

Specifications

For

One (1)

Aluminum Rescue

On a Ford F-550 Chassis

Egremont Fire Department

Egremont, MA

July 12, 2018

GENERAL TERMS AND CONDITIONS

INSTRUCTION TO BIDDERS

The intention of these specifications is to specify the basic requirements for manufacturing custom fire apparatus to withstand the continuous use encountered in the emergency firefighting service.

It is the Purchaser's intent to award the bid to the lowest responsible bidder meeting these specifications. Certified parts availability, service capability, total life expectancy and cost will be given serious consideration. Because of this, the right is reserved to reject or accept any or all bids.

Questions regarding these specifications shall be submitted in writing to a designated representative of the Purchaser. It is not the purpose of these specifications to eliminate any qualified bidder.

SUBMISSION OF BIDS

Only bids submitted on these forms shall be considered. Bids shall be enclosed in a sealed envelope plainly marked, "BID ON NEW FIRE APPARATUS" bearing the time and date of the opening.

In addition to these specifications, each bidder is required to submit a complete and accurate description of their own product to include, but not limited to, size, dimension, type, model, material grade and material thickness of their fire apparatus in the form of a detailed bid proposal. Bids will be judged on completeness and accuracy in response to these specifications. Bid proposals not complying with these basic minimum specifications may be judged non-compliant and shall be rejected.

Returning these specifications with a list of clarifications, exceptions and price shall be considered non-responsive, incomplete and shall be rejected. There is no exception to this requirement. All bid proposals must be in the same sequence as these specifications for ease of comparison. Any bid proposal not in this sequence shall be disregarded and immediately rejected.

Failure to comply with all conditions mentioned under "Instruction to Bidders" or the failure to conform to these specifications will be reasonable cause for rejection of the bid. Any bid not in accordance with these instructions or not in the form prescribed, or containing bids not asked for, or not containing all statements contained on the said bid form, shall be rejected.

All bids shall be signed by an appropriate officer of the manufacturer of the apparatus being bid. Bids signed by a sales representative shall be declared informal and shall be rejected.

Each bid shall indicate the full business address of the Bidder. Bids by a partnership shall furnish the full name of all the partners and shall be signed by the partners. Bids by a Corporation shall be followed by the name of the State of Incorporation, and by the signature and designation of the President, Vice President, or Secretary. The name of each person signing shall also be typed or printed below the signature.

NFPA REQUIREMENTS

The work required by the specifications shall conform to the latest applicable standards of the National Fire Protection Association at the date required for submittal of the bid proposal unless changed by these specifications.

REGULATIONS

The apparatus shall comply with all Federal, State, and local requirements pertaining to vehicles used as emergency vehicles at the date required for the submittal of the bid proposal unless changed by these specifications.

The delivered apparatus shall have a certified GVWR weight sticker applied to the vehicle on delivery to assure the apparatus meets all requirements pertaining to the weight carrying capacity of the vehicle.

BIDDER QUALIFICATIONS

Bidder shall have in operation a parts and service facility adequate for actively engaging in the performance of the services specified herein.

Bidder shall have previous performance under municipal contract, or contracts of sufficient and comparable size with other customers.

Bidder shall employ qualified personnel to render prompt, efficient, and quality service.

A certified and notarized statement of financial condition and/or current Dun and Bradstreet rating may be required prior to contract signing.

Bidder shall have been in operation for a minimum of twenty (20) years in the manufacture and/or remanufacture of fire apparatus.

An inspection of the bidder's facility may be made prior to award of the bid, at which time additional information could be requested to verify the bidder's responsibility.

The bidder shall identify the location of the manufacturing facility.

INSURANCE

Bidder shall furnish with the bid a certificate of insurance for general liability in the amount of \$1,000,000 combined each occurrence with \$15,000,000 excess liability, \$15,000,000 aggregate. Insurance policies shall be maintained for the life of the contract and shall provide five (5) days notice before cancellation.

EXCEPTIONS, VARIATIONS OR CLARIFICATIONS

All bidders shall place an "X" in the appropriate column provided on the right hand edge of the paper, indicating compliance or non-compliance with that section of the specifications.

A number shall be inserted next to that section which relates to an explanation on page(s) entitled "Exceptions", that the bidder shall include with these specifications.

Any exception shall be clearly defined with details as to the proposed alternative referencing manufacturer and model number where appropriate. A general exception cannot be taken for any paragraph. A full word for word WRITTEN COMPARISON shall be included within the bid for any exception listed. Each exception shall be considered by the degree of impact and total effect on the bid. Proposals taking total exception to the bid specifications shall not be considered by the Purchaser. The Purchaser shall determine which (if any) exceptions are acceptable and this determination shall be final.

The Purchaser shall evaluate all bids received for all variations and exceptions to these specifications, no matter how slight. If variations are found that are not listed as an exception, it shall be considered that the bid is non-compliant and shall be rejected.

Should the apparatus not comply with all requirements of this document, the apparatus shall be rejected when delivered. All apparatus shall be inspected for material, workmanship, and compliance with specifications prior to acceptance. All items found to be in non-compliance shall be identified, and the Purchaser reserves the right to accept or reject those specific items. The non-compliance rejected items shall be replaced or reworked to meet the requirements of this document at no additional cost to the Purchaser.

PROPOSAL SEQUENCE

For ease of evaluation, comparison and verifying compliance, all bid proposals shall be submitted in the same sequence as these specifications.

GENERAL CONSTRUCTION

The apparatus shall be of the latest type and construction with due consideration to symmetrical proportion, the distribution of weight and the nature of the load to be carried, and the general character of the service to which the apparatus shall be subjected when placed in service. The apparatus and all major components shall be manufactured in the United States of America. NO EXCEPTION.

The importance of public safety associated with all fire fighting vehicles requires that this vehicle meets or exceeds these specifications. The minimum level of quality and design detailed in these specifications are required to meet the life cycle objectives of the apparatus.

To extend the expected service life of the vehicle, the body module(s) shall be separate and removable from the chassis frame and be able to be reinstalled on a new chassis.

The sheet metal material and gauge throughout the specifications are considered minimum. Since such materials are available to all manufacturers, exceptions to same shall not be accepted. Substitutions of lighter gauge material shall not be acceptable.

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

Details of design, construction and the sizes and weights of the different parts are left to the discretion of the manufacturer unless specified or shown.

The workmanship shall be of the highest quality in its respective field. Special consideration shall be given to accessibility of the various components, required periodic maintenance operations, ease of operation, and symmetrical proportioning of the overall apparatus.

Because this project requires the integration of the new custom fabricated components and related accessories to a new cab, chassis and necessary components, the Manufacturer shall accept final responsibility for the merger of the components into a fully integrated and complete vehicle.

Construction shall be rugged and ample safety factors shall be provided to carry loads as specified to meet the road requirements and speed conditions.

LIABILITY

The Bidder, if his bid is accepted, shall defend any and all suits and assume all liability for use and all claims made against the Purchaser or any of its officials or agents for the use of any patents, process, device or article forming a part of the apparatus or any appliance furnished under contract.

TAXES

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. The bid price shall be F.O.B. at a location designated by the Purchaser. The price bid by the Bidder shall be good for a period of forty-five (45) days from the date of the bid opening.

WITHDRAWAL OF BIDS

Bids may be withdrawn by certified mail or telegraphic request from Bidders prior to the time fixed for opening. Negligence on the part of the Bidder in preparing the bid confers no right for withdrawal of the bid after it has been opened. No Bidder may withdraw his bid after the time set for the opening thereof.

DELIVERY

The maximum number of calendar days to complete and ship the vehicle shall not exceed 365 days after the signing of a contract. The manufacturer shall state the number of calendar days required to complete and deliver the apparatus after the award of the contract. The Manufacturer shall not be held liable for delays in delivery caused by accidents, strikes, or floods, provided however that the Manufacturer notifies the Purchaser's representative in writing, of the occurrence of any delay, such notification to be by certified mail and provided within 10 working days of its occurrence.

To insure proper break-in of all components while still under warranty, the apparatus shall be delivered over the road under its own power. Rail and/or truck freight is not acceptable. The apparatus shall be suitably protected against damage from road debris while in transit.

INFORMATION REQUIRED AT DELIVERY

Copies of complete operation and maintenance manuals, covering the completed apparatus, including but not limited to the chassis manual, lubrication charts, and fire equipment service information as supplied by brand name component suppliers.

Engine manufacturer's current brake horsepower curve, showing the maximum no-load governed engine RPM.

Manufacturer's record of apparatus construction details including actual vehicle weights.

DRAWINGS

To assure the Purchaser that the bidder fully understands the scope of the work to be performed and is familiar with the project, a set of engineered drawings shall be included with the bid. The purpose of these drawings is to assist the Purchaser in evaluation and comparison of all bids received in compliance with the specifications. Shop sketches of similar sales drawings shall not be acceptable. There shall be no exception to this requirement. Omission of drawings shall be cause for rejection of bid.

The drawings shall depict the proposed apparatus and shall show front, left side, right side and rear views of the proposed apparatus and shall show all principal dimensions.

MATERIALS

The material specifications herein shall be considered an absolute minimum. Exceptions shall not be taken or permitted due to the fact that all the raw materials of the specified type and gauge are available to all manufacturers. Since all custom manufacturers have the ability to shear, brake, and weld, as these specifications require, all basic design specifications stated herein shall be met.

CERTIFICATIONS

The proposed apparatus shall meet or exceed all applicable requirements of the latest editions of NFPA standards unless changed by requirements of these specifications, Underwriter's Laboratories, Inc., and all State and Federal regulations in effect at the date required for the submittal of the bid proposal.

Parts and service shall be available for this apparatus for a minimum of twenty (20) years.

The unit proposed is not a prototype unit and is of an established model and design.

The Purchaser reserves the right to accept other than low bid if it is in the best interest of the community. By submission of their bid, each bidder agrees to accept the decision of the Purchaser without recourse or prejudice.

SERVICE CENTER REQUIREMENTS

In order to provide efficient service and support during the life of the apparatus, it will be required that the successful bidder and/or authorized manufacturer's representative shall own and maintain a full service, parts, and repair facility within seventy-five (75) miles of the purchaser. Designated service facilities not directly owned and operated by the bidder or an authorized sales representative will not be acceptable.

The manufacturer's representative repair facility must be a full time operation. Mobile service trucks shall be available in addition to the above service facility. The bidder's service center must provide a twenty four (24) hour emergency call number and must provided seven (7) days a week emergency repair service.

The service center must have an on-premise full pump test site for conducting acceptance test and annual pump service and certification testing.

NON-COLLUSIVE BIDDING CERTIFICATION

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor.

Unless otherwise required by law, the prices which have been quoted in the bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor and;

No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit a bid for the purpose of restricting competition.

Dated: _____

(Legal name of person, firm or corporation)

By: _____

Title: _____
(Bidder)

SEAL OF THE CORPORATION

PAYMENT TERMS

Payment for the completed apparatus shall be made in full upon final inspection.

SURETY REQUIREMENTS

A bid bond in the amount of 10 percent of the total amount of the bid shall be furnished with each bidder proposal. A letter of credit shall not be accepted in lieu of a bond.

PRE-CONSTRUCTION MEETING

A pre-construction conference shall be held after the award of contract and prior to actual construction of the proposed apparatus. The purpose of the conference is to assure complete understanding of the Purchaser's advertised specifications and the Bidder's proposal specifications.

The pre-construction conference shall be held at the customer location with a sales representative of the manufacturer (or a project manager employee of the manufacturer) and representatives of the truck committee in attendance.

APPARATUS ORIENTATION

The completed unit shall be delivered to the Purchaser with guidelines provided to fire fighting personnel on operation, care, and maintenance of apparatus at the Purchaser's fire station.

The services of a qualified and responsible representative of the manufacturer shall accompany the delivery of the apparatus. The delivery engineer shall remain in the community a reasonable time, but in no case less than one (1) three-hour session for orientation of fire department personnel, making normal adjustments and mounting equipment that is included as part of the proposal.

Bids with factory pickup or orientation shall be rejected. NO EXCEPTION.

INSPECTION TRIP

The Manufacturer shall provide for inspection of the apparatus under construction during normal business hours. The bid price shall include the cost of one (1) inspection trip for two (2) representatives of the purchaser. Inspection trip shall include meals, transportation, and overnight lodging.

APPARATUS WARRANTY

The, Manufacturer shall warrant the apparatus for work performed under the specifications to be well constructed and of good material and free from defects in material, workmanship and imperfections under normal use and service. The Manufacturer's obligation under this warranty shall be limited to repairing or replacing, any parts or parts thereof which may prove defective under normal use and service within one (1) year. Such defective part or parts shall be replaced free of charge and without charge for installation to the Purchaser. This warranty shall not apply to normal maintenance or repair. Brand name components included with the apparatus (i.e. valves, lighting, equipment, accessories, axles, tires, etc.) shall be warranted by their respective manufacturers.

Selected Equipment & Specs

Dimensions

Exterior length: 254.8" * Cab to axle: 84.0" * Exterior width: 80.0" * Exterior height: 81.1" * Wheelbase: 169.0" * Front track: 74.8" * Rear track: 74.0" * Turning radius: 24.2" * Rear tire outside width: 93.9" * Min ground clearance: 8.3" * Front legroom: 43.9" * Front headroom: 40.8" * Front hiproom: 62.5" * Front shoulder room: 66.7" * Passenger volume: 64.6cu.ft. * Cargo volume: 11.6cu.ft. * Maximum cargo volume: 11.6cu.ft.

Powertrain

Powerstroke 330hp 6.7L OHV 32 valve intercooled turbo V-8 engine with diesel direct injection * Recommended fuel : diesel * federal * TorqShift 6 speed automatic transmission with overdrive * Part-time * Limited slip differential * Fuel Economy Cty: N/A * Fuel Economy Highway: N/A * Transmission PTO provision

Suspension/Handling

Front Mono-beam non-independent suspension with anti-roll bar, HD shocks * Rear DANA 130 rigid axle leaf spring suspension with anti-roll bar, HD shocks * Firm ride Suspension * Hydraulic power-assist re-circulating ball Steering * Front and rear 19.5 x6 polished forged aluminum wheels * Front LT225/70SR19.5 GBSW AS rear LT225/70SR19.5 GBSW AT * Dual rear wheels

Body Exterior

2 doors * Driver and passenger power remote heated, power folding door mirrors with turn signal indicator * Turn signal indicator in mirrors * Black door mirrors * Chrome bumpers * Trailer harness * Clearcoat paint * Front and rear 19.5 x6 wheels * 2 front tow hook(s)

Convenience

Manual air conditioning with air filter * Cruise control with steering wheel controls * Power front windows * Driver and passenger 1-touch up * Driver and passenger 1-touch down * Remote power door locks with 2 stage unlock and illuminated entry * Manual tilt steering wheel * Manual telescopic steering wheel * Day-night rearview mirror * Internet access * 911 Assist emergency SOS * Wireless phone connectivity * 2 1st row LCD monitors * Front cupholders * Dual visor mirrors * Driver and passenger door bins * Upfilter switches

Seats and Trim

Seating capacity of 3 * Front 40-20-40 split-bench seat * 4-way driver seat adjustment * Manual driver lumbar support * 4-way passenger seat adjustment * Centre front armrest with storage * Cloth seat upholstery * Metal-look instrument panel insert.

Entertainment Features

811usXM AM/FM/Satellite radio with radio data system * SYNC external memory control * Steering wheel mounted radio controls * 5 speakers * Streaming audio * Fixed antenna

Lighting, Visibility and Instrumentation

Halogen aero-composite headlights * Delay-off headlights * Fully automatic headlights * Variable Intermittent front windshield wipers * Deep tinted windows * Front reading lights * Tachometer * Compass * Outside temperature display * Camera(s) - rear * Trip computer * Trip odometer * Configurable digital/analog gauges

Safety and Security

4-wheel ABS brakes * Brake assist * 4-wheel disc brakes * Driveline traction control * Dual front impact airbag supplemental restraint system with passenger cancel * Dual seat mounted side impact airbag supplemental restraint system * Safety Canopy System curtain 1st row overhead airbag supplemental restraint system * Remote activated perimeter/approach lighting * Power remote door locks with 2 stage unlock and panic alarm * Security system with SecurILocker Immobilizer * MyKey restricted driving mode * Manually adjustable front head restraints with tilt

Dimensions

General Weights

Curb	7995 lbs.	G/VWR	19500 lbs.
Payload	11670 lbs.		

Selected Equipment & Specs (cont'd)

Front Weights

Front GAWR 7500 lbs.
 Front axle capacity 7500 lbs.
 Front tire/wheel capacity 7500 lbs.

Front curb weight 4774 lbs.
 Front spring rating 7500 lbs.

Rear Weights

Rear GAWR 14706 lbs.
 Rear axle capacity 14706 lbs.
 Rear tire/wheel capacity 15000 lbs.

Rear curb weight 3221 lbs.
 Rear spring rating 15000 lbs.

Trailer Type

Harness Yes
 Trailer sway control Yes

Brake controller Yes

General Trailering

5th-wheel towing capacity 22200 lbs.
 Towing capacity 18500 lbs.

Gooseneck towing capacity 22200 lbs.
 GCWR 31000 lbs.

Fuel Tank type

Capacity 40 gal.

Off Road

Min ground clearance 8"

Interior cargo

Cargo volume 11.6 cu.ft.

Maximum cargo volume 11.6 cu.ft.

Rear Frame

Height loaded 29"

Height unloaded 34"

Powertrain

Engine Type

Brand Powerstroke
 Cylinders V-8
 Ignition Compression
 Liters 6.7L
 Recommended fuel Diesel
 Valvetrain OHV

Block material Iron
 Head material Aluminum
 Injection Diesel direct injection
 Orientation Longitudinal
 Valves per cylinder 4
 Forced induction Intercooled turbo

Engine Spec

Bore 3.90"
 Displacement 406 cu.in.

Compression ratio 16.2:1
 Stroke 4.25"

Engine Power

Output 330 HP @ 2,600 RPM

Torque 750 ft.-lb @ 2,000 RPM

Alternator

Type Dual

Amps 377

Battery

Amp hours 78
 Run down protection Yes

Cold cranking amps 750
 Type Dual

Engine Extras

Block heater Yes

Selected Equipment & Specs (cont'd)

Transmission			
Electronic control	Yes	Lock-up	Yes
Overdrive	Yes	Speed	6
Type	Automatic		
Transmission Gear Ratios			
1st	3.974	2nd	2.318
3rd	1.516	4th	1.149
5th	0.858	6th	0.674
Reverse Gear ratios	3.128		
Transmission Torque Converter			
Stall ratio	1.90		
Transmission Extras			
Driver-selectable mode	Yes	Sequential shift control	SelectShift
PTO provision	Yes		
Drive Type			
4wd type	Part-time	Type	Four-wheel
Drive Feature			
Limited slip differential	Mechanical	Traction control	Driveline
Power take-off provision	Yes	Locking hub control	Manual
Transfer case shift	Manual		
Drive Axle			
Ratio	4.88		
Exhaust			
Material	Stainless steel	System type	Single
Emissions			
CARB	Federal		
Fuel Economy			
Fuel type	Diesel		
Engine Retarder			
Type	Yes		
Driveability			
Brakes			
ABS	4-wheel	ABS channels	3
Type	4-wheel disc	Vented discs	Front and rear
Brake Assistance			
Brake assist	Yes		
Suspension Control			
Ride	Firm		
Front Suspension			
Independence	Mono-beam non-independent	Anti-roll bar	Regular
Front Spring			
Type	Coil	Grade	HD

Selected Equipment & Specs (cont'd)

Front Shocks

Type HD

Rear Suspension

Independence DANA 130 rigid axle
Anti-roll bar Regular

Type Leaf

Rear Spring

Type Leaf

Grade HD

Rear Shocks

Type HD

Steering

Activation Hydraulic power-assist

Type Re-circulating ball

Steering Specs

of wheels 2

Exterior

Front Wheels

Diameter 19.5"

Width 6.00"

Rear Wheels

Diameter 19.5"
Dual Yes

Width 6.00"

Front and Rear Wheels

Appearance Polished
Covers Chrome hub

Material Forged aluminum

Front Tires

Aspect 70
Sidewalls BSW
Tread AS
Width 225mm
RPM 647

Diameter 19.5"
Speed S
Type LT
LT load rating G

Rear Tires

Aspect 70
Sidewalls BSW
Tread AT
Width 225mm
RPM 645

Diameter 19.5"
Speed S
Type LT
LT load rating G

Wheels

Front track 74.8"
Turning radius 24.2'
Rear tire outside width 93.9"

Rear track 74.0"
Wheelbase 169.0"

Body Features

Front license plate bracket Yes
Body material Aluminum
Front tow hook(s) 2

Front splash guards Yes
Side impact beams Yes

Body Doors

Selected Equipment & Specs (cont'd)

Door count 2

Exterior Dimensions

Length 254.8"
 Body height 81.1"
 Axle to end of frame 47.2"
 Frame yield strength (psi) 50000.0
 Front bumper to front axle 38.3"
 Front bumper to back of cab 123.7"

Body width 80.0"
 Cab to axle 84.0"
 Frame section modulus 17.2cu.in.
 Frame rail width 34.2"
 Cab to end of frame 131.2"

Safety

Airbags

Driver front-impact Yes
 Overhead Safety Canopy System curtain 1st row
 Passenger side-impact Seat mounted

Driver side-impact Seat mounted
 Passenger front-impact Cancellable

Seatbelt

Height adjustable Front

Security

Immobilizer SecurILock
 Restricted driving mode MyKey

Panic alarm Yes

Seating

Passenger Capacity

Capacity 3

Front Seats

Split 40-20-40

Type Split-bench

Driver Seat

Fore/aft Manual
 Way direction control 4

Reclining Manual
 Lumbar support Manual

Passenger seat

Fore/aft Manual
 Way direction control 4

Reclining Manual

Front Head Restraint

Control Manual

Type W/tilt

Front Armrest

Centre Yes

Storage Yes

Front Seat Trim

Material Cloth

Back material Carpet

Convenience

AC And Heat Type

Air conditioning Manual

Air filter Yes

Audio System

Radio SiriusXM, AM/FM/Satellite
 Radio grade Regular

Radio data system Yes
 Seek-scan Yes

Selected Equipment & Specs (cont'd)

External memory control	SYNC		
Audio Speakers			
Speaker type	Regular	Speakers	5
Audio Controls			
Speed sensitive volume	Yes	Steering wheel controls	Yes
Voice activation	Yes	Streaming audio	Bluetooth yes
Audio Antenna			
Type	Fixed		
LCD Monitors			
1st row	2	Primary monitor size (inches)	8
Cruise Control			
Cruise control	With steering wheel controls		
Convenience Features			
Retained accessory power	Yes	12V DC power outlet	3
Emergency SOS	911 Assist	Wireless phone connectivity	Bluetooth
AC power outlet	1	Smart device integration	Mirroring
Upfitter switches	Yes		
Door Lock Activation			
Type	Power with 2 stage unlock	Remote	Keyfob (all doors)
Integrated key/remote	Yes		
Instrumentation Type			
Display	Digital/analog	Configurable	Yes
Instrumentation Gauges			
Tachometer	Yes	Engine temperature	Yes
Turbo/supercharger boost	Yes	Transmission fluid temp.	Yes
Engine hour meter	Yes		
Instrumentation Warnings			
Oil pressure	Yes	Engine temperature	Yes
Battery	Yes	Lights on	Yes
Key	Yes	Low fuel	Yes
Door ajar	Yes	Service interval	Yes
Brake fluid	Yes		
Instrumentation Displays			
Clock	In-radio display	Compass	Yes
Exterior temp.	Yes	Systems monitor	Yes
Camera(s) - rear	Yes		
Instrumentation Feature			
Trip computer	Yes	Trip odometer	Yes
Steering Wheel Type			
Material	Urethane	Tilting	Manual
Telescoping	Manual		
Front Side Windows			
Window 1st row activation	Power		

Selected Equipment & Specs (cont'd)

Window Features

1-touch down	Driver and passenger	1-touch up	Driver and passenger
Tinted	Deep		

Front Windshield

Wiper	Variable intermittent
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Rear Windshield

Window	Fixed
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Interior

Driver Visor

Mirror	Yes
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Passenger Visor

Mirror	Yes
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Rear View Mirror

Day-night	Yes
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Headliner

Coverage	Full	Material	Cloth
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Floor Trim

Coverage	Full	Covering	Carpet
Mats	Carpet front		

Trim Feature

Instrument panel insert	Metal-look	Gear shift knob	Urethane
Interior accents	Chrome		

Lighting

Dome light type	Fade	Front reading	Yes
Illuminated entry	Yes	Variable IP lighting	Yes

Storage

Driver door bin	Yes	Front Beverage holder(s)	Yes
Glove box	Locking	Passenger door bin	Yes
Illuminated	Yes	Instrument panel	Bin
Dashboard	Covered	1st row underseat	Locking
Audio media storage	Yes		

Legroom

Front	43.9"
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Headroom

Front	40.8"
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Hip Room

Front	62.5"
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Shoulder Room

Front	66.7"
-------	-------

Interior Volume

Passenger volume	64.6 cu.ft.
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Warranty - Selected Equipment & Specs

Warranty

<i>Basic</i>			
Distance	36000 miles	Months	36 months
<i>Powertrain</i>			
Distance	60000 miles	Months	60 months
<i>Corrosion Perforation</i>			
Distance	Unlimited miles	Months	60 months
<i>Roadside Assistance</i>			
Distance	60000 miles	Months	60 months
<i>Diesel Engine</i>			
Distance	100000 miles	Months	60 months

Selected Options

Code	Description	MSRP
Base Vehicle		
F5H	Base Vehicle Price (F5H)	\$45,575.00
Packages		
663A	Order Code 663A <i>Includes:</i> - Cloth 40/20/40 Split Bench Seat - Includes 20% center under-seat storage, center armrest, cupholder, storage, 4-way adjustable driver/passenger headrests and driver's side manual lumbar. - Radio: AM/FM Stereo/MP3 Player - Includes 5-speakers. - SiriusXM Satellite Radio - Includes a 6-month prepaid subscription. Service is not available in Alaska and Hawaii. - Subscriptions to all SiriusXM services are sold by SiriusXM after trial period. If you decide to continue service after your trial, the subscription plan you choose will automatically renew thereafter and you will be charged according to your chosen payment method at then-current rates. Fees and taxes apply. To cancel you must call SiriusXM at 1-866-635-2349. See SiriusXM Customer Agreement for complete terms at www.siriusxm.com. All fees and programming subject to change. Sirius, XM and all related marks and logos are trademarks of Sirius XM Radio Inc.	N/C
Powertrain		
99T	Engine: 6.7L 4V OHV Power Stroke V8 Turbo Diesel B20 <i>Includes Diesel Exhaust Fluid (DEF) tank, Intelligent Oil-Life Monitor, manual push-button engine-exhaust braking and split-shaft calibration compatibility.</i> <i>Includes:</i> - Dual 78-AH 750 CCA Batteries	\$9,010.00
44W	Transmission: TorqShift 6-Speed Automatic (6R140). Includes SelectShift.	N/C
X8L	Limited Slip w/4.88 Axle Ratio	\$360.00
68M	GVWR: 19,500 lb Payload Plus Upgrade Package <i>Includes upgraded frame, rear-axle and low deflection/high capacity springs. Increases max. GVWR to 14,706. Note: See Order Guide Supplemental Reference for further details on GVWR.</i>	\$1,155.00
Wheels & Tires		
THB	Tires: 225/70R19.5G BSW Traction <i>Includes 4 traction tires on the rear and 2 all-season tires on the front. Optional spare is 225/70R19.5G BSW all-season.</i>	\$190.00
64D	Wheels: 19.5" Forged Polished Aluminum <i>Includes bright hub covers/center ornaments.</i>	\$1,095.00
Seats & Seat Trim		
3	Cloth 40/20/40 Split Bench Seat <i>Includes 20% center under-seat storage, center armrest, cupholder, storage, 4-way adjustable driver/passenger headrests and driver's side manual lumbar.</i>	Included
Other Options		

Selected Options (cont'd)

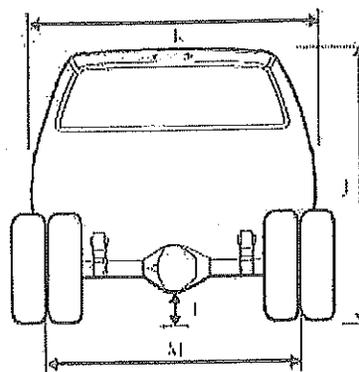
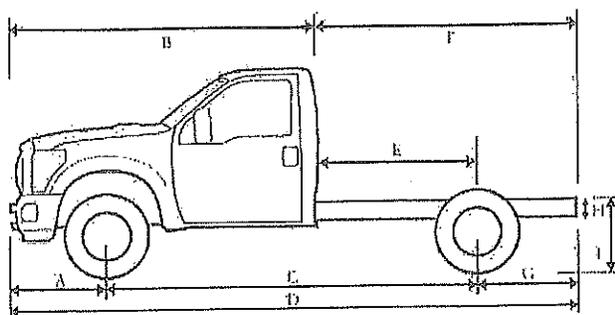
Code	Description	MSRP
PAINT	Monotone Paint Application	STD
169WB	169" Wheelbase	STD
67P	Extra Heavy-Duty Front End Suspension - 7,500 GAWR <i>Includes upgraded front axle and max 7,500 lbs. Front Springs/GAWR rating for configuration selected. Incomplete vehicle package - requires further manufacture and certification by a final stage manufacturer.</i>	\$285.00
86S	Low Deflection Package <i>Includes 2-inch spacer blocks. Recommended for rear-biased loading, such as wrecker/retriever applications.</i>	\$110.00
41H	Engine Block Heater	\$100.00
62R	Transmission Power Take-Off Provision <i>Includes transmission mounted live drive and stationary mode PTO.</i>	\$280.00
98R	Operator Commanded Regeneration (OCR)	Included
18A	Upfitter Interface Module	\$295.00
67B	Dual Extra Heavy-Duty Alternators (Total 377-Amps)	Included
54F	PowerScope Trailer Tow Mirrors w/Heat <i>Includes power-folding, telescoping, power glass, turn signal and high-intensity LED security approach lamps.</i> <i>Includes:</i> <i>- Utility Lighting System</i> <i>Includes LED side-mirror spotlights.</i>	\$280.00
63A	Utility Lighting System <i>Includes LED side-mirror spotlights.</i>	Included
872	Rear View Camera & Prep Kit Upfitters kit includes camera with mounting bracket, 14' jumper wire and camera mounting and aiming instructions. Kit requires video display option to be added to unit. Reference order guide for additional information. Related option content: 872, 585 and 96V. <i>Includes cab wiring, frame wiring to the rear most cross member and video display. Video displayed in 8" display when ordered with SYNC 3 (913).</i>	\$415.00
585	Radio: AM/FM Stereo/MP3 Player <i>Includes 6-speakers.</i> <i>Includes:</i> <i>- SiriusXM Satellite Radio</i> <i>Includes a 8-month prepaid subscription. Service is not available in Alaska and Hawaii. Subscriptions to all SiriusXM services are sold by SiriusXM after trial period. If you decide to continue service after your trial, the subscription plan you choose will automatically renew thereafter and you will be charged according to your chosen payment method at then-current rates. Fees and taxes apply. To cancel you must call SiriusXM at 1-866-635-2349. See SiriusXM Customer Agreement for complete terms at www.siriusxm.com. All fees and programming subject to change. Sirius, XM and all related marks and logos are trademarks of Sirius XM Radio Inc.</i>	Included
913	SYNC 3 Communications & Entertainment System	\$450.00

Selected Options (cont'd)

Code	Description	MSRP
	<p><i>Includes enhanced voice recognition, 8" LCD capacitive touchscreen in center stack with swipe capability, pinch-to-zoom capability included with available voice-activated touchscreen navigation system, AppLink, 911 Assist, Apple CarPlay and Android Auto and 2 smart-charging USB Ports. Note: SYNC AppLink lets you control some of your favorite compatible mobile apps with your voice. It is compatible with select smartphone platforms. Commands may vary by phone and AppLink software.</i></p>	
Fleet Options		
47A	<p>Ambulance Prep Package (LPO)</p> <p>Requires valid FIN code.</p> <p><i>Includes 7,000 lbs. max front springs/GAWR rating for configuration selected; Incomplete vehicle package - requires further manufacture and certification by a final stage manufacturer. Ford vehicles are suitable for producing ambulances only if equipped with the Ford Ambulance Prep Package. In addition, Ford urges ambulance manufacturers to follow the recommendations of the Ford Incomplete Vehicle Manual and the Ford Truck Body Builders Layout Book (and pertinent supplements). Using a Ford vehicle without the Ford Ambulance Prep Package to produce an ambulance voids the Ford warranty. NOTE: Stationary Elevated Idle Control (SEIC) has been integrated into the engine control module.</i></p> <p><i>Includes:</i></p> <ul style="list-style-type: none"> - Dual Extra Heavy-Duty Alternators (Total 377-Amps) - Operator Commanded Regeneration (OCR) 	\$1,205.00
942	<p>Daytime Running Lamps (DRL) (LPO)</p> <p>Requires valid FIN code.</p> <p><i>The non-controllable 942 Daytime Running Lamps (DRL) replace the standard Daytime Running Lamps (DRL). Includes on/off cluster controllable.</i></p>	\$45.00
Emissions		
425	50-State Emissions System	STD
Interior Colors		
39_01	Medium Earth Gray	N/C
Primary Colors		
PQ_01	Race Red	N/C

Performance

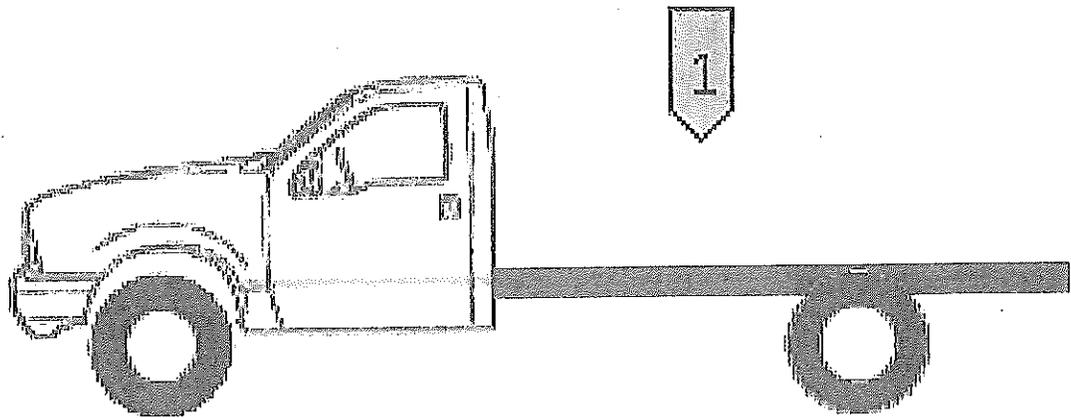
Performance predictions in this report represent an estimate of vehicle performance based on standard operating conditions. Variations in customer equipment, load configuration, ambient conditions, and/or operator driving techniques can cause significant variations in vehicle performance. These values are not representative of results that may be shown in actual dynamometer tests. This report should therefore be used as a guide for comparative vehicle performance.



Dimensions

A	Front of Bumper to Front Axle	38.30 in.
B	Front Bumper to Back of Cab (BBC)	123.70 in.
C	Wheelbase (WB)	169.00 in.
D	Overall Length (OAL)	254.80 in.
E	Back of Cab to Rear Axle (CA)	84.00 in.
F	Back of Cab to End of Frame	131.20 in.
G	Rear Axle to End of Frame (AF)	47.20 in.
H	Frame Section Height	N/A
I	Rear Frame Height Unloaded	34.50 in.
I	Rear Frame Height Loaded	28.60 in.
J	Cab Height	81.10 in.
K	Body Width	80.00 in.
L	Maximum Ground Clearance	N/A
L	Minimum Ground Clearance	8.30 in.
M	Front Tread	74.80 in.
M	Rear Tread	74.00 in.

Performance (cont'd)



Weight

GVW	Front Axle	Rear Axle	Totals
Chassis	4,774 lbs	3,221 lbs	7,995 lbs
Body	0 lbs	0 lbs	0 lbs
Occupants Weight	300 lbs	150 lbs	450 lbs
↑ Max Payload - (Max Payload)	2,426 lbs	8,629 lbs	11,055 lbs
TOTAL	7,500 lbs	12,000 lbs	19,500 lbs

Ratings	Front Axle	Rear Axle	GVWR
GAWR	7,500 lbs	14,706 lbs	19,500 lbs
Wheels/Tires	7,500 lbs	15,000 lbs	
Suspension	7,500 lbs	15,000 lbs	
Axle	7,500 lbs	14,706 lbs	
Legal Axle Limit	0 lbs	0 lbs	

Performance (cont'd)
Start, Grade and Speed

Start	Ratio	Desired	Calculated
Start grade capability in 1st gear	3.97	15.00 %	42.71 %
Start grade capability in reverse	3.13	15.00 %	33.62 %

Grade	Ratio	Desired	Calculated
Maximum grade in 4th gear	1.15	3.00 %	13.00 %
Maximum grade in 5th gear	0.86	3.00 %	9.71 %
Maximum grade in 6th gear	0.67	3.00 %	7.63 %

Speed	Desired	Calculated
Top Speed (level grade)	75 mph	88 mph
<i>To meet your requirement you need a maximum axle ratio of 5.74</i>		
Top Speed on 3.0% grade	55 mph	
<i>To meet your requirement you need a maximum of 122 hp</i>		
Cruise Speed	60 mph	65 mph
Engine RPM at desired cruise speed		2,121 rpm

Variables in Use

Rear axle ratio:.....	4.88/4.88	Governed RPM:.....	3,120 rpm
Tire size:	225/70R19.5 (645 rev/mile)	Frontal Area:	40.06 Sq.Ft.
Gross Vehicle Weight (GVW):	19,500 lbs	Cruising RPM	2,300 rpm
Clutch engagement torque:	375 ft.lbs.	Worst road surface	Typical Highway
Torque conversion ratio:....	1.90	Final Drive Ratio:.....	0.67
Peak engine torque:.....	750 ft.lbs.	Drag Coefficient.....	0.80
Engine Power:	330 hp @ 2,600 rpm		

..... and should be treated as estimates only. Actual base vehicle, package and option pricing

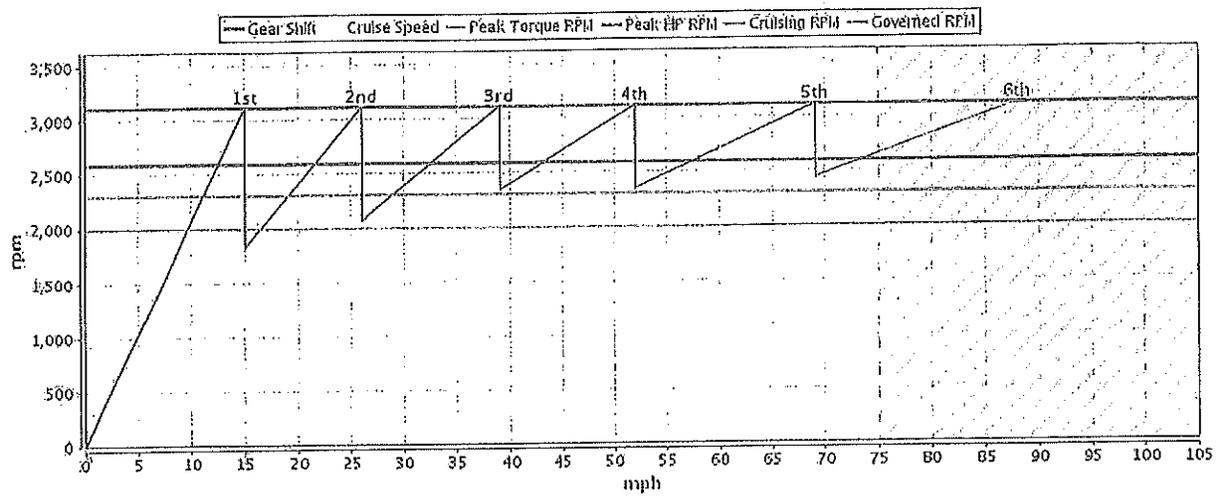
Performance (cont'd)

Shift Chart

Shift Chart displays mathematical geared speed.

Diesel engines use Governed RPM for shift points.

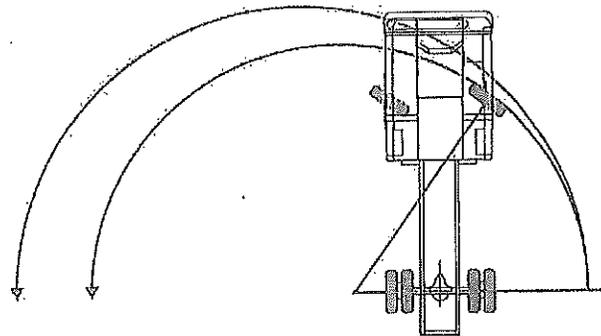
Gas engines use Peak Torque RPM for shift points.



Turning Radius

Turning Radius

24.25 ft



MAX HEIGHT

The maximum height of the apparatus shall not exceed 102".

Y__N__

MAX LENGTH

The maximum length of the apparatus shall not exceed 23' 10".

Y__N__

OVERALL WIDTH

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

Y__N__

WHEELBASE

A wheelbase restriction has not been specified for this apparatus.

Y__N__

ANGLE OF APPROACH

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

Y__N__

ANGLE OF DEPARTURE

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

Y__N__

CENTER OF GRAVITY

The apparatus, prior to acceptance, will be required to meet the vehicle stability of the applicable NFPA Automotive Fire Apparatus Standard.

A calculated center of gravity shall be provided. The calculated or measured center of gravity (CG) shall be no higher than 80-percent of the rear axle track width.

Y__N__

ENGINEERING BLUEPRINTS

The manufacturer has submitted "proposal" blueprints which are "representative" of the vehicle being proposed and these have been generated on computer-aided-design (CAD) equipment. The blueprints submitted shall be on "B" size paper, 11" x 17" in size and views are on 1/16" to 1" scale.

The blueprints are provided as follows:

Sheet No. 1: Left side exterior view
 Right side exterior view
 Rear exterior view

The manufacture shall be provide construction drawings for approval prior to actual construction of the vehicle.

The design of the equipment is in accordance with the best engineering practices. The equipment design and accessory installation shall permit accessibility for use, maintenance and service. All components and assemblies shall be free of hazardous protrusions, sharp edges, cracks or other elements, which might cause injury to personnel or equipment.

All oil, hydraulic, and air tubing lines and electrical wiring shall be located in protective positions properly attached to the frame or body structure and shall have protective loom or grommets at each point where they pass through structural members, except where a through-frame connector is necessary.

Parts and components will be located or positioned for rapid and simple inspection and recognition of excessive wear or potential failure. Whenever functional layout of operating components determines that physical or visual interference between items cannot be avoided, the item predicted to require the most maintenance shall be located for best accessibility.

Y__N__

DELIVERY

Final delivery of the completed apparatus shall be made F.O.B. Fire Department Headquarters.

Y__N__

BUMPER TO BUMPER WARRANTY

The manufacturer shall warrant each new motorized fire apparatus for a period of ONE YEAR from the date of delivery, except for chassis and other components noted herein.

Under this warranty we agree to furnish any parts to replace those that have failed due to defective material or workmanship where there is no indication of abuse, neglect, unusual or other than normal service providing that such parts are, at the option of the manufacturer, made

available for our inspection at our request, returned to our factory or other location designated by us with transportation prepaid within thirty days after the date of failure or within one year from the date of delivery of the apparatus to the original purchaser, whichever occurs first, and inspection indicates the failure was attributed to defective material or workmanship.

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

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

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

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

Y__N__

ALUMINUM BODY WARRANTY - TEN YEAR

The manufacturer warrants to the original purchaser only, that the all aluminum body, under normal use and with reasonable maintenance, be structurally sound and will remain free from corrosion perforation for a period of TEN (10) years.

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

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

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

to or from such repair facility shall be borne by the purchaser and is not an item covered under this warranty.

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

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

Note: Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufacturers.

Y ___ N ___

PAINT WARRANTY FIVE YEAR

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

The full apparatus body, manufactured and painted by the manufacturer, shall be covered for the following paint failures as outlined on the guarantee certificate:

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

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

Note: Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufacturers.

Y ___ N ___

COMPLETE PRINTED MANUAL

The manufacturer shall provide with the vehicle upon delivery, one (1) complete delivery manual. This manual shall be in a notebook type binder, with reference tabs for each section of the vehicle. A companion compact disk (CD) with all of the printed material in an electronic format (Adobe Acrobat PDF) shall be provided.

Within each section shall be:

- Individual component manufacturer instruction and parts manuals
- Warranty forms for the body
- Warranty forms for all major components
- Warranty instructions and format to be used in compliance with warranty obligations
- Wiring diagrams
- Installation instruction and drawings for major parts
- Visual graphics and electronic photos for the installation of major parts
- Necessary normal routine service forms, publications and components of the body portion of the apparatus
- Technical publications for training and instruction on major body components
- Warning and safety related notices for personnel protection
- Cab and chassis manuals on parts, service and maintenance shall be provided

Y ___ N ___

"ON-LINE" SERVICE MANUAL SUPPORT

As part of the standard delivery manual, the manufacturer shall give a password-protected link to the end user, allowing access to the manufacturers' database on service parts. The internet-based system shall allow the end user to access the major component supplier's service parts listing such as Hale, Waterous, Akron, etc. This shall be accomplished with simplistic point and click features on the manufacturer line item within the "stripper" or "line item sheet". This will include, automatic updates, printable schematics and manufacturer's web links and is available in the commercially available format of Adobe Acrobat Reader to access these documents. The manufacturer shall submit with the bid proposal, a sample set of on line Adobe formatted material that has been printed from the manufacturer's website.

Parts Listings within Manuals

The manuals will include cross-reference part numbers from the manufacturer part number to the vendor parts. Example: Hydraulic Ladder Rack, Part #LR-MN-0002 cross-referenced to Ziamatic Corporation Part 098-MN2345. This will allow for reference between individual parts and complete installation assemblies as completed by the body builder. The manuals will list all components of the vehicle that includes a vendor part utilized in a complete installation via the manufacturer's "line item sheet" or "stripper" utilized to manufacture the completed vehicle. These are "As Built" and proposals with "typical" or "generic" manuals will be rejected.

Illustrative Schematics within Manuals

The manufacturer shall include installation diagrams and drawings of all major sub assemblies. This will include components such as hydraulic ladder rack assemblies, pump panels, tanks, fire

pumps, etc. The drawings shall be linked via an Internet based service program, in an electronic format from the manufacturers "stripper" (line item listing) of the manufacturing document. The manufacturer shall submit, upon request, a sample schematic.

Digital Images within Manuals

In addition to two and three-dimensional installation drawings, the manufacturer shall make accessible, via an internet based link, the actual photos of the installed components listed within the "stripper" or line sheet. This will include, but not limited to wiring terminals, main body distribution strips, fire pump shifting, auxiliary components, etc. The manufacturer shall submit a sample of these upon request.

Installation Instructions within Manuals

The manufacturer "work instructions" or "installation instructions" shall be included with the service manuals. These documents shall be accessible via a web-based link to the individual vehicle manufactured. The work instructions shall give systematic instructions of the component installation process. The manufacturer shall submit, upon request, a sample set of instructions.

Automatic Updates of Manuals and Parts Listings

The online manuals will include automatic updates that are accessible via the web link. When clicking on the part within the manufacturer's stripper or line sheet, it will allow the end user to access the component manufacturer website for updated information. This will allow for latest parts and service components from the individual part manufacturer or vendor.

Electrical Schematics

To maintain the vehicles electrical systems, the manufacturer shall provide to the purchaser the instructional manuals, complete electrical information and schematics on the vehicle. The electrical information shall be provided as follows:

Wiring Systems 12 and 120 Volt:

- Graphic symbols for electrical diagrams.
- Wire labeling, imprinting codes and index.
- Computer generated electrical schematics indicating the circuit number, wire size, switches, circuit breaker and terminals on the vehicle.

The manufacturer shall submit, upon request, a sample set of diagrams.

Y ___ N ___

LOW VOLTAGE ELECTRICAL SYSTEM SPECIFICATIONS

07/12/18

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.

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.

The wiring between the cab and body shall be joined using Deutsche type connectors or an enclosed in a terminal junction panel area. This system will permit body removal with minimal impact on the apparatus electrical system. All connections shall be crimp-type with insulated shanks to resist moisture and foreign debris such as grease and road grime. Weather-resistant connectors shall be provided throughout to ensure the integrity of the electrical system.

Any electrical junction or terminal boxes shall be weather resistant and located away from water spray conditions. In addition, the main body junction panel shall house the automatic reset breakers and relays where required.

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 three-inches (3") by color coding or permanent marking with a circuit function code and identified on a reference chart or electrical wiring schematic per requirements of applicable NFPA #1901 standards.

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 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.
- A coil of wire must be provided behind an electrical appliance to allow them to be pulled away from mounting area for inspection and service work.
- All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.

The warning lights shall be switched in the chassis cab with labeled switches in an accessible location. Individual rocker switches shall be provided only for warning lights provided over the minimum level of warning lights in either the stationary or moving modes. All electrical equipment switches shall be mounted on a switch panel mounted in the cab convenient to the operator. The warning light switches shall be of the rocker type. For easy nighttime operation, an integral indicator light shall be provided to indicate when the circuit is energized. All switches shall be appropriately identified as to their function.

A single warning light switch shall activate all required warning lights. This switch will allow the vehicle to respond to an emergency and "call for the right of way". When the parking brake is applied, a "blocking right of way" system shall automatically activate per requirements of the applicable NFPA standards. All "clear" warning lights shall be automatically turned off upon application of the parking brake.

NFPA REQUIRED TESTING OF ELECTRICAL SYSTEM

The apparatus shall be electrically tested upon completion of the vehicle and prior to delivery. The electrical testing, certifications, and test results shall be submitted with delivery documentation per requirements of the applicable NFPA standards. The following minimum testing shall be completed by the apparatus manufacturer:

1. Reserve capacity test:

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 ten (10) minutes. All electrical loads shall be turned off prior to attempting to restart the engine. The battery system shall then be capable of restarting the engine. Failure to restart the engine shall be considered a failed test.

2. 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.

3. 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 two (2) hours. Activation of the load management system is permitted during this test. However, if an alarm sounds due to excessive battery discharge, as detected by the system requirements in the NFPA standards, or a system voltage of less than 11.7 volts dc for more than 120 seconds is present, the test has failed.

4. Low voltage alarm test:

Following the completion of the above tests, the engine shall be 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. With the load still applied, a reading of less than 11.7 volts dc for a 12 volt system shall be considered a test failure. The battery system shall then be able to restart the engine. Failure to restart the engine shall be considered a test failure.

NFPA REQUIRED DOCUMENTATION

The following documentation shall be provided on delivery of the apparatus:

- a. Documentation of the electrical system performance tests required above.
- b. A written load analysis, including:
 1. The nameplate rating of the alternator.
 2. The alternator rating under the conditions.

- 3. Each specified component load.
- 4. Individual intermittent loads.

Y__N__

LOAD MANAGER 2

The apparatus shall be equipped with a Kussmaul model 091-79 Automatic Load Shedding System for performing continuous electrical load management. The Load Manager shall have the following features:

- Monitor 12-volt system and detect low voltage.
- Capability to control two (2) loads.
- Automatic reset when voltage rises.
- Adjustable voltage setpoint.

The load manager shall be protected against reverse polarity and shorted outputs, and be enclosed in an enclosure to enhance EMI/RFI protection. The manufacturer shall provide for all electrical loads in excess of the NFPA minimum electrical requirements that exceed the alternator output.

Y__N__

HIGH IDLE SYSTEM

There shall be a high idle system furnished and installed on the apparatus. The high idle system shall have an on/off switch located in the chassis on the switch console. The system shall have an interlock that will disable the solenoid if the parking brake is not completely set.

Y__N__

ELECTRICAL CONSOLE WITH EMERGENCY LIGHT SWITCH PANEL

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

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

SWITCHES

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

Y__N__

BINDER STORAGE MODULE

One (1) cab storage module shall be provided at the rear of the center console to accommodate a minimum of six (6) 2" three ring binders. The binders shall be stored two (2) wide and three (3) high in the module. The module shall include a nylon safety belt for retaining the binder when not in use. The compartment shall be fabricated of 1/8" smooth aluminum.

A locking cabinet with a hinged door shall be included with the console for storing EMS medication. Dimension shall be a minimum of 12" wide x 6" tall x 8" deep

Y__N__

The cabinet's exterior shall have an unpainted D/A orbital sander finish.

Y__N__

The cabinet's interior shall have a natural finish.

Y__N__

BATTERY SYSTEM

The battery system shall be supplied with the chassis.

Y__N__

MASTER ELECTRIC SWITCH

One (1) master battery disconnect switch shall be located conveniently to the driver of the apparatus. The switch shall disconnect the 12 volt power supply from the battery system.

A green "Master On" light shall be provided. This light shall illuminate anytime the master switch is in the "ON" position.

Y__N__

BATTERY CHARGER

One (1) Kussmaul Autocharge model #091-165-12 12-amp automatic battery charger shall be wired to the 12 volt battery system. The charger unit shall be mounted in a clean dry area and will be accessible for service and/or maintenance.

Y__N__

BATTERY CHARGER DISPLAY

One (1) Kussmaul 091-199-001 single battery bank voltage display shall be supplied with the charger.

Y__N__

AUTO-EJECT

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

Y__N__

SHORE POWER PLUG

The shore power plug shall be located at the left front cab door.

Y__N__

12 VOLT POWER SOURCE

One (1) 12 volt power and ground connection rated at 30 amps shall be provided on the apparatus for the installation of a mobile two-way radio.

Y__N__

The power source shall be run through the chassis master battery switch and shall be deactivated when the master switch is in the "OFF" position.

Y__N__

12 VOLT POWER SOURCE

One (1) 12 volt power and ground connection rated at 20 amps shall be provided in an interior body cabinet of the apparatus body.

Y__N__

The power source shall be "constant hot" and remain active regardless of the position of the master battery switch.

Y__N__

ENGINE COMPARTMENT LIGHT

One (1) 12 volt LED light with switch shall be mounted in the engine enclosure.

Y__N__

The control switch shall be mounted on the light head.

Y__N__

LIGHT MOUNTING LOCATION

The mounting location for the specified light shall be on the front of the apparatus body.

Y__N__

SCENE LIGHT

Two (2) Fire Research Spectra LED Scene Light model SPA530-Q20 side mount push up telescopic light shall be installed. The light pole shall be anodized aluminum and have a knurled twist lock mechanism to secure the extension pole in position. The extension pole shall rotate 360 degrees. The outer pole shall be a grooved aluminum extrusion and qualify as an NFPA compliant handrail. The pole mounting brackets shall have a 2 3/4" offset. Wiring shall extend from the pole bottom with a 4' retractile cord.

The lamphead shall have eighty four (84) ultra-bright white LEDs, 72 for flood lighting and 12 to provide a spot light beam pattern. It shall operate at 12/24 volts DC, draw 18/9 amps, and generate 20,000 lumens of light. The lamphead shall have a unique lens that directs flood lighting onto the work area and focuses the spot light beam into the distance. The lamphead angle of elevation shall be adjustable at a pivot in the mounting arm and the position locked with a round knurled locking knob. The lamphead shall be no more than 5 3/8" high by 14" wide by 3 3/4" deep and have a heat resistant handle. The lamphead and mounting arm shall be powder coated. The LED scene light shall be for fire service use.

Y__N__

A raised pole hazard light switch for a telescoping pole shall be installed. The magnetic switch shall be in a cylindrical housing clamped on the outer pole. A magnet shall be mounted in the extension pole. The switch contacts shall close when the pole is raised and activate the "Do Not Move Apparatus" light in the cab when the parking brake is disengaged.

Y__N__

SCENE LIGHT SWITCHING

A scene light switch with indicator shall be installed on the cab dash and on a body console to control the left side scene light(s). The switches shall be wired to operate in a three-way

configuration to allow the light(s) to be controlled from either location regardless of switch position. The switches shall be labeled "LEFT SCENE".

Y__N__

SCENE LIGHT SWITCHING

A scene light switch with indicator shall be installed on the cab dash and on a body console to control the right side scene light(s). The switches shall be wired to operate in a three-way configuration to allow the light(s) to be controlled from either location regardless of switch position. The switches shall be labeled "RIGHT SCENE".

Y__N__

LIGHT MOUNTING LOCATION

The mounting location for the specified light shall be on the rear of the apparatus body on the right side.

Y__N__

SCENE LIGHT

One (1) Fire Research Spectra LED Scene Light model SPA530-Q20 side mount push up telescopic light shall be installed. The light pole shall be anodized aluminum and have a knurled twist lock mechanism to secure the extension pole in position. The extension pole shall rotate 360 degrees. The outer pole shall be a grooved aluminum extrusion and qualify as an NFPA compliant handrail. The pole mounting brackets shall have a 2 3/4" offset. Wiring shall extend from the pole bottom with a 4' retractile cord.

The lamphead shall have eighty four (84) ultra-bright white LEDs, 72 for flood lighting and 12 to provide a spot light beam pattern. It shall operate at 12/24 volts DC, draw 18/9 amps, and generate 20,000 lumens of light. The lamphead shall have a unique lens that directs flood lighting onto the work area and focuses the spot light beam into the distance. The lamphead angle of elevation shall be adjustable at a pivot in the mounting arm and the position locked with a round knurled locking knob. The lamphead shall be no more than 5 3/8" high by 14" wide by 3 3/4" deep and have a heat resistant handle. The lamphead and mounting arm shall be powder coated. The LED scene light shall be for fire service use.

Y__N__

A raised pole hazard light switch for a telescoping pole shall be installed. The magnetic switch shall be in a cylindrical housing clamped on the outer pole. A magnet shall be mounted in the extension pole. The switch contacts shall close when the pole is raised and activate the "Do Not Move Apparatus" light in the cab when the parking brake is disengaged.

Y__N__

SCENE LIGHT SWITCHING

A scene light switch with indicator shall be installed on the cab dash and on a body console to control the rear scene light(s). The switches shall be wired to operate in a three-way configuration to allow the light(s) to be controlled from either location regardless of switch position. The switches shall be labeled "REAR SCENE".

Y__N__

BACK-UP ALARM

One (1) automatic electric back-up alarm shall be wired to the back-up light circuit, and mounted under the rear of the apparatus body.

Y__N__

BACKUP CAMERA

One (1) ASA color rear camera system shall be mounted on the rear of the vehicle. Backup monitor shall be incorporated into the Ford AM/FM Radio. All system components shall be installed by the apparatus body manufacturer.

Y__N__

PORTABLE LANTERN, p/n 44451

One (1) Streamlight "Vulcan" LED portable handlight shall be installed, p/n 44451. The lantern shall include a mounting bracket, with 12 volt charger wired to the battery system to allow the light to recharge when not in use.

Y__N__

HANDLIGHT INSTALLATION

The location of the handlight installation shall be in the chassis cab. All components shall be installed as directed by the fire department.

Y__N__

RADIO ANTENNA BASE

Two (2) radio antenna base shall be supplied and installed on the apparatus, the antenna coax terminating in the cab. The location shall be determined by the customer.

Y__N__

MARKER LIGHTS

LED marker lights shall be installed on the vehicle in conformance to the Department of

Transportation requirements.

Y__N__

LICENSE PLATE BRACKET

One (1) stainless steel license plate bracket shall be provided at the rear of the apparatus. The bracket shall have a LED light.

Y__N__

TAIL LIGHTS

One (1) pair of Whelen M6 LED tail/brake lights shall be provided. The rectangular 4"x6" lights shall be red.

Y__N__

TURN SIGNALS

One (1) pair of Whelen M6 LED turn signals with populated sequential chevron arrow shall be provided.

Y__N__

BACKUP LIGHTS

One (1) pair of Whelen Series M6 LED backup lights shall be installed on the rear of the apparatus body. The dimensions shall be 4" x 6" and the lens color shall be clear.

Y__N__

BACKUP LIGHT SWITCH

One (1) manual backup light switch shall be installed on the rear panel of the apparatus body.

Y__N__

FOUR LIGHT HOUSING

One (1) pair of chrome plated tail light housings shall be supplied. Each housing shall be designed to hold four (4) Whelen M6 rear lights located at the lower rear corners of the body.

Y__N__

CAB GROUND LIGHTS

There shall be two (2) AMDOR Luma-Bar H20 LED lights installed mounted to the underside of the cab step below each door. One (1) light shall be located on the driver's side and one (1) light located on the officer's side of the apparatus.

The light shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat buildup.

The ground lighting shall be activated when the parking brake is set.

Y__N__

GROUND LIGHTS - MID BODY

There shall be two (2) AMDOR Luma-Bar H20 LED lights mounted to the underside of the rub rail, mid body. One (1) light shall be located on the driver's side and one (1) light located on the officer's side of the apparatus.

The light shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat buildup.

The ground lighting shall be activated when the parking brake is set.

Y__N__

GROUND LIGHTS - REAR STEP

There shall be two (2) AMDOR Luma-Bar H20 LED, model AY-9500-12, lights mounted under the rear step. One (1) light shall be located on the driver's side and one (1) light located on the officer's side of the apparatus.

The light shall have a polycarbonate lens to eliminate breakage from impact and eliminate heat buildup.

The ground lighting shall be activated when the parking brake is set.

Y__N__

The ground lights shall automatically activate when the parking brake is applied.

Y__N__

REAR TAILBOARD LIGHTS

Two (2) LED step lights with clear lens shall be installed to illuminate the step surfaces at the rear of the apparatus body.

Y__N__

WALKWAY LIGHT

Six (6) LED walkway light shall be installed. The lights shall be installed in upper roof walkway

area.

Y__N__

The step/walkway light switch shall be installed and wired to the parking brake.

Y__N__

SCENE LIGHT

Six (6) Fire Research model SPA900-Q70 surface mount light shall be installed. The light shall be mounted with four (4) screws to a flat surface. It shall be 6 3/4" high by 9" wide and have a profile of less than 1 3/4" beyond the mounting surface. Wiring shall extend from a weatherproof strain relief at the rear of the light.

The light shall have twenty-four (24) white LEDs that generate a rated 7000 lumens at 12 or 24 volts DC. The lens shall redirect the light along the vehicle and out onto the working area. The light housing shall be aluminum with a chrome colored bezel.

Y__N__

SCENE LIGHT LOCATION

Two (2) scene light shall be located on the left side of the apparatus body.

Y__N__

The scene light shall be installed on a treadplate mounting plate.

Y__N__

SCENE LIGHT LOCATION

Two (2) scene light shall be located on the right side of the apparatus body.

Y__N__

The scene light shall be installed on a treadplate mounting plate.

Y__N__

SCENE LIGHT LOCATION

Two (2) scene light shall be located on the rear of the apparatus body.

Y__N__

SCENE LIGHT SWITCHING

A scene light switch with indicator shall be installed on the cab dash and on a body console to control the left side scene light(s). The switches shall be wired to operate in a three-way

configuration to allow the light(s) to be controlled from either location regardless of switch position. The switches shall be labeled "LEFT SCENE".

Y__N__

SCENE LIGHT SWITCHING

A scene light switch with indicator shall be installed on the cab dash and on a body console to control the right side scene light(s). The switches shall be wired to operate in a three-way configuration to allow the light(s) to be controlled from either location regardless of switch position. The switches shall be labeled "RIGHT SCENE".

Y__N__

SCENE LIGHT SWITCHING

A scene light switch with indicator shall be installed on the cab dash and on a body console to control the rear scene light(s). The switches shall be wired to operate in a three-way configuration to allow the light(s) to be controlled from either location regardless of switch position. The switches shall be labeled "REAR SCENE".

Y__N__

SCENE LIGHT SWITCHING

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

Y__N__

DOOR OPEN LIGHT

One (1) red flashing, warning light shall be provided and installed in the driver's compartment to indicate an open passenger or apparatus compartment door. The warning light shall also be attached to folding equipment racks and light towers as specified. The light shall be a flashing LED marker light with a red lens and shall be properly marked and identified.

Y__N__

DOOR OPEN/HAZARD WARNING ALARM

A door open/hazard warning alarm shall be installed. The audible alarm shall activate when an open door is detected upon release of the parking brake. The alarm shall have a distinct noise to avoid conflict with other cab mounted alarms.

Y__N__

ELECTRIC SIREN AND CONTROL

One (1) Whelen model #295SLSA1 electronic siren shall be mounted in the cab. This unit shall

feature an electronic air horn, wail, yelp, hi-lo and shall have a hard wired PA microphone.

Y__N__

SPEAKER

One (1) Whelen Model #SA315P, nylon composite speaker shall be installed. The speaker shall be wired to the electric siren located in the cab.

Y__N__

SPEAKER

One (1) stainless steel grille shall be installed on the speaker.

Y__N__

SPEAKER LOCATION

The siren speaker shall be installed on the apparatus bumper extension, as determined by the body manufacturer.

Y__N__

LIGHTBAR

One (1) Whelen Justice series light bar shall be included with the apparatus cab. The light bar shall be a model JE2NFPA and shall be mounted on the roof of the cab, towards the front, above the windshield.

The light bar shall feature:

- A 56" light bar designed for high performance
- Four (4) red Linear Super LED corner modules
- Four (4) red CON3 LED hinged modules
- Two (2) white CON3 LED hinged modules with exterior clear optic lenses
- Clear hard coated lenses to provide extended life/luster protection against UV & chemical stresses
- Designed in accordance with NFPA Zone A requirements

Y__N__

LIGHTBAR ACTIVATION

The front upper light bar shall be activated through the master warning switch.

Y__N__

UPPER REAR WARNING LIGHTS

07/12/18

One (1) pair of Whelen model M6 LED warning lights shall be installed, one each side on the upper rear of the apparatus body. The dimensions of the lights shall be 4-5/16" x 6-3/4".

Y__N__

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

Y__N__

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

Y__N__

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

Y__N__

UPPER SIDE FRONT WARNING LIGHTS

One (1) pair of Whelen model M6 LED warning lights shall be installed, on the upper portion of the body side, towards the front. The dimensions of the lights shall be 4-5/16" x 6-3/4".

Y__N__

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

Y__N__

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

Y__N__

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

Y__N__

UPPER SIDE REAR WARNING LIGHTS

One (1) pair of Whelen model M6 LED warning lights shall be installed, one each side on the upper portion of the body side, towards the rear of the body. The dimensions of the lights shall be 4-5/16" x 6-3/4".

Y__N__

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

Y__N__

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

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

Y__N__

LOWER FRONT WARNING LIGHTS

One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side one the front of the chassis cab. The warning light shall incorporate six red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The dimensions of the lights shall be 2" x 4".

Y__N__

The driver side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

Y__N__

The officer side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

Y__N__

INTERSECTION WARNING LIGHTS

One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side of the chassis cab. The warning light shall incorporate six red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The dimensions of the lights shall be 2" x 4".

Y__N__

The driver side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

Y__N__

The officer side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

Y__N__

LOWER MID-BODY WARNING LIGHTS

One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side one of the apparatus, mid body. The warning light shall incorporate six red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The dimensions of the lights shall be 2" x 4".

Y__N__

The driver side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

Y__N__

The officer side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

Y__N__

Each light shall be surface mounted with a Whelen Model LIN6FC chrome flange.

Y__N__

LOWER REAR SIDE WARNING LIGHTS

One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side of the apparatus body, towards the rear of the body. The warning light shall incorporate six red Super-LEDs, a clear non-optic hard coated polycarbonate lens, clear optic collimator and utilize a metalized reflector for maximum output. The dimensions of the lights shall be 2" x 4".

Y__N__

The driver side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

Y__N__

The officer side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

Y__N__

Each light shall be surface mounted with a Whelen Model LIN6FC chrome flange.

Y__N__

LOWER REAR WARNING LIGHTS

One (1) pair of Whelen model M6 LED warning lights shall be installed, one each side on the lower rear of the apparatus body. The dimensions of the lights shall be 4-5/16" x 6-3/4".

Y__N__

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

Y__N__

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

Y__N__

Y__N__

FLUID DATA PLAQUE

One (1) fluid data plaque containing required information shall be provided based on the applicable components for this apparatus, compliant with NFPA Standards:

- Engine oil
- Engine coolant
- Chassis transmission fluid
- Drive axle lubricant
- Power steering fluid
- Pump transmission lubrication fluid
- Other NFPA applicable fluid levels or data as required

Location shall be in the driver's compartment or on driver's door.

Y__N__

DATA & WARNING LABELS

HEIGHT LENGTH & WEIGHT

A highly visible label indicating the overall height, length, and weight of the vehicle shall be installed in the cab dash area.

CAB SEATING POSITION LIMITS

The label shall also include the seating positions for firefighters. A weight allowance of 250 pounds for each shall be factored into the gross vehicle weight rating of the chassis.

Y__N__

NO RIDE LABEL

One (1) "NO RIDERS" label shall be applied on the vehicle at the rear step area or other applicable areas. The label shall warn personnel that riding in or on these areas, while the vehicle is in motion is prohibited.

Y__N__

CAB SEATING POSITION LIMITS

One (1) label shall be installed in the cab to indicate seating positions for firefighters. A weight allowance of 250 pounds for each shall be factored into the gross vehicle weight rating of the chassis.

Y__N__

HELMET WARNING TAG

One (1) label shall be installed in the cab, visible from each seating position. The label shall read "CAUTION: DO NOT WEAR HELMET WHILE SEATED." Helmets must be properly stowed while the vehicle is in motion according to the current edition of NFPA 1901.

Y__N__

REAR TOWING PROVISIONS

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

Y__N__

The tow plates shall be painted black.

Y__N__

HUB AND LUG NUT COVERS

The apparatus shall have chrome or stainless steel hub and lug nut covers on the front and single rear axles.

Y__N__

TIRE PRESSURE INDICATOR, p/n RWTG1235

There shall be a tire pressure indicator, p/n RWTG1235, at each tire's valve stem on the vehicle that shall indicate if there is insufficient pressure in the specific tire.

Y__N__

EXHAUST HEAT SHIELD

A heat shield shall be installed under the body in the areas where the exhaust system is routed.

Y__N__

REAR MUD FLAPS

One (1) pair of black mud flaps shall be installed behind the rear wheels.

Y__N__

ALUMINUM RUNNING BOARDS

There shall be a set of aluminum running boards furnished on each side of the two-door commercial chassis that extend from behind the front wheel to the rear of the two-door cab. The running boards shall have slip resistant overlay material installed on each step surface.

Y__N__

BODY CONSTRUCTION

Y__N__

3/16" ALUMINUM BODY

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

The aluminum extrusion alloy shall be 6061 with a temper rating of T6, and have a tensile strength of 45,000 PSI and yield strength of 40,000 pounds. The aluminum extrusions shall 3" x 3" aluminum tubing, 1-3/4" x 3" aluminum tubing and 3" x 3" aluminum angle and specially designed extrusions, up to .250" wall thickness where applicable.

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

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

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

Compartments to be sweep-out design and to be water and dust proof. All compartments shall be made to the maximum practical dimensions to provide maximum storage capacity. To ensure maximum storage space, the apparatus shall be constructed without any void spaces between the body and the compartment walls. Double wall construction does not meet this requirement.

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

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

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

FASTENERS

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

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

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

Y ___ N ___

COMPARTMENT FLOORS

The compartment floors shall be constructed of smooth aluminum material, to match the compartment interior walls.

Y ___ N ___

ALUMINUM SUB-FRAME

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

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

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

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

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

The tubular extrusion shall consist of 1-3/4" x 3" rectangular tubes of both 1/8" and 3/16" wall thickness and 3" x 3" square aluminum tubing of both 1/8" and 3/16" wall thickness.

Y__N__

SINGLE AXLE WHEEL AREA

For ease of accessibility and maintenance, wheel well panels shall be double break formed painted smooth plate that is welded in place.

To fully protect the wheel well area from road debris and to aid in cleaning, a full depth (minimum of 25") radius wheel well liner shall be provided. Wheel well liner shall be smooth aluminum to prevent corrosion.

Y__N__

FENDERETTES

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

Y__N__

BODY DIMENSIONS

The aluminum rescue body shall be 144" long and 95" wide.

Y__N__

ROLL UP DOOR CONSTRUCTION

The roll up door(s) shall be fabricated from aluminum extrusions and be manufactured and assembled in the United States.

The door slats shall be double-wall extrusions with dimensions of 1.366" high x .315" thick. The exterior surface shall be flat and the interior surface concave to deflect loose equipment to prevent the door from jamming. Each slat shall have interlocking end shoes to prevent the slat from moving side to side resulting in binding of the door. Each slat shall be separated by a co-extruded PVC and rubber inner seal to prevent metal to metal contact and minimize dirt and moisture from entering the compartment. The inner seal shall not be visible from the exterior to maintain a clean appearance of door. The slats shall have interlocking joints with a folding locking flange to provide security and prevent penetration by sharp objects.

The track shall be a one (1) piece aluminum assembly that has an attaching flange and finishing flange incorporated into the design that facilitates installation and provides a finished look to the door without additional trim or caulking. A low profile side seal shall be utilized to maximize

usable compartment space.

A drip rail designed to prevent water from dripping into the compartment shall be provided. The drip rail shall have a built in replaceable non-contacting seal to eliminate scratching of the surface of the door.

Bottom rail extrusion must have smooth back to prevent loose equipment from jamming the door and have "V" shaped double seal to prevent water and debris from entering the compartment. The door latch system shall be a full width one (1) piece lift bar that enables the user to operate with one hand.

The roll mechanism shall have a clip system that connects the curtain slats to the operator drum to allow for easy tension adjustment without tools. A four (4) inch diameter counterbalanced operator drum to shall be incorporated to assist in lifting the door.

Y__N__

EZ-PULL DOWN STRAPS

Seven (7) elastic nylon straps shall be provided and installed on each roll up door . The straps shall be secured to the side wall of the interior compartment in a way that will allow the EZ-Pull strap to contract automatically and tuck inside the compartment when closed to prevent the strap from dangling and hindering closing of the door. When the door is the open position, the straps shall be installed so that they are fully extended as to not interfere with removing items from the compartment. For the ease of locating, the straps shall be bright orange in color.

Y__N__

DOOR DRIP PANS

An aluminum drip pan shall be provided on the roll up door.

Y__N__

COMPARTMENT HEIGHT

The body side compartment shall be 60" high.

Y__N__

LEFT SIDE BODY COMPARTMENTS

The left side body compartmentation shall be as follows:

Y__N__

LEFT FRONT COMPARTMENT

There shall be one (1) full height compartment located ahead of the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

Y__N__

COMPARTMENT DEPTH

The compartment shall be transverse to the opposite side of the truck.

The compartment shall be equipped with the following items:

Y__N__

One (1) louver with filter shall be installed in the compartment.

Y__N__

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with four (4) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

Y__N__

ADJUSTABLE SHELF

One (1) adjustable shelf shall be constructed of .188" smooth aluminum plate with 1.5" formed vertical lip front & back. Shelf supports on each side to be constructed of .188" aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8" bolts and spring-loaded cam locks. If shelf is longer than 40" a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf.

Y__N__

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

500# ROLLOUT TRAY

One (1) roll-out equipment tray shall be installed in the compartment. The tray with telescoping slides and cam follower bearings shall be rated to a maximum load of 500 lbs. The tray shall have a gas shock to hold the tray extended or closed. There shall be a lock to prevent movement, when the tray is in the closed position.

The tray shall be formed of .188" smooth aluminum plate, fabricated with two (2) inch sides. Reflective material measuring 1" x 6" shall be installed on each front corner both on the face and side of tray for firefighter safety.

Y__N__

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

COMPARTMENT DIVIDES

Two (2) compartment divider constructed from 3/16" smooth aluminum material shall be installed. The divider shall be bolted in for ease of removal.

One divider shall be mounted on the pull out tray with 30" of usable space forward of divider on tray and remaining space on tray rearward of the divider.

A second divider shall be located forward of the tray divider at 30" back from door opening side of tray.

Y__N__

HORIZONTAL SLIDE-IN MOUNTING MODULES

Four (4) horizontally mounted slide-in tracks shall be installed in the upper portion of the R1/L1 compartment. The tracks shall be fiberglass. One (1) slide in compartments shall accommodate a stokes baskets, one (1) slide in compartment shall accommodate a Little Giant ladder, one (1) shall accommodate a scoop stretcher and one (1) shall accommodate a backboard.

Y__N__

The floor area of the compartment shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

COMPARTMENT LIGHTS

Two (2) 48" long OnScene Solutions Access LED lights shall be installed, one on each side of the door opening. The lights shall contain 30 LEDs per light producing approximately 150 lumens (six LEDs and 30 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.

The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.

Y__N__

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

Y__N__

LEFT OVERWHEEL COMPARTMENT

There shall be one (1) compartment above the rear wheels. The compartment shall be equipped with a single natural finish roll up door.

Y__N__

COMPARTMENT DEPTH

The compartment shall be transverse to the opposite side of the truck.

The compartment shall be equipped with the following items:

Y__N__

One (1) louver with filter shall be installed in the compartment.

Y__N__

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with four (4) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

Y__N__

500# ROLLOUT TRAY

One (1) roll-out equipment tray shall be installed in the compartment. The tray with telescoping slides and cam follower bearings shall be rated to a maximum load of 500 lbs. The tray shall have a gas shock to hold the tray extended or closed. There shall be a lock to prevent movement, when the tray is in the closed position.

The rear of the tray shall have a 3/16" aluminum false wall permanently installed extending as high as possible.

The tray shall be formed of .188" smooth aluminum plate, fabricated with two (2) inch sides. Reflective material measuring 1" x 6" shall be installed on each front corner both on the face and side of tray for firefighter safety.

Y__N__

The roll-out tray shall be mounted on tracks to make the tray adjustable.

Y__N__

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

TRAY DIVIDER

One (1) compartment divider constructed from 3/16" smooth aluminum material shall be installed. The divider shall be adjustable fore and aft on the slide out tray.

Y__N__

COMPARTMENT LIGHTS

Two (2) 18" long OnScene Solutions Access LED lights shall be installed, one on each side of the door opening. The lights shall contain 12 LEDs per light producing approximately 60 lumens (six LEDs and 30 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.

The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.

Y__N__

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

Y__N__

LEFT REAR COMPARTMENT

There shall be one (1) full height compartment located behind the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

Y__N__

COMPARTMENT DEPTH

The compartment shall be 23" deep.

The compartment shall be equipped with the following items:

Y__N__

One (1) louver with filter shall be installed in the compartment.

Y__N__

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with four (4) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

Y__N__

ADJUSTABLE SHELF

Two (2) adjustable shelf shall be constructed of .188" smooth aluminum plate with 1.5" formed vertical lip front & back. Shelf supports on each side to be constructed of .188" aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8" bolts and spring-loaded cam locks. If shelf is longer than 40" a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf.

Y__N__

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

250# ROLLOUT TRAY

One (1) roll-out equipment tray shall be installed in the compartment. The tray with telescoping slides and cam follower bearings shall be rated to a maximum load of 250 lbs. The tray shall have a gas shock to hold the tray extended or closed. There shall be a lock to prevent movement, when the tray is in the closed position.

The tray shall be formed of .188" smooth aluminum plate, fabricated with two (2) inch sides. Reflective material measuring 1" x 6" shall be installed on each front corner both on the face and side of tray for firefighter safety.

Y__N__

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

COMPARTMENT LIGHTS

Two (2) 48" long OnScene Solutions Access LED lights shall be installed, one on each side of the door opening. The lights shall contain 30 LEDs per light producing approximately 150 lumens (six LEDs and 30 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.

The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.

Y__N__

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

Y__N__

RIGHT SIDE BODY COMPARTMENTS

The right side body compartmentation shall be as follows:

Y__N__

RIGHT FRONT COMPARTMENT

There shall be one (1) full height compartment located ahead of the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

Y__N__

COMPARTMENT DEPTH

The compartment shall be transverse to the opposite side of the truck.

The compartment shall be equipped with the following items:

Y__N__

One (1) louver with filter shall be installed in the compartment.

Y__N__

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with four (4) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

Y__N__

ADJUSTABLE SHELF

Two (2) adjustable shelf shall be constructed of .188" smooth aluminum plate with 1.5" formed vertical lip front & back. Shelf supports on each side to be constructed of .188" aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8" bolts and spring-loaded cam locks. If shelf is longer than 40" a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf.

Y__N__

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

500# ROLLOUT TRAY

One (1) roll-out equipment tray shall be installed in the compartment. The tray with telescoping slides and cam follower bearings shall be rated to a maximum load of 500 lbs. The tray shall have a gas shock to hold the tray extended or closed. There shall be a lock to prevent movement, when the tray is in the closed position.

The tray shall be formed of .188" smooth aluminum plate, fabricated with two (2) inch sides. Reflective material measuring 1" x 6" shall be installed on each front corner both on the face and side of tray for firefighter safety.

Y__N__

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

COMPARTMENT LIGHTS

Two (2) 48" long OnScene Solutions Access LED lights shall be installed, one on each side of the door opening. The lights shall contain 30 LEDs per light producing approximately 150 lumens (six LEDs and 30 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.

The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

Y__N__

RIGHT OVERWHEEL COMPARTMENT

There shall be one (1) compartment above the rear wheels. The compartment shall be equipped with a single natural finish roll up door.

Y__N__

COMPARTMENT DEPTH

The compartment shall be transverse to the opposite side of the truck.

Y__N__

The compartment shall be equipped with the following items:

One (1) louver with filter shall be installed in the compartment.

Y__N__

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with four (4) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

Y__N__

500# ROLLOUT TRAY

One (1) roll-out equipment tray shall be installed in the compartment. The tray with telescoping slides and cam follower bearings shall be rated to a maximum load of 500 lbs. The tray shall have a gas shock to hold the tray extended or closed. There shall be a lock to prevent movement, when the tray is in the closed position.

Y__N__

The tray shall be formed of .188" smooth aluminum plate, fabricated with three (3) inch sides. Reflective material measuring 1" x 6" shall be installed on each front corner both on the face and side of tray for firefighter safety.

Y__N__

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

COMPARTMENT DIVIDER

One (1) compartment divider constructed from 3/16" smooth aluminum material shall be installed. The divider shall be installed on the pull out tray and shall be adjustable fore and aft.

PAC TRAC ON AFT WALL OF DIVIDER

There shall be three (3) lengths of 7000 Series Pac Trac provided on the aft side of the tray divider for the purpose of mounting equipment. PacTrac 3-Section Z-Mount brackets shall be used for in the installation.

Equipment brackets to be attached to the Pac Trac shall be provided by the purchaser or as listed elsewhere in these specifications.

Y__N__

COMPARTMENT LIGHTS

Two (2) 18" long OnScene Solutions Access LED lights shall be installed, one on each side of the door opening. The lights shall contain 12 LEDs per light producing approximately 60 lumens (six LEDs and 30 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.

The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.

Y__N__

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

Y__N__

RIGHT REAR COMPARTMENT

There shall be one (1) full height compartment located behind the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

Y__N__

COMPARTMENT DEPTH

The compartment shall be 23" deep.

The compartment shall be equipped with the following items:

Y__N__

One (1) 12 volt powered louver with integral filter shall be installed in the compartment to provide ventilation. The louver shall be low profile type.

Y__N__

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with four (4) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

Y__N__

ADJUSTABLE SHELF

Two (2) adjustable shelf shall be constructed of .188" smooth aluminum plate with 1.5" formed vertical lip front & back. Shelf supports on each side to be constructed of .188" aluminum and bolted to an aluminum extrusion (mounted vertically) by use of 3/8" bolts and spring-loaded cam locks. If shelf is longer than 40" a reinforcement by aluminum gusset is to be placed full-length on bottom of shelf.

Y__N__

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

500# ROLLOUT TRAY

One (1) roll-out equipment tray shall be installed in the compartment. The tray with telescoping slides and cam follower bearings shall be rated to a maximum load of 500 lbs. The tray shall have a gas shock to hold the tray extended or closed. There shall be a lock to prevent movement, when the tray is in the closed position.

The tray shall be formed of .188" smooth aluminum plate, fabricated with two (2) inch sides. Reflective material measuring 1" x 6" shall be installed on each front corner both on the face and side of tray for firefighter safety.

Y__N__

The roll-out tray shall be mounted on tracks to make the tray adjustable.

Y__N__

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be

interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

COMPARTMENT LIGHTS

Two (2) 48" long OnScene Solutions Access LED lights shall be installed, one on each side of the door opening. The lights shall contain 30 LEDs per light producing approximately 150 lumens (six LEDs and 30 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.

The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.

Y__N__

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

Y__N__

REAR CENTER COMPARTMENT

There shall be one (1) full height compartment located at the rear of the apparatus. The compartment shall be equipped with a full height natural finish roll up door. The compartment shall be in depth to the overwheel compartment.

The compartment shall be equipped with the following:

Y__N__

One (1) louver with filter shall be installed in the compartment.

Y__N__

ADJUSTABLE SHELVING TRACKS

The compartments shall be equipped with four (4) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

Y__N__

500# ROLLOUT TRAY

Two (2) roll-out equipment tray shall be installed in the compartment. The tray with telescoping slides and cam follower bearings shall be rated to a maximum load of 500 lbs. The tray shall

have a gas shock to hold the tray extended or closed. There shall be a lock to prevent movement, when the tray is in the closed position.

The tray shall be formed of .188" smooth aluminum plate, fabricated with two (2) inch sides. Reflective material measuring 1" x 6" shall be installed on each front corner both on the face and side of tray for firefighter safety. The tray shall extend in depth to the area under the L2/R2 compartments above the rear wheels.

Y__N__

The roll-out tray shall be mounted on tracks to make the tray adjustable.

Y__N__

The shelf/tray shall be fitted with removable vinyl Turtle Tile matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

COMPARTMENT DIVIDER

Two (2) compartment divider constructed from 3/16" smooth aluminum material shall be installed on the pull out tray.

One (1) divider shall be bolted in for ease of removal at a position on the tray just rearward of the L2/R2 compartment wall extending from left to right.

One (1) divider shall be mounted on adjustable track on the floor and the side to side divider. Divider shall be adjustable left to right on the slide out tray rearward of the front divider.

Y__N__

COMPARTMENT LIGHTS

Two (2) 48" long OnScene Solutions Access LED lights shall be installed, one on each side of the door opening. The lights shall contain 30 LEDs per light producing approximately 150 lumens (six LEDs and 30 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.

The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.

Y__N__

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

Y__N__

REAR STEP - 12" BOLT-ON

A 12" deep step shall be provided at the rear of the apparatus body, bolted in place and easily removable for replacement or repair. The tailboard shall be constructed of .188" aluminum diamond plate or equal non-slip surface in compliance with NFPA #1901 standards.

A label shall be provided warning personnel that riding on the rear step while the apparatus is in motion is prohibited.

Y__N__

LADDER SOURCE

New ladders shall be provided by the body builder.

Y__N__

PIKE POLE MOUNTING BRACKET

Two (2) tube shall be provided for pike pole mounting. The tube shall have a 2" interior diameter and shall be mounted inside of the apparatus body.

Y__N__

PIKE POLE SOURCE

The pike poles shall be provided by the body builder.

Y__N__

FRONT BODY PROTECTION PANELS

Aluminum tread plate overlays and panels shall be installed on the front of the body compartment from the lower edge to the top of the compartment doors.

Y__N__

REAR BODY PROTECTION PANELS

The rear body panels of the body shall be a smooth material, to allow for the proper application and installation of a "Chevron" stripe on the rear.

Y__N__

POLISHED COMPARTMENT TOP WELDS

The compartment top welds to be polished.

Y__N__

FOLDING STEP RIGHT SIDE REAR

A folding step of die cast high-strength zinc/aluminum alloy, plated with a superior automotive grade chrome finish shall be provided. The greater than 42 sq. in. serrated non-skid step traction area also offers an oversized non-slip grasp hand-hold. A heavy duty stainless steel spring design firmly holds the step in the open or closed positions. A rubber stop prevents any transit noise and rattles in the closed position. Step lighting shall be from a LED light mounted above the step.

The step has been third part tested to assure conformation of NFPA 1901 and FHA, 49CFR specifications for stepping surfaces and handhold.

The step shall be installed on the rear right side of the body.

Y__N__

REAR INTERMEDIATE STEP

An intermediate fixed step shall be provided at the rear of the apparatus body, bolted in place and easily removable for replacement or repair. The intermediate step shall be constructed of .188" polished aluminum diamond plate or equal non-slip surface in compliance with NFPA #1901 standards and be approximately 8" deep x 68" wide.

Y__N__

PULL-OUT STEP

Two (2) pull-out steps, 500# slides, shall be provided below the body on the left side of the apparatus, one below L1 and one below L3. The pull-out steps are to include an aluminum treadplate stepping surface to comply with NFPA 1901.

Y__N__

PULL-OUT STEP

Two (2) pull-out steps, 500# slides, shall be provided below the body on the right side of the apparatus, one under R1 and one under R3. The pull-out steps are to include an aluminum treadplate stepping surface to comply with NFPA 1901.

Y__N__

ACCESS LADDER EZ CLIMB - LEFT REAR

There shall be a swing out and down access ladder supplied and installed on the apparatus, for accessing the top of the apparatus. It shall be of an all aluminum design and shall incorporate

treads six (6") inches deep and no more than eighteen (18") inches apart. The ground to the first step dimension, on level ground, shall be no more than twenty-four (24") inches. When in the deployed position the ladder shall have an angle of approximately 75-degrees to facilitate ascending and descending the ladder. The ladder shall be retained in the stowed and deployed position by two (2) gas cylinders and shall not require the use of lathes to hold it in position.

Y__N__

HANDRAIL REAR STEP

Two (2) extruded aluminum non-slip handrails, approximately 30" in length, shall be provided and vertically mounted on the rear of the apparatus, one (1) on each side of the body.

Y__N__

HANDRAIL BELOW HOSEBED

One (1) extruded aluminum non-slip handrail, approximately 48" in length, shall be provided and horizontally mounted below the hosebed on the rear of the apparatus.

Y__N__

EXTRUDED ALUMINUM RUB RAILS

Full body length polished aluminum rub rails shall be bolted in place on the lower right and left body sides. The side rub rails shall be a heavy extruded aluminum "C" channel.

Y__N__

NYLON SPACERS FOR RUB RAILS

There shall be nylon spacers provided between the rubrail and the body. This shall allow wash out and replacement in the event of damage.

Y__N__

WHEEL WELL PROVISION LOCATION

The wheel well provisions shall be located on the left side of the apparatus, behind of the rear wheels.

Y__N__

FUEL/DEF FILL DOORS

Two brushed aluminum fill enclosure door shall be installed in the left side rear and forward wheel wells. One (1) shall be labeled indicating DIESEL FUEL ONLY and one (1) shall be labeled indicating DEF ONLY.

Y__N__

WHEEL WELL PROVISION LOCATION

The wheel well provisions shall be located on the right side of the apparatus, ahead of the rear wheels.

Y__N__

One (1) breathing air cylinder storage compartment shall be provided and located in the rear wheel well of the apparatus body.

The cylinder storage compartment shall be constructed entirely of aluminum. The door assemblies shall be provided with a gasket between door and body side, bolted in-place and removable for repair or replacement.

Compartment shall be provided with SCBA cylinder scuff protection. A brushed aluminum door with push button trigger latch shall be provided.

All SCBA compartments mounted in the wheel well area shall have an o-ring gasket with finger latch assembly.

Y__N__

One (1) one-inch (1") wide loop of black webbing shall be installed in each SCBA compartment to prevent the bottle from sliding out of the compartment in case of door failure. The loop shall be mounted, centered in the compartment and shall hang within one-inch (1") of the compartment floor to allow the bottle to pass by the strap when the bottle is placed in the compartment. The strap shall loop over the valve.

Y__N__

WHEEL WELL PROVISION LOCATION

The wheel well provisions shall be located on the right side of the apparatus, behind the rear wheels.

Y__N__

One (1) breathing air cylinder storage compartment shall be provided and located in the rear wheel well of the apparatus body.

The cylinder storage compartment shall be constructed entirely of aluminum. The door assemblies shall be provided with a gasket between door and body side, bolted in-place and removable for repair or replacement.

Compartment shall be provided with SCBA cylinder scuff protection. A brushed aluminum door with push button trigger latch shall be provided.

All SCBA compartments mounted in the wheel well area shall have an o-ring gasket with finger latch assembly.

Y__N__

One (1) one-inch (1") wide loop of black webbing shall be installed in each SCBA compartment to prevent the bottle from sliding out of the compartment in case of door failure. The loop shall be mounted, centered in the compartment and shall hang within one-inch (1") of the compartment floor to allow the bottle to pass by the strap when the bottle is placed in the compartment. The strap shall loop over the valve.

Y__N__

UPPER BODY SIDE COMPARTMENT

Two (2) upper body compartment shall be provided top of body with dimensions of approximately 72" and 12" deep.

The compartment shall have a lift-up door installed, constructed of 1/8" aluminum tread plate. The door shall have a stainless steel hinge and dual gas openers. The door opening shall be flanged upward 1" to prevent water from running into compartments when the door is closed. Two (2) heavy duty socket and plunger latches shall be installed to hold the door along with a heavy duty chrome grab handle to lift the door.

The compartment shall be located on the left side of the body.

Provision for storing a 2-section, ALCO PEL-16 aluminum ladder shall be provided in this compartment. Ladder shall be enclosed and seperated from the remainder of the upper roof compartment with 1/8" aluminum on the top and sides. Two (2) Pike pole tubes shall be located above ladder storage within the upper body compartment.

Remaining storage area to be open.

Y__N__

ROOF COMPARTMENT DOOR

One (1) lift-up door, constructed of aluminum tread plate with aluminum box pan shall be provided. The door shall have a stainless steel hinge and dual gas openers. The door opening shall be flanged upward 2" with 1" reverse lip, to prevent water from running into compartments when the door is closed. Two (2) butterfly latches shall be installed to hold down the door along with a stainless steel handle to lift the door. The door shall be located on the rear of the rooftop cabinet above the rear panel of the apparatus.

Y__N__

COMPARTMENT LIGHT

Two (2) LED light fixture shall be installed on the wall of the compartment. The light shall have a clear lens.

Y__N__

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

Y__N__

UPPER BODY SIDE COMPARTMENT

Two (2) upper body compartment shall be provided top of body with dimensions of approximately 60" and 12" deep.

The compartment shall have a lift-up door installed, constructed of 1/8" aluminum tread plate. The door shall have a stainless steel hinge and dual gas openers. The door opening shall be flanged upward 1" to prevent water from running into compartments when the door is closed. Two (2) heavy duty socket and plunger latches shall be installed to hold the door along with a heavy duty chrome grab handle to lift the door.

The compartment shall be located on the right side of the body.

Y__N__

ROOF COMPARTMENT DOOR

One (1) lift-up door, constructed of aluminum tread plate with aluminum box pan shall be provided. The door shall have a stainless steel hinge and dual gas openers. The door opening shall be flanged upward 2" with 1" reverse lip, to prevent water from running into compartments when the door is closed. Two (2) butterfly latches shall be installed to hold down the door along with a stainless steel handle to lift the door. The door shall be located on the rear of the rooftop cabinet above the rear panel of the apparatus.

Y__N__

COMPARTMENT LIGHT

Two (2) LED light fixture shall be installed on the wall of the compartment. The light shall have a clear lens.

Y__N__

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

Y__N__

UPPER BODY COMPARTMENT

One (1) 12" deep x 46" right to left x 48" front to rear, upper body equipment compartment with lift-up door shall be provided.

The compartment shall have a lift-up door installed, constructed of 1/8" aluminum tread plate. The door shall have a stainless steel hinge and dual gas openers. The door opening shall be flanged upward 1" to prevent water from running into compartments when the door is closed. Two (2) heavy duty socket and plunger latches shall be installed to hold the door along with a heavy duty chrome grab handle to lift the door.

The compartments shall be located at the front of the body on the right side.

Y__N__

COMPARTMENT LIGHT

Two (2) LED light fixture shall be installed in the compartment, mounted on the wall of the compartment. The compartment light shall have a clear lens.

Y__N__

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

Y__N__

SHORELINE RECEPTACLES

The following receptacles shall be wired to the shoreline power.

Y__N__

POWER DISTRIBUTION STRIP

Two (2) power distribution strip with six (6) straight blade receptacles shall be provided. The unit shall have a 20 amp capacity and an integral on/off switch.

One (1) in the L1 compartment and one (1) in the R2 Compartment

Y__N__

PORTABLE ELECTRIC WINCH

One (1) 9,000 pound capacity portable winch, Model XD9000i P/N 37441, manufactured by the Warn Winch Company shall be installed. The 12-volt electric winch system shall utilize a portable mounting system with two carrying handles. Power is supplied to the winch through a

12 volt pigtail with a quick connect plug. The winch shall be attached to the body at the specified locations with a steel tube insert secured with a pin.

The winch shall have forward and reverse modes and shall be controlled by a push button device at the end of a removable 25 foot minimum or longer remote lead which connects to the winch through a weatherproof receptacle.

The winch shall be provided with a cable guide, 125 feet of 5/16" diameter galvanized aircraft cable and hook assembly.

Y__N__

WINCH RECEIVER - FRONT

The front of the chassis shall be equipped with a receiver assembly for high or low angle rescue or winch applications. The receiver shall be a square steel tube, same size as that of a trailer hitch. The unit shall be attached to the chassis frame assembly.

Y__N__

One (1) 12 volt Warn quick disconnect electrical receptacle, shall be installed in the body for the portable winch. The power cables shall be color coded "red" positive and "black" neutral and rated at 125% of winch power requirement (including line drop).

Y__N__

WINCH RECEIVERS - SIDE BODY

The body shall be equipped with one (1) receiver assembly for high or low angle rescue or winch applications. The receiver shall be a square steel tube, same size as that of a trailer hitch. The unit shall be attached to the body sub-frame assembly or chassis frame rails and shall be located behind the rear wheels.

Y__N__

Two (2) 12 volt Warn quick disconnect electrical receptacle, shall be installed in the body for the portable winch. The power cables shall be color coded "red" positive and "black" neutral and rated at 125% of winch power requirement (including line drop).

Y__N__

REAR TRAILER HITCH

One (1) trailer hitch rated at approximately 10,000 pounds shall be installed at the rear of the apparatus and be attached to the body sub-frame assembly. The hitch shall include a removable receiver insert slide-in ball mount with a 2-5/16" ball and a 5/8" hitch and safety pin.

Y__N__

One (1) 12 volt Warn quick disconnect electrical receptacle, shall be installed in the body for the portable winch. The power cables shall be color coded "red" positive and "black" neutral and rated at 125% of winch power requirement (including line drop).

Y__N__

TRAILER POWER PLUG

One (1) trailer plug shall be provided at the rear of the apparatus. A 12 volt seven (7) pin electrical connector shall be wired to the chassis stop, running, and turn lights.

Y__N__

CHASSIS PAINT

The commercial chassis shall be painted by the chassis manufacturer.

Y__N__

BODY PAINT PROCESS

All bright metal fittings, if unavailable in stainless steel shall be heavily chrome plated. Iron fittings shall be copper plated prior to chrome plating. If applicable, any and all accessory times shall be removed from the body prior to cleaning and painting. Any accessory items that are to be painted, shall be painted separately and installed after the body is painted and cured.

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

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

The next two to four coats (depending on need) shall be a PPG DelFleet F4936 High Solids Epoxy Gray Primer. The film build shall be 4-6 mils when dry. The primer surfacer coat, after appropriate dry time, shall be sanded with 320-600 grit sandpaper to ensure maximum gloss of the paint. The last step is the application of at least three coats of PPG DelFleet polyurethane two-component color (single stage). The film build being 2-3 mils dry. The single stage polyurethane, when mixed with component (PPG F3270) catalyst shall provide a UV barrier to prevent fading and chalking.

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

Y__N__

APPARATUS COLOR

Y__N__

INTERIOR COMPARTMENT FINISH

Eight (8) apparatus side compartment interiors are to be painted with a spatter finish material. The compartments shall be cleaned with a grease remover, and then the surface sanded and prepared for painting. The compartment shall be provided with two (2) coats of white epoxy. The compartments are then coated with a splatter paint top coat.

Y__N__

TOUCH-UP PAINT

One (1) two (2) ounce bottle of touch-up paint shall be furnished with the completed truck at final delivery.

Y__N__

UNDERCOATING

The cab fenders and entire underside of the two-door commercial chassis cab is to be cleaned and properly prepared for application of a sprayed on automotive type undercoating for added corrosion resistance. Undercoating is to be a solvent based, rubberized coating, black in color.

Y__N__

UNDERCOATING

The entire underside of the single axle apparatus body is to be cleaned and properly prepared for application of a sprayed on automotive type undercoating for added corrosion resistance. Undercoating is to be a solvent based, rubberized coating, black in color.

Y__N__

LETTERING

Lettering shall be supplied by Larkin Sign of Great Barrington Massachusetts. The bidder shall be responsible for the cost of this lettering not to exceed \$3,500.00

Y__N__

REFLECTIVE STRIPING

The dealer shall supply reflective striping for the apparatus in compliance to applicable NFPA standards.

Y__N__

CHEVRON STRIPING

The entire rear portion of the body shall have 3M reflective red and yellow striping installed. The chevron style striping shall be applied at a 45-degree upward angle pointing towards the center upper portion of the rear panel.

Y ___ N ___

WHEEL CHOCKS

Two (2) medium aluminum wheel chocks shall be provided.

Y ___ N ___

WHEEL CHOCK MOUNTINGS

Two (2) wheel chock holders shall be mounted under the apparatus body.

Y ___ N ___

EXTENSION LADDER

One (1) Alco-Lite Model PEL-16, 16 foot two (2) section aluminum extension ladder shall be provided on the apparatus. The ladder shall meet or exceed latest NFPA standards.

Y ___ N ___

ROOF HOOK

One (1) 6-ft Fire Hooks Unlimited NY style Roof Hook with grips shall be provided.

Y ___ N ___

ROOF HOOK

One (1) 10-ft Fire Hooks Unlimited NY style Roof Hook with grips shall be provided.

Y ___ N ___

CONTINGENCY

An allotment of \$12,000.00 is included in the bid price for the purpose of mounting of tools, change orders, radios and any additional equipment. A final invoice for all contingency items shall be provided to the Fire Department and any remaining balance shall be credited to the Fire Department. Any amount in excess of the allotted \$12,000.00 will be the responsibility of the Fire Department and must be approved in writing.