

ANN ARBOR FIRE DEPARTMENT

PROPOSED APPARATUS

Spencer Manufacturing, Inc. of South Haven, MI will furnish the **Ann Arbor Fire Department** with the apparatus described in your detailed specifications including all boilerplate items. Any notes, clarifications or exceptions are clearly outlined in our proposal. A company history is attached for your review.

The proposed Spencer apparatus will be constructed at our factory in South Haven, MI. Pre construction and inspection trips outlined will be provided including provisions for periodic un-scheduled inspections described in the boilerplate

Warranty and continuing service will be provided by Spencer Manufacturing via road service or at our factory in South Haven, MI.

Additional service can or will be provided by our dealer network and/or approved service centers.

LIABILITY

Spencer Manufacturing shall defend any and all suits and assume all liability for use of any patented processes, devices or articles forming a part of the apparatus or any appliance under the contract.

DESIGN

The apparatus combines our time-tested design and construction standards with full consideration given the scope of your specification. Please see our proposal and drawing for full details.

ROAD TEST

The apparatus is road-tested at Spencer Manufacturing, Inc., at completion and will meet the standards set forth in NFPA 1901, current edition.

NFPA REQUIRED ITEMS

The purchaser shall be responsible for providing all equipment items required by NFPA pamphlet that are not otherwise indicated or addressed in these specifications.

COOPERATIVE PURCHASING

The apparatus manufacturer shall honor the specifications and pricing of this proposed build for other agencies that wish to purchase similar apparatus through cooperative purchasing.

Changes of chassis, year model, equipment and/or additional change orders shall be reflected in the new contract.

CONSTRUCTION DRAWINGS

A basic drawing will be included with the proposal. Upon award a fully detailed drawing will be supplied to the Fire Department. The drawing shall be signed and returned to the manufacturer and kept on file for future reference.

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PRECONSTRUCTION CONFERENCE

The prime contractor will have a Pre-Construction Conference prior to any manufacturing. The purpose of meeting is to finalize all construction details. The location shall be at the manufacturing facility. All expenses for transportation, lodging and meals are paid for by the department. The selling dealer and/or representative will be present at the pre-construction conference.

INSPECTION TRIPS

Inspection trips shall be covered at the expense of the department.

Timing of the trip shall be coordinated between the customer and selling dealer.

PROGRESS PICTURES

Progress pictures will be provided once body has started construction. Pictures will be provided throughout each phase of construction, paint and assembly.

DELIVERY

The completed apparatus will be delivered at the Spencer Manufacturing facility in South Haven, MI. Apparatus review will be provided by factory personnel during the acceptance process.

SEATING CAPACITY PLATE

A permanent plate indicating seat belt use and occupancy shall be installed in a visible location.

HELMET WARNING PLATE

A permanent plate stating "DO NOT WEAR HELMET" shall be installed in a visible location.

FLUID CAPACITY PLATE

A permanent plate listing all fluids and capacities shall be installed in a visible location.

OVERALL HEIGHT PLATE

A plate indicating overall height, overall length, overall width and the vehicle GVRW shall be installed in a location visible to driver.

TAILBOARD PLATE

A permanent plate shall be installed at the rear indicating "DO NOT RIDE ON REAR STEP".

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FORD COMMERCIAL CHASSIS

Selected Options

2022 Ford F350 Crew Cab chassis cab Single rears

4X4 – electric shift on the fly

179" Wheelbase 60" CA

6.2L Gasoline Engine

10 Speed Automatic Transmission

11,400# GVWR

3.73 E-locking rear axle

4 - LT275/70R18 BSW all terrain tires

Vinyl bucket seats and floor covering

Power Equipment Group – power windows, power door locks, remote entry,

Accessory delay, power exterior mirrors

Utility Light System – spotlights in exterior mirrors

4- 18" polished aluminum wheels

Skid plate for transfer case

110V/400W outlet in dash

Built in Ford trailer brake controller

Front Wheel well liners

Front splash guards

240 amp alternator

Xtra heavy duty service suspension – includes uprated front springs

XL Décor Group – Chrome front bumper- required with Aluminum Wheels

Dual batteries

Race Red Paint

Standard Equipment - Above selected options override any below standard equipment

Powertrain/Functional

6.2L gasoline V8 Engine/10 Speed Automatic Transmission

Heavy Duty Alternator -200 Amp HD

Brakes- 4 Wheel Anti-lock, Power Front/Rear Disc

Battery- 650 CCA, 78 AH

Floor covering – full length black vinyl w/insulation

Fuel Tank – 26.5 gallon mid ship w/SRW 40 Gallon Aft Axle w/DRW

Shock Absorbers Gas Heavy Duty

Stabilizer Bar- Front & Rear

Stationary Elevated Idle Control

Steering – Power w/ damper

Tow Hooks- Front

Trailer Towing Package including 7 wire harness w/relays blunt cut & labeled

Transfer Case – Electronic shift on the fly/manual locking hubs – 4x4 only

Interior

Air Conditioning

Auto lamp headlamps w/ rainlamp activated headlamps

Auxiliary power point/ ash try & cigar lighter

Cabin air particulate filter

Dome Lamp- LH/RH door activated

Grab Handles- Driver & Passenger – over rear doors on Crew Cab

Headliner-color coordinated cloth w/dual sun visors

Horns – dual electric

Outside temperature display

Instrumentation – tachometer, speedometer, oil pressure, coolant temperature,

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fuel guage, and message center
Radio- AM/FM Stereo w/digital clock & 2 speakers
Heavy duty vinyl 40/20/40 split seat w/center armrest & manual driver lumbar
Steering wheel w/telescoping column
SYNC- hands free Bluetooth connection
Wipers – Interval
Upfitter Switches – 6 in overhead console

Exterior

Glass-solar tinted
Roof Clearance Lights LED
Mirrors – Telescoping Dual Fold Away w/Spotter mirror
Wheels/Tires – 6 Steel-LT245/75R17 E BSW All Season w/DRW
4 Steel LT275/65R18E BSW All Season w/SRW

Safety/Security

Air Bags – driver & passenger
Air Bag deactivation switch, passenger side (not w/ crew cab)
Safety Belts – Dual with height adjustable shoulder harness

EXHAUST MODIFICATION

The chassis exhaust pipe and muffler shall be extended to the front of the right rear wheel and shall be pointed out. Any heat shields required to protect body and/or compartments from heat shall be installed.

CHASSIS SETUP

The chassis shall have adjustments made to insure the proper configuration for accepting pumps and/or bodies. This shall include the repositioning air tanks, frame cross members, step adjustments, etc.

CAB RUNNING BOARDS

There will be two (2) aluminum open grit running boards provided and mounted to the chassis cab. The running boards will run from the front wheel well to the back of the chassis cab, one (1) each side. The running boards shall be powder coated black.

BATTERY CONDITIONER

A Pro-Power PS1ES single battery conditioner will be installed in a dry, protected area of the apparatus. The maximum output will be 15 amperes, supplied as required to the battery system. When fully charged, the conditioner will shut down.

- The conditioner will be wired to the 120-V shore power inlet.

BATTERY CONDITIONER GAUGE

An LED waterproof charge display shall be installed adjacent to the shore power inlet.

SHORE POWER RECEPTACLE

A KUSSMAUL 20-amp super auto-eject type receptacle shall be provided. This receptacle shall eject the male shore line from the apparatus when the engine starter switch is energized. The receptacle will be provided with a weather-proof cover. An appropriate end shall be provided.

Location: Driver side fender

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WEATHER PROOF COVER

The cover for the shore power receptacle shall be Yellow in color.

BACKUP ALARM

There shall be an electronic beeper that sounds when the truck is placed in reverse. The beeper shall be heard over all engine noise to warn persons on or near the truck.

CONSOLE

A Joto console will be installed between the driver and officer seats of the commercial chassis.

The apparatus switch box, siren and other accessories will be installed on the top face of the box with recessed brackets.

Two (2) cup holders shall be included in the console.

The console exterior shall be black.

TRAILER HITCH

There shall be a Class III trailer hitch securely installed to the rear frame rails.

TRAILER WIRING

Wiring to accommodate the trailer hitch shall be installed on the apparatus. A weather resistant cover shall be included.

REAR TOW EYES

There shall be two (2) rear tow eyes below the body that will be attached to the rear of the chassis frame.

EXTRUDED ALUMINUM BODY SUPERSTRUCTURE

The body subframe is to be entirely welded, constructed of 6061-T6 extruded aluminum tubing with **minimum** dimensions of 2"x3"x1/4" and 2"x2"x3/16".

The body sides are to be constructed from 2"x3"x1/4" and 2"x2"x3/16" 6061-T6 structural aluminum tubing welded to form a continuous support matrix for the hose body and compartments. The interior components will be welded along perimeter and along each side for additional support.

The upper body side panels shall be constructed with a single sheet to present a seamless construction and maximum corrosion protection.

Fender liners will be independent from the compartment sides to provide maximum corrosion and impact protection. Wheelwell fastening support angles shall be welded and be made from 1" x 1" x 1/4" angle.

The apparatus body shall be entirely independent from the chassis frame. It is to be attached to the frame over 1/2" x 3" 60# rubber pads running the full length of body. The unit is to be designed so as to be removable from the chassis in the event of future chassis replacement.

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EXTRUDED ALUMINUM APPARATUS BODY

The apparatus body compartments are to be constructed from 1/8"-3/16" aluminum alloy. All compartments are to be formed and welded to the substructure and sidewalls. Lower compartment floors are to be fitted with hat section supports to allow for loading of heavy equipment.

COMPARTMENTATION:

Each compartment shall be "sweep-out" style. The compartments shall not share a common wall and shall be individually vented. The compartments shall be divided as follows:

SIDE:

There shall be two (2) compartments ahead of the rear wheels, one (1) each side. The compartments shall be approximately **31.5" wide x 60" high x 42/20" deep**.

There shall be two (2) compartments over the rear wheels, one (1) each side. The compartments will be approximately **44" wide x 36" high x 42" deep**.

There shall be two (2) compartments behind the rear wheels, one (1) each side. The compartments shall be approximately **33.5" wide x 60" high x 18" deep**.

REAR:

There shall be one (1) compartment in the rear of the apparatus. The compartment shall be approximately **44" wide x 60" high x 34/10" deep**.

SUPERSTRUCTURE AND BODY WARRANTY - LIFETIME

The manufacturer shall warrant to the original purchaser that the apparatus superstructure and body is structurally sound and free of all structural defects of workmanship and material and further warrants that it will maintain its structural integrity for the life of the apparatus. This warranty shall not pertain to issues of paint finish, hardware, moldings or accessories. The warranty shall terminate upon transfer of possession or ownership by the original purchaser.

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L1 COMPARTMENT

- *The following is a description of items included with the compartment.*

ROLL UP DOOR - BRUSHED

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

ROLL UP DOOR SILLS

An extruded aluminum door sill shall be provided for each roll up door.

ADJUSTABLE SHELF TRACKING

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

STREAMLIGHT FLASHLIGHT

There shall be one (1) Streamlight FIRE VULCAN 180, LED rechargeable flashlight(s) supplied and installed.

Location(s): Forward wall L1

HEAVY DUTY HOOKS

There shall be two (2) heavy duty storage hooks supplied and installed for hanging of helmets and turnout coats.

Location(s): Rear wall L1

SCBA BRACKET

One (1) Ziamatic model #UN-6-30-2-SFPHS air pack bracket shall be supplied and mounted in the compartment.

LED COMPARTMENT LIGHT

One (1) extruded aluminum LED strip light installed in the compartment. The strip light shall be installed in a vertical position and run the full height of the compartment.

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L2 COMPARTMENT

- *The following is a description of items included with the compartment.*

ROLL UP DOOR - BRUSHED

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

ROLL UP DOOR SILLS

An extruded aluminum door sill shall be provided for each roll up door.

ADJUSTABLE SHELF TRACKING

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

ADJUSTABLE SHELF- FULL DEPTH

There shall be an adjustable shelf made from 3/16" aluminum with 2" sides provided and installed on the adjustable tracking.

BACKBOARD AND TOOL STORAGE- TRANSVERSE

A bolt in vertical compartment divider fabricated from 3/16" aluminum shall be provided and installed with angles at the top and bottom of the compartment. The divider shall be placed at the rear of the compartment to allow enough width for a backboard and long handle tool storage.

A divider shall be provided above the backboard storage area to allow for storage of long handle tools above.

LED COMPARTMENT LIGHT

One (1) extruded aluminum LED strip light installed in the compartment. The strip light shall be installed in a vertical position and run the full height of the compartment.

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L3 COMPARTMENT

The following is a description of items included with the compartment.

ROLL UP DOOR - BRUSHED

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

ROLL UP DOOR SILLS

An extruded aluminum door sill shall be provided for each roll up door.

ADJUSTABLE SHELF TRACKING

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

SCBA BRACKET

One (1) Ziamatic model #UN-6-30-2-SFPHS air pack bracket shall be supplied and mounted in the compartment.

LED COMPARTMENT LIGHT

One (1) extruded aluminum LED strip light installed in the compartment. The strip light shall be installed in a vertical position and run the full height of the compartment.

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B COMPARTMENT

The following is a description of items included with the compartment.

ROLL UP DOOR - BRUSHED

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

ROLL UP DOOR SILLS

An extruded aluminum door sill shall be provided for each roll up door.

ADJUSTABLE SHELF TRACKING

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

LED COMPARTMENT LIGHT

One (1) extruded aluminum LED strip light installed in the compartment. The strip light shall be installed in a vertical position and run the full height of the compartment.

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R1 COMPARTMENT

- *The following is a description of items included with the compartment.*

ROLL UP DOOR - BRUSHED

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

ROLL UP DOOR SILLS

An extruded aluminum door sill shall be provided for each roll up door.

ADJUSTABLE SHELF TRACKING

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

STREAMLIGHT FLASHLIGHT

There shall be one (1) Streamlight FIRE VULCAN 180, LED rechargeable flashlight(s) supplied and installed.

Location(s): Forward wall R1

HEAVY DUTY HOOKS

There shall be two (2) heavy duty storage hooks supplied and installed for hanging of helmets and turnout coats.

Location(s): Rear wall R1

SCBA BRACKET

One (1) Ziamatic model #UN-6-30-2-SFPHS air pack bracket shall be supplied and mounted in the compartment.

LED COMPARTMENT LIGHT

One (1) extruded aluminum LED strip light installed in the compartment. The strip light shall be installed in a vertical position and run the full height of the compartment.

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R2 COMPARTMENT

- *The following is a description of items included with the compartment.*

ROLL UP DOOR - BRUSHED

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

ROLL UP DOOR SILLS

An extruded aluminum door sill shall be provided for each roll up door.

ADJUSTABLE SHELF TRACKING

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

ADJUSTABLE SHELF- FULL DEPTH

There shall be an adjustable shelf made from 3/16" aluminum with 2" sides provided and installed on the adjustable tracking.

BACKBOARD AND TOOL STORAGE- TRANSVERSE

A bolt in vertical compartment divider fabricated from 3/16" aluminum shall be provided and installed with angles at the top and bottom of the compartment. The divider shall be placed at the rear of the compartment to allow enough width for a backboard and long handle tool storage.

A divider shall be provided above the backboard storage area to allow for storage of long handle tools above.

LED COMPARTMENT LIGHT

One (1) extruded aluminum LED strip light installed in the compartment. The strip light shall be installed in a vertical position and run the full height of the compartment.

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R3 COMPARTMENT

The following is a description of items included with the compartment.

ROLL UP DOOR - BRUSHED

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

ROLL UP DOOR SILLS

An extruded aluminum door sill shall be provided for each roll up door.

ADJUSTABLE SHELF TRACKING

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

ADJUSTABLE SHELF- FULL DEPTH

There shall be an adjustable shelf made from 3/16" aluminum with 2" sides provided and installed on the adjustable tracking.

LED COMPARTMENT LIGHT

One (1) extruded aluminum LED strip light installed in the compartment. The strip light shall be installed in a vertical position and run the full height of the compartment.

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ROLL-UP DOOR WARRANTY - SEVEN YEARS

ROM series 4 doors and parts shall be warranted for a period of seven (7) years.

COMPARTMENT INTERIOR FINISH

All exterior compartments of the pumper/rescue apparatus will be constructed from fire apparatus quality aluminum material. All exterior seams will be welded and sealed from weather and dust. The interior compartment seams will all be carefully caulked with a gray sealant for further protection and cosmetics.

The apparatus compartment interiors will be polished aluminum diamondplate.

RUBRAILS

Poly rub rails shall be provided along the lower edge of the apparatus body. The rub rail assemblies shall be spaced-out and isolated from the body with non-metallic materials. Each rub rail shall be a minimum of 1" thick and tapered at each end.

BODY FACE PACKAGE

The front face of the apparatus body will be trimmed with 1/8" polished diamondplate aluminum. Body support extrusions will be drilled and tapped for application of stainless steel fasteners to hold the panels in place. The panels are to be easily removable for service.

The rear face of the body will be trimmed with 1/8" smooth plate aluminum to allow easy application of chevron material.

All exterior edges will be sanded and rounded to prevent the catching of equipment or any injuries. The exterior seams shall be carefully caulked for water prevention and cosmetics.

REAR TAILBOARD

An 11" rear tailboard step will be provided. The step will be constructed from 1-1/2" extruded aluminum. Extrusion shall have a non-slip surface with punched holes. Tailboard shall be supported by heavy 2" x 2" x 3/8" angles welded directly to the body superstructure.

REAR WHEELWELL TRIM

The area around the rear wheel openings shall be constructed from aluminum diamondplate. The wheelwells shall be completely removable for ease of service and replacement.

RUBBER FENDERETTES

Rubber fenderettes shall be installed on the rear wheelwells. They shall be bolted so as to be easily removable for service and/or replacement.

MUDFLAPS

Mud flaps shall be made from black hard rubber and shall be installed on the cab fenders, behind the front tires and on the body fenders, behind the rear tires.

MISCELLANEOUS HARDWARE

One bag of miscellaneous hardware shall be supplied with the finished apparatus. This hardware shall consist of nuts, bolts, screws, washers, etc. used in the manufacture of the apparatus.

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FUEL INLET

There shall be a cast aluminum bezel around the fuel inlet. The bezel will be clearly marked "GAS ONLY".

REAR BODY HANDRAILS

There shall be two (2) 30" long handrails manufactured from 1-1/4" diameter extruded aluminum with chrome end stanchions. They shall be mounted vertically at the rear of the apparatus body.

In the event there is telescoping scene light, ladder or folding step installed in the same location(s), these items may be substituted in an effort to conserve mounting space on the body.

ALUMINUM BODY PAINT FINISH

All paintable surfaces shall conform to the following procedure, ensuring a durable finish:

- Aluminum body exterior shall not have components mounted to paintable surfaces prior to application of protective anti-corrosion and topcoat refinish materials.
- All paintable aluminum surfaces shall be sanded/ground to remove all burrs, rough edges and other imperfections from the fabrication process.
- All paintable metal surfaces shall have an anti-corrosion coating and an epoxy-based primer applied to them before the application of body fillers.
- After application and finishing of all filler work, any bare metal areas shall be recoated with an anti-corrosion coating and an epoxy-based primer before continuing the refinish process.
- The unit shall be sprayed with a high quality urethane primer-surfacer. The primer-surfacer shall be sanded to provide a smooth appearing surface that will facilitate adhesion of a urethane-based sealer. The urethane-based sealer shall be applied in such a manner to provide a uniform surface for the application of subsequent topcoats. The apparatus body shall be top-coated with basecoat/clear coat polyurethane paint system. The finished paint surface shall have a high gloss- >85 using a 60° gloss meter.
- Any location where aluminum is penetrated after the refinish process has been completed, shall be treated with a corrosion inhibiting compounds.

Color/Code: Race red

PAINT WARRANTY - FIVE YEARS

The 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 THE MANUFACTURER:

- Peeling or de lamination of the topcoat and/or other layers of paint.
- Cracking or checking.

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- Loss of gloss caused by cracking, checking, or hazing.
- Any paint failure caused by defective 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.

The paint warranty is a full term (non-prorated) warranty.

TOUCH UP PAINT

A container with touch-up paint shall be provided with each truck. The container shall have a small touch-up brush that is attached to the top of the container.

DISSIMILAR METALS

The body and components shall be thoroughly protected against corrosion and/or oxidation caused by contact between dissimilar metals. These areas shall be protected by the use of corrosion resistant primers, gaskets and "ECK" (electrolic corrosion material) or any equivalent material.

STRIPING AND LETTERING

No reflective striping or lettering will be provided or installed.

CHEVRON STRIPING - REAR

Chevron striping shall be applied to the entire rear wall of the apparatus body. The chevrons shall consist of 6" wide Diamond Grade reflective striping at 45 degree angles from the tailboard in an inverted "V" pattern. The stripes shall alternate red reflective, lime reflective, red reflective, etc.

CAB DOOR REFLECTIVE

The interior of each door shall include high visibility reflective tape. A white reflective tape that measures 1" in width shall be provided vertically along the outer rear edge of the door.

APPARATUS BODY ELECTRICAL SYSTEM

All electrical equipment installed by the apparatus builder shall conform to current automotive electrical system standards and the latest standards as outlined in NFPA #1901.

All electrical wire installed by the apparatus builder shall be rated to carry 125 percent of the maximum current for which the circuit is protected. A high-temp automotive primary wire that is insulated with chemically cross-linked Polyethylene and withstands prolonged temperatures of up to 350 degrees F. without melting or fusing shall be used. Wire shall be highly resistant to grease, oil, acids, brake fluid and abrasion. Wire shall meet or exceed S.A.E. specifications J1127.

Electrical connections in exposed areas outside of the cab shall be made using heat shrink or weather-proof connections. All connections shall have a corrosion preventative compound applied to them. All weather exposed lights shall have the sockets coated with this same compound.

Wire shall be individually color coded and be labeled every six (6") inches on the insulation. Wiring installed by body builder shall be run in a heat protective loom that is held in place with a rubber coated bracket that is fastened in place with stainless steel screws.

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There will be two (2) wire terminal points that will be used as test points and for service. The location of these points will be in the apparatus cab and in an enclosed box recessed into the side or back wall of a rear compartment. All wire connections shall be protected to promote a lasting, corrosion-free connection. All exterior terminal blocks will be installed in a weather resistant box. All wire harnesses will be easily accessible and replaceable. All wires shall be protected by automatic circuit breakers that will reset.

CAB MOUNTED SWITCH PANEL

A master switch panel, custom designed for the specified chassis and body will be provided and mounted in the center console. Backlighting will glow at low intensity with the ignition on and at high intensity when the circuit is activated.

Each switch label will be specifically identified.

12-V NFPA TEST

The following NFPA 9-14 test requirements shall be performed:

- Reserve capacity test
- Alternator test at idle
- Alternator test at full load
- Low voltage alarm test

CLEARANCE LIGHTS AND REFLECTORS

Clearance lights and reflectors shall be installed to meet current DOT standards and include:

- Two (2) Red LED marker lights
- Four (4) Red reflectors
- Two (2) Amber reflectors
- One (1) Red LED three-light cluster under the rear step.

STOP/TAIL, TURN AND BACKUP LIGHTS

Whelen M6 series lights shall be installed at the rear of the apparatus as follows:

- Red LED stop/tail/turn light, one (1) each side
- Clear LED backup light, one (1) each side

Each shall be installed inside a one-piece housing, one each side. The lower rear warning light shall be included in the 3 light housing.

REAR LOWER LIGHTS BEZEL COLOR

The surface mounted lower stop/tail/turn and back up lights shall include chrome bezels.

LICENSE LIGHT AND BRACKET

A polished aluminum LED license plate light and bracket shall be installed on the rear of the vehicle.

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LED CAB GROUND LIGHTS (4)

Under body lighting will be provided for the apparatus cab doors. Four (4) LED strip lights with clear lenses will be mounted below the apparatus cab, one (1) under each cab door. The lights will be controlled by the parking brake switch.

LED REAR TAILBOARD / BUMPER GROUND LIGHTS (2)

Under tailboard/bumper lighting will be provided for the rear of the apparatus. Two (2) LED strip lights with clear lenses will be angle mounted below the rear tailboard/bumper. The lights will be controlled by the parking brake switch.

RECESSED STEP LIGHTS - LED

There shall be LED recessed step lights mounted in such a manner as to light the area around the runningboards, tailboard, and rear intermediate step.

COMPARTMENT DOOR SWITCHES

All exterior compartment doors will be provided with a door switch that shall activate the "Door Ajar" indicator light.. The switch shall be installed not to interfere with loading or unloading the equipment stored within the compartment.

DOOR AJAR INDICATOR

There shall be a red flashing door-ajar indicator located on the cab in easy view of the driver. The light shall be illuminated automatically whenever the apparatus parking brake is released and the following conditions exist:

- Any passenger or equipment door is open.
- Any ladder or equipment rack is not in the stowed position.
- The aerial stabilizer system not in its stowed position.
- Powered light tower is extended.
- Any other device is opened, extended or deployed that creates a hazard, or is likely to cause damage to the apparatus if it is moved.

SIDE SCENE LIGHTS

The front upper sides of the body shall include two (2) Whelen M9V2R combination warning/scene lights, one (1) each side which shall be surface mounted.

SIDE SCENE LIGHTS

The rear upper sides of the body shall include two (2) Whelen M9V2R combination warning/scene lights, one (1) each side which shall be surface mounted.

REAR SCENE LIGHTS

The rear of the body shall include two (2) Whelen M9V2R combination warning/scene lights, one (1) each side which shall be surface mounted.

SCENE LIGHTING SWITCHING

The body and/or cab mounted scene lights shall include switches in the cab. Each side of the apparatus will include its own switch if applicable.

ANN ARBOR FIRE DEPARTMENT

HOUSEHOLD DUPLEX RECEPTACLE- SHORE POWER

There shall be two (2) 120-volt/20 amp household duplex receptacle(s) mounted as directed by the Fire Department. A hinged weatherproof cover shall be installed over any exterior mounted receptacle(s).

Location(s): L1, R1

POWER AND GROUND STUDS - RADIO WIRING

An auxiliary set of power and ground studs shall be provided and installed in the console.

Both 12V constant hot and 12V master power shall be provided.

ANTENNA WIRING

The apparatus shall have one (1) antenna base and cable supplied and installed on the cab roof. The whip shall be customer supplied. The antenna cable shall be ran to the cab console.

CONSOLE EQUIPMENT

The radio(s) and computer shall be supplied and installed by the department. Radio recessed brackets will be supplied with the console.

BACKUP CAMERA

A back-up camera with color monitor shall be installed on the apparatus. The monitor shall be a minimum 7" color LCD display and be on the dash, center console or in place of the rear view mirror. A waterproof I/R camera shall be mounted on the rear of the apparatus. The camera shall provide not less than 270 pixel resolution. The system shall automatically activate when the vehicle is placed in reverse. An on/automatic selector switch shall be mounted on the chassis dash.

NFPA WARNING LIGHTS

The optical warning system on the fire apparatus shall be capable of two separate signaling modes during emergency operations. One mode shall signal that the apparatus is responding to an emergency and is calling for the right of way. The other mode shall signal that the apparatus is stopped and is blocking the right of way.

The switching for the two different modes shall be through switches and relays that sense the position of the parking brake.

CAB FRONT LIGHTBAR

One (1) Whelen brand Justice JE2NFPA lightbar shall be mounted centered on the front of the cab roof. The lightbar shall be 56.00 inches in length. The lightbar shall feature eight (8) red LED lights and two (2) clear LED lights. The clear lights shall be disabled with park brake engaged. The cable shall exit the lightbar on the right side of the cab.

ANN ARBOR FIRE DEPARTMENT

INBOARD FRONT WARNING LIGHTS

The front grille shall include two (2) Whelen M6 Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn. The lights shall be mounted to the grille within a bezel.

The warning lights shall be red.

INTERSECTION WARNING LIGHTS

The front bumper tail or the corner of a commercial cab hood shall include two (2) Whelen M4 series Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the sides of the apparatus within a bezel.

The warning lights shall be red.

REAR WHEEL WELL WARNING LIGHTS

The rear wheel wells shall include two (2) Whelen M4 LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn. The lights shall be mounted to the sides of the body within a bezel.

The warning lights shall be red.

REAR TAILBOARD SIDE WARNING LIGHTS

The rear tailboard shall include two (2) Whelen M6 Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn. The lights shall be mounted within a cast housing located on the top of the tailboard sides.

The warning lights shall be red.

FRONT UPPER BODY SIDE WARNING LIGHTS

The front upper body sides shall include two (2) Whelen M9V2R combination warning/scene lights, one (1) each side which shall be surface mounted. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the sides of the apparatus within a bezel.

The warning lights shall be red.

REAR UPPER BODY SIDE WARNING LIGHTS

The rear upper body sides shall include two (2) Whelen M9V2R combination warning/scene lights, one (1) each side which shall be surface mounted. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the sides of the apparatus within a bezel.

The warning lights shall be red.

ANN ARBOR FIRE DEPARTMENT

UPPER REAR WARNING LIGHTS

The upper rear of the apparatus shall include two (2) M9V2R combination warning/scene lights, one (1) each side which shall be surface mounted. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the apparatus within a bezel.

The warning lights shall be red.

LOWER REAR WARNING LIGHTS

The lower rear of the apparatus shall include two (2) Whelen M6 Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the apparatus within a bezel.

The warning lights shall be red.

WARNING LIGHTING BEZEL COLOR

The body and/or cab surface mounted warning lights shall include chrome bezels.

WARNING LIGHTING LENS COLOR

The body and/or cab surface mounted warning lights shall include colored lenses to match the warning light color.

WARNING LIGHTING SWITCHING

The body and/or cab mounted warning lights shall include switches in the cab. Each side of the apparatus will include its own switch if applicable.

A master warning light switch shall also be included.

SIREN CONTROL HEAD

A Federal EQ2B electronic siren control head shall be provided and installed in the switch panel with a location specific to the customer's needs. The siren shall feature 200-watt output, "Q" wail, yelp, air horn, PA, radio broadcast and "Q" brake. The siren shall include a noise cancelling microphone.

ELECTRONIC SIREN SPEAKER

The bumper shall include two (2) Whelen Engineering Inc. model SA315P, 100 watt speakers which shall be mounted within the bumper fascia.

APPARATUS WARRANTY - ONE YEAR

The completed apparatus shall be warranted to be free from defects in workmanship and materials under normal use and service for a period of one (1) year from the date of delivery to the Fire Department. This warranty shall cover the costs for parts and labor for this period of time.

PURCHASER'S RESPONSIBILITY

These specifications are as complete, accurate and up to date as possible; however, it is the purchaser's responsibility for the safe, legal operation and maintenance of this apparatus and equipment.

ANN ARBOR FIRE DEPARTMENT

DELIVERY PREP

The apparatus shall be detailed and cleaned prior to delivery.

All metal edges shall be carefully sanded and rounded. All compartment and exterior sheeting seams shall be carefully caulked.

Any loose equipment shall be stored on the truck.