apparatus is 30 feet long or longer.

MARKER LIGHTS

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

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Two (2) Truck-Lite# 98034Y amber reflectors shall be provided on the apparatus body lower side, as far forward and low as practical, one (1) each side.

Four (4) Truck-Lite# 98034R red reflectors shall be provided on the apparatus rear, one (1) each side and two (2) on the rear.

LICENSE PLATE BRACKET

There shall be a license plate bracket mounted on the rear of the apparatus. A clear LED light shall be incorporated into the bracket

SIDE FACING UPPER CAB SCENE LIGHTS

One (1) pair of LED scene lights shall be supplied with the custom chassis.

SIDE FACING UPPER FRONT BODY SCENE LIGHTS

One (1) pair of Whelen PCPSM1C Pioneer single surface mount LED scene lights shall be installed. Each of the lightheads shall generate 9,504 lumens. The lights shall be located on the left and right sides of the upper front portion of the apparatus body. Each light shall be supplied and installed with a chrome bezel.

SIDE FACING UPPER REAR BODY SCENE LIGHTS

One (1) pair of Whelen PCPSM1C Pioneer single surface mount LED scene lights shall be installed. Each of the lightheads shall generate 9,504 lumens. The lights shall be located on the left and right sides of the upper rear portion of the apparatus body. Each light shall be supplied and installed with a chrome bezel.

REAR FACING UPPER BODY SCENE LIGHTS

One (1) pair of Whelen M92SLC EZ Series LED scene lights shall be installed. The lights shall be located on the rear of the apparatus body, one (1) each side. Each light shall be supplied and installed with a chrome bezel.

SCENE LIGHT ACTIVATION

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The scene lights shall be activated by individual rocker switches located in the switch panel, one (1) for each side of the apparatus.

SCENE LIGHT SWITCHING

The rear scene lights shall activate automatically upon placing the transmission into reverse.

BACK-UP CAMERA INSTALLATION

The chassis supplied back-up camera shall be installed at the rear of the body.

WARNING LIGHT FLASH PATTERN

All of the perimeter warning lights shall be set to the default NFPA flash pattern as provided by the warning light manufacturer.

HEADLIGHT FLASHER

An alternating high beam headlight flashing system shall be supplied with the custom chassis.

LIGHT BAR

The light bar shall be supplied with the custom chassis.

SIDE FACING UPPER FRONT BODY WARNING LIGHTS

One (1) pair of Whelen model M9 LED warning lights shall be installed, one (1) each side of the upper front portion of the apparatus body.

The driver side warning light shall be a Whelen Model M9RC red LED with clear lens.

The officer side warning light shall be a Whelen Model M9RC red LED with clear lens.

Each light shall be mounted with a Whelen Model M9FC chrome flange.

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SIDE FACING UPPER REAR BODY WARNING LIGHTS

One (1) pair of Whelen model M9 LED warning lights shall be installed, one (1) each side of the upper rear portion of the apparatus body.

The driver side warning light shall be a Whelen Model M9RC red LED with clear lens.

The officer side warning light shall be a Whelen Model M9RC red LED with clear lens.

Each light shall be mounted with a Whelen Model M9FC chrome flange.

UPPER REAR WARNING LIGHTS

One (1) pair of Whelen model M9 LED warning lights shall be installed, one (1) each side of the upper rear of the apparatus body.

The driver side warning light shall be a Whelen Model M9RC red LED with clear lens.

The officer side warning light shall be a Whelen Model M9RC red LED with clear lens.

Each light shall be mounted with a Whelen Model M9FC chrome flange.

LOWER FRONT WARNING LIGHTS

The lower front warning lights shall be supplied with the custom chassis.

LOWER INTERSECTION WARNING LIGHTS

The lower intersection warning lights shall be supplied with the custom chassis.

LOWER CAB SIDE WARNING LIGHTS

The lower cab side warning lights shall be supplied with the custom chassis.

LOWER MID-BODY WARNING LIGHTS

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

The driver side warning light shall be a Whelen Model M6RC red Super-LED with clear lens.

The officer side warning light shall be a Whelen Model M6RC red Super-LED with clear lens.

Each light shall be mounted with a Whelen Model M6FC chrome flange.

LOWER REAR WARNING LIGHTS

One (1) pair of Whelen model M9 Series LED warning lights shall be installed, one (1) each side of the lower rear of the apparatus body.

The driver side warning light shall be a Whelen Model M9RC red LED with clear lens.

The officer side warning light shall be a Whelen Model M9RC red LED with clear lens.

Each light shall be mounted with a Whelen Model M9FC chrome flange.

ELECTRIC SIREN AND CONTROL

The electric siren shall be supplied with the custom chassis.

ELECTRONIC SIREN SPEAKER

The electronic siren speaker(s) shall be supplied with the custom chassis.

FOUR BOTTLE, 6000 PSI CASCADE SYSTEM

The system shall be comprised of four (4) 6000 psi, DOT/UN approved, 510 cu. ft. cylinders.

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Each tank is to be equipped with a soft seat valve, complete with appropriate approved safety relief device. A dome-type protective cap is to be supplied with each tank to protect the valve during shipping or transportation.

CASCADE BOTTLE LOCATION

The cascade bottles shall be mounted in compartment CR1.

SPACE SAVER FILL STATION

One (1) Resolve Specialty Space Saver model 100A mobile filling station(s) designed for SCBA and SCUBA cylinders shall be provided. The fill station shall be capable of simultaneously filling (2) cylinders. The unit comes complete with safety interlocks, safety gauges, charge and bleed valves. and a pressure regulator for automatic SCBA filling. The fill enclosure shall meet NFPA 1900 testing certification, and shall be approx. 42.50" high (53.00" with door open) x 13.00" wide x 23.00" deep and weigh 405 lbs.

The Resolve Space Saver fill station shall be provided with an American Airwork's four (4) bank, manual control cascade air fill control panel.

FILL STATION LOCATION

The fill station and control panel shall be mounted in compartment R4.

SCBA BOTTLE STORAGE

One (1) SCBA cylinder storage module shall be supplied. It shall be capable of holding eighteen (18) SCBA cylinders up to 7.625" diameter.

The storage module shall be located in compartment R4.

NFPA 1900 120/240 VOLT POWER SOURCE TESTING

Electrical System Testing:

The wiring and permanently connected devices and equipment shall be subjected to a dielectric voltage withstand test of 900 volts for one minute. The test shall be conducted between live parts and the neutral conductor, and

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between live parts and the vehicle frame with any switches in the circuit closed position. This test shall be conducted after all body work has been completed.

Electrical polarity verification shall be made of all permanently wired equipment and receptacles to determine that connections have been properly made.

NFPA Operational Test

The apparatus manufacturer shall perform the following operational test and shall certify that the power source and any devices that are attached to the line voltage electrical system are properly connected and in working order:

The prime mover shall be started from a cold start condition and the line voltage electrical system loaded to 100 percent of the nameplate rating. The power source shall be operated at 100 percent of its nameplate voltage for a minimum of 2 hours unless the system meets category certification as defined in NFPA 1900.

120/240 VOLT ELECTRICAL EQUIPMENT INSTALLATION

All 120/240 electrical equipment shall be installed by the apparatus manufacturer. This shall include any item related to the system, including, but not limited to the following:

- Generator
- All scene lighting accessories.
- All outlets, and cord reels (where applicable).
- Breaker panel.

HYDRAULIC GENERATOR

One (1) Smart Power Systems 10kW hydraulic generator shall be installed on the rescue unit. The hydraulic pump shall be driven by the chassis transmission mounted power take off (PTO). The generator is designed specifically for mounting on top of the vehicle

Digital Meter Display Gauge

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A digital meter display shall be installed and it shall be in compliance with NFPA 1900. The CCC shall be an interactive operator control center, equipped with Smart Touch solid state buttons, with super bright red LED displays for:

- Voltage (VAC)
- Frequency (Hz)
- Dual Current Display (Amps)
- System Hydraulic Pressure (PSI)
- Running Time Display (Hours)
- Service Reminders
- Operator Warnings
- System Faults
- Prognostics & Diagnostics

The CCC shall be permanently mounted at an operator's panel.

Generator Operation

The output of the generator shall be controlled by an integral, patented, solid state Electronic Control Unit. The ECU shall be connected directly to the NFPA 1900 required digital instrumentation display.

The generator shall be operable in the stationary mode and/or when driving, utilizing the standard soft start system for engagement at any speed.

The generator shall be engaged by a lighted control switch.

Ratings and Capacity

Rating:	12,000 watts peak 10,000 watts continuous
Volts:	120/240 volts
Phase:	Single, 4 wire
Frequency:	60 Hz

Testing

The generator shall be tested in accordance with all current NFPA 1900.

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All ratings and capacities shall be derived utilizing current NFPA 1900 test parameters.

Warranty

The entire generator system, including the Command and Control Center digital meter display, shall be covered by a standard 6 year/1,000 hour fully transferable warranty from the generator manufacturer. The warranty shall commence the date the product is shipped.

GENERATOR BONDING

A minimum of four (4) 16.00" x 2 gauge copper ground straps shall be bolted to body sub-frame and chassis sub-frame for proper bonding of high voltage system.

CIRCUIT BREAKER BOX

The generator output line conductors will be wired from the generator output connections to a Square D, model #QO112L125PG breaker panel. The breaker panel will be equipped with a properly sized main breaker using two (2) of the twelve (12) spaces which leaves a total of ten (10) available spaces.

LIGHT TOWER

WILL-BURT NIGHT SCAN CHIEF LIGHT TOWER

A Will-Burt Night Scan Powerlite 3.0-600-2 light tower shall be provided.

The horizontal surface mounted tower shall be raised electrically and pneumatically.

Design and Construction

The tower shall be a series of graduated extruded aluminum tubes that nest one inside another. The tower shall have an extended height of approximately 10 ft. above the mounting location and a stowed height of approximately 11.375" above the mounting surface. The tower shall be approximately 44.5" wide by 65.813" in length. The tower shall be designed to sustain the intended top load

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with a 125 percent safety factor and shall exceed NFPA requirements of a minimum 50 mph wind when in a fully raised and unguyed position.

The tower tubular sections shall be constructed of high strength, heat-treated 6061-T6 aluminum tubes and collars. Each tube shall be protected by low friction synthetic collars for smooth operation and long life. Bumpers shall be designed to reduce shock on extension and retraction. All exterior surfaces shall be anodized for long life and fasteners shall be stainless steel for corrosion resistance.

Nesting System

The tower shall have an “auto-stow” function. A double click of the mast down button will stow, retract, and shut power off to the unit. An integrated saddle assembly with synthetic, non-marring rests shall be provided for the tower and flood light assembly in the nested position.

Floodlight Rotation and Tilt Operation

The tower shall be equipped with a Will Burt Model RCP (remote control positioner) to control the rotation and direction of the lights in a manner that provides 360° of light coverage. The remote-control positioner unit shall be equipped with three (3) gear motors; one for rotation and two for individual positioning of each floodlight bank (one (1) motor for left side tilting and one (1) motor for right side tilting.) This feature shall be designed so that the lighting may be directed in two separate locations *equally* and *simultaneously* for enhanced safety and functionality. The positioner shall also rotate the floodlight assembly from zero to 350 degrees and tilt the floodlight assembly from 0 to 346 degrees.

Hand-held Wired Remote Control

A safety yellow in color for high visibility, handheld remote-control pendant, connected to a quick-disconnect, 25 ft. coiled cord shall be provided to control the tower. All functions of the tower shall be accessible through this remote-control including elevating with “auto-up” ability, lowering with “auto-stow” ability, rotation and tilting of the floodlight assembly and floodlight switching. An auxiliary power button shall also be included to control optional equipment such

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as strobe lights or a camera that is mounted to the mast. A red emergency stop button shall be integrated into the handheld control for added safety or shall be located on the junction box. Each button of the controller shall have a corresponding LED light that provides operational feedback. An LED display that includes alphanumeric feedback shall be located in the center of the controller. This display shall provide operational feedback and error codes if they occur.

Pneumatic Controls

The pneumatic controls to raise and lower the tower shall include an air regulator and solenoid valves. Lights will be operational within approximately 12 seconds from elevation initiation. The tower shall be able to be fully elevated in approximately 60 seconds. In the event of malfunction of the elevating system while the tower is in operation or being deployed, a method of limiting the rate of descent shall be provided to prevent injury to personnel or damage to the equipment.

Two (2) allen keys as well as directions are included under the cover to fold the mast into the saddle if manual stowage of mast is required.

The air supply for pneumatic operation of the tower shall be from an external source with supplied air regulator and dual solenoids. The installer shall provide piping, shut-off valve, pressure protection valve, air compressor, auxiliary air tank(s) and additional required equipment. The complete air system shall be installed in conformance to applicable NFPA and FVMSS brake standards.

Electrical Installation

The wiring harness for the floodlights, accessories, and remote-control positioner shall be internally routed through telescoping aluminum tubing with a highly flexible coil cord.

Installer supplied 12-volt electrical wiring shall be provided with electrical connections at the tower assembly in conjunction with appropriate electrical power for the floodlights. The installer as required by manufacturer's installation guidelines shall provide appropriate wiring from the circuit breaker panel for connection to the tower. The electric power to the tower and light units shall automatically disconnect whenever the tower is in the nested position.

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The tower operation area shall be illuminated automatically by a look up light whenever the tower is in operation. Any upward movement of the tower from the nested position shall energize a red warning light in the cab and a secondary light located at the tower control area. In addition, the installer shall provide parking brake interlocks and other equipment as required by applicable NFPA standards.

Floodlight System

Two (2) Will-Burt WB 300 Scene Lights model WB318-300-WB3 shall be provided. Each lamp head shall operate between 100-277 volts AC, draw 300 watts, and generate 45,000 raw lumens of light for a total of 90,000 lumens. The lamp head shall have a 40° beam angle. The lamp head shall have an IP Rating of IP67. Each lamp head shall have four (4) individual replaceable modules.

Warranty

The tower assembly shall carry a two (2) year parts and labor warranty. Exact provisions of such warranty shall be provided with the proposal and at time of delivery of product.

Labeling and NFPA Compliance

Essential operating instructions and warning labels shall be provided in compliance to applicable OSHA, SAE, and NFPA standards. Appropriate labels on the "hazards of electrocution" associated with the operation of a light tower shall be installed in the appropriate areas.

A label shall be provided at the operator's position by the installer with the following information:

1. Extended height of the tower from the ground.
2. Bulb replacement data.

The tower and installation shall be in full compliance to applicable sections of the current NFPA 1900 Standard.

Testing and Quality Assurance

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The tower manufacturer shall be ISO 9001:2015 certified. In addition, quality control and manufacturer testing shall be completed prior to shipment of the tower. The final installer shall test the operation of the tower for a minimum of 2 hours at full load, with testing documentation provided upon delivery.

PAINT, STRIPING, AND LETTERING SECTION

CHASSIS PAINT

The chassis shall be painted by the OEM Chassis Manufacturer.

PAINT PROCESS

The body exterior shall have no mounted components prior to painting to assure full coverage of treatments. Compartment doors (if applicable) will be painted separately to assure proper paint coverage on body, doorjambes and door edges. All surfaces shall be sanded to remove all burrs and imperfections before etching and treatment.

The body shall be totally removed from the chassis during the painting process to insure the entire unit is covered.

PPG wax & grease solvent shall be used to clean and prep the body surface prior to any sanding. The surface shall then be rinsed with freshwater. This step removes wax, grease and other surface contaminants, thus leaving a bright, clean and conditioned surface.

PAINT FINISH

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

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

After bake and ample cool down time, the coated surface shall be sanded using 3M 1000, 1200, and or 1500 grit sandpaper to remove surface defects. In the

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final step, the surface shall be buffed with 3M Super-duty compound to add extra shine to coated surface. No more than .5 mil shall be removed in this process.

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

ANTI-CORROSION PROTECTION

Where dissimilar metals must be joined, overlaid, share perforations or otherwise come in contact with each other to achieve construction, performance or aesthetic requirements, such items shall be separated by a continuous contact, nonconductive coating or film to prevent or otherwise mitigate the effects of electrolysis. Only stainless-steel hardware and fasteners shall be used in the construction of the apparatus. Where stainless steel fasteners pass through an aluminum component, the fastener contact surfaces, including the head, washer and nut shall be coated with ECK anti-corrosion material.

UNDERCOATING

The body underside, including the sub-frame and the inside of the wheel wells, NOT THE WHEEL WELL LINERS, shall be thoroughly coated with SWT commercial automotive undercoat and sound deadening material to protect the body module against corrosion. The coating shall be black and shall be tested to ASTM B117 Salt Spray test for 1,000 hours at 10-mils.

COMPARTMENT INTERIOR FINISH

The interior of the compartments shall be finish painted with Multispec #344767 Gray Stone scuff resistant paint to provide a protective application over all of the compartment interior surfaces.

WHEEL RIMS

The chassis wheels shall be as furnished by the chassis OEM. No additional finishes shall be provided by apparatus manufacturer.

REFLECTIVE LETTERING - PURCHASER SUPPLIED

Reflective lettering shall be installed by the purchaser.

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REAR CHEVRON STRIPING

At least 50% of the rear facing vertical surface shall be covered with alternating strips of reflective striping.

Each stripe shall be a minimum of 6.00" in width and shall be applied to the apparatus at 45° angle.

RED & FLUORESCENT YELLOW-GREEN ORALITE V98

The Oralite V98 reflective tape shall be #12 red and #112 fluorescent yellow-green in color.

LOOSE EQUIPMENT

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

ONE YEAR APPARATUS WARRANTY

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

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

APPARATUS BODY WARRANTY, TEN YEAR

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

PAINT WARRANTY, FIVE YEAR

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

APPARATUS ELECTRICAL WARRANTY, TWO YEAR

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