



Town of Ferdinand
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Ferdinand, IN 47532-0007
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www.ferdinandindiana.org

July 23, 2026

INVITATION TO BID

To whom it may concern:

Enclosed is an invitation to bid. The Ferdinand Indiana Volunteer Fire Department is seeking bids for a rescue truck and equipment. If you need additional information, please contact John Hoppenjans, Ferdinand Fire Chief, 812.630.1082, ferdinandfd@psci.net.

The town is a tax exempt entity. Also please provide an estimated but considered accurate date of availability.

Thank you for your consideration.

Fire Chief John Hoppenjans, Ferdinand Volunteer Fire Department

KENNETH SICARD, President
TAMARA M. MILLER, Clerk-Treasurer

DEBBIE JOHNSON, Member
SHARON BOHNENKEMPER, Attorney

RONALD WEYER, Member

One (1)

INSTRUCTIONS TO BIDDERS

Sealed bids will be received by the Ferdinand Volunteer Fire Department until 6:45 p.m. (Ferdinand time) on August 18, 2026 at 2065 Main St., Ferdinand, IN 47532 for a F550 Light Rescue Truck (the Fire Apparatus) and the furnishing of all necessary labor, equipment and material for the Fire Apparatus, and other equipment as outlined in the following specifications.

Bids will be addressed and submitted in accordance with the instructions provided. Each bid must be submitted in a sealed envelope, addressed to the Town Council, Town of Ferdinand, P.O. Box 7, 2065 Main St., Ferdinand, IN 47532, or delivered to Ferdinand Town Hall, Ferdinand, Indiana. Each sealed envelope containing a bid must be plainly marked on the outside as "Rescue Truck", and said envelope should bear on the outside the name of the Bidder and its address. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed to the Town Council, Town of Ferdinand, PO Box 7, Ferdinand, Indiana 47532. Any questions should be addressed to Fire Chief John Hoppenjans, ferdinandfd@psci.net, 812.630.1082.

All specifications herein contained are considered as minimum. No exceptions to these minimum standards will be allowed relating to gauge, alloy, and type of metal, size of compartments and overall design. Bidders must state the brand of any item provided which is a substitute for the brand or model specified for evaluation by the bidder. The buyer reserves the right to require a bidder to provide proof in each case that a substituted item is equal to that specified. The buyer will be the sole judge in determination of acceptable substitutes.

Submit only one (1) bid that meets or exceeds the minimum specifications. No substitutes, stock units, or alternates will be permissible unless such units are requested later in the specifications. If this is done, the bidder will be automatically disqualified.

This apparatus will conform to the current edition of the National Fire Protection Association Pamphlet No. 1900.

All bids must be signed. Failure to do so will cause the bid to be non-responsive and rejected.

The competency and responsibility of Bidders will be considered in making the award. The Fire Department reserves the right to reject any or all bids, or to reject the bid of the bidder who, in the judgment of the buying authority is not in a position to perform the Contract. These specifications, together with any other documents required herein, will be included in the final contract. Each bidder will submit a copy of his proposed contract form. The purchaser reserves the right to reject a bid based on unacceptable provisions of a bidder's contract and does not obligate itself to accept the lowest or any bid.

It will be the responsibility of the bidder to ensure that their proposal arrives at the proper location by the time indicated. Late proposals, telegrams, facsimile, or telephone bids will not be considered. Bids will not be considered from firms, individuals or the same owners of separate companies submitting more than one bid.

Any erasures, strikeouts and/or changes to prices written in numerals should be initialed by the bidder. Failure to initial may be cause to reject the bid as irregular and disqualified from consideration.

A written review of the company, in chronological order, detailing the background of the manufacturer shall be provided as part of the Bid proposal.

If a vendor represents more than one Fire Apparatus Company, they will only bid the top of the line product that meets specifications.

The body is to be completely built, painted, and installed by the prime body manufacturer, which minimizes third party involvement on engineering, design, service, and warranty issues. Apparatus using a subcontracted body will not be acceptable.

THE PURCHASER WILL NOT ACCEPT ANY BIDS, WHICH DO NOT MEET THESE SPECIFICATIONS AND IS THE SOLE DECIDER TO DEEM WHICH BID IS IN THE BEST INTEREST OF THE PURCHASER.

QUALITY AND WORKMANSHIP

The design of the apparatus proposed shall embody the modular design and construction technique as outlined.

The workmanship is of the highest quality in its respective field. Special consideration has been given to the following points: accessibility of the various components, which require periodic maintenance operations for ease of operation, including both pumping and driving operations and symmetrical proportioning of the overall apparatus.

Construction utilized shall be rugged and safety factors have been provided to carry loads as specified and to meet the road requirements and speed conditions as set forth under "Performance Tests and Requirements".

Welding shall not be employed in the assembly of the apparatus in a manner that prevent the removal of major component parts for service and/or repair. This includes the following but is not limited to compartment doors, hinges, fender liners, and running boards, hose beds, and pump panels, etc.

INFORMATION REQUIRED WITH BID

The fire apparatus and equipment to be furnished in meeting these specifications must be the product of an established reputable fire apparatus manufacturer of ten-(10) years or more. Each bidder will furnish satisfactory evidence of the manufacturer's ability to construct, supply service, parts and technical assistance for the apparatus specified. The bidder must state the location of the factory and full service center.

The general construction of the apparatus will give due consideration to the nature and distribution of the load to be sustained and the general character of the service to which the apparatus is to be subjected when placed in service. The body will be modular in design and construction of the latest modern type, for transfer of body to another chassis without cutting or welding.

Each bidder must submit a detailed proposal, which accurately specifies the construction method to be used in the apparatus. The purchaser will utilize this proposal to compare the unit proposed with the specifications. To facilitate comparison all bid proposal specifications will be submitted in the same sequence as the advertised specification. Any bidder who fails to submit a set of construction specifications, or who photocopies and submits these specifications as their own construction details will be considered non-responsive. Thus, render such proposal ineligible for award.

One (1)

EXCEPTIONS

These specifications are based upon design and performance criteria, which have been developed by the fire department because of extensive research and careful analysis. Subsequently these specifications reflect the only type of fire apparatus that is acceptable at this time. Therefore, major exceptions to specifications will not be accepted. No exceptions shall be taken in regard to the thickness of the body metals.

The bidder will make accurate statements as to the apparatus weight and dimensions. All bids will include a complete set of detailed manufacturer's specifications. The Purchaser's standards for bidding Automotive Fire Apparatus must be strictly adhered to, and all bid forms and questions must be complete and submitted with the bid. Omissions and variations will result in immediate rejection of the bid.

Certified engineering performance information and thickness of materials used will be furnished in the bidder specifications.

To the right side of each paragraph of the fire department specifications, the bidder will state "YES" or "NO" indicating compliance with the specifications. All deviations, no matter how slight, will be clearly explained on a separate cover sheet entitled "EXCEPTIONS TO SPECIFICATIONS". Any exceptions or variations to these specifications must be set forth on separate sheets, indicating page number (s) of the specifications, and must be submitted with the bid. Any bid deemed as taking total exception to these published specifications will result in immediate rejection of the bid.

Proposals that are found to have deviations without listing them will be rejected. No Exceptions

No prototype apparatus will be considered and all design, operational and material features must fully comply with the State and Federal Motor Vehicle Safety Standards.

One (1)

BIDDERS BACKGROUND

Bids are requested from responsible manufacturers who are engaged in the manufacture of fire apparatus. To ensure reliable and complete acceptance of the apparatus, bidder shall have been in operation for a minimum of ten (10) years in the manufacturing of fire apparatus.

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

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

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

One (1)

PROPRIETARY PARTS

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

One (1)

COOPERATIVE PURCHASING

The manufacturer shall be pleased to allow other public agencies to use the purchase agreement resulting from this invitation to bid unless the bidder expressly notes on the proposal form that prices are not available for tag-on. The condition of such use by other agencies shall be that any such agency must make and pursue contact, purchase order/contract, and all contractual remedies with the successful bidder. Such tag-on shall be done so that the purchaser has no responsibility for performance by either the manufacturer or the agency using the contract.

One (1)

FAIR, ETHICAL AND LEGAL COMPETITION

In order to ensure fair, ethical, and legal competition the apparatus manufacturer shall never have ever been fined or convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.

One (1)

PRODUCT QUALITY AND WORKMANSHIP

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

A). Accessibility to various components that require periodic maintenance or lubrication checks.

B). Ease of vehicle and pump operation.

C). Features beneficial to the intended operation of the apparatus.

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

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

One (1)

PAYMENT TERMS

Full payment for the apparatus shall be made at time of delivery of the completed vehicle. Due to insurance liability, the apparatus will not be left at the purchaser's location without full acceptance and payment or prior agreement between the Purchaser and Bidder.

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

One (1)

NFPA COMPLIANT

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

One (1)

VEHICLE STABILITY

A. The height of the fully loaded vehicle center of the gravity not shall exceed the chassis manufacturer maximum.

B. The front to rear weight distribution of the fully loaded vehicle shall be within the limits set by the chassis manufacturer. The front axle loads not be less than the minimum axle loads specified by the chassis manufacturer, under full load and all other loading conditions.

C. Difference in weight on the end of each axle, from side to side, when the vehicle is fully loaded and equipped shall not exceed 7%.

PERFORMANCE TEST AND REQUIREMENTS

A. The apparatus meet the performance requirements at elevations of 2000 feet (610 m) above sea level.

B. The apparatus meet the performance requirements while stationary on any grade of up to and including 6% in any direction.

C. From a standing start, the vehicle shall attain a true speed of 35 mph (56 kmph), within 25 seconds on a level road.

D. The apparatus obtain a minimum top speed of 50 mph (80 kmph) on a level road.

ROAD TEST CERTIFICATION

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

A). The apparatus must be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed RPM of the engine.

B). The apparatus must be capable of accelerating from a steady speed of 15 mph to a true speed of 35 mph within 30 seconds. This shall be accomplished without moving the gear selector.

C). The fully loaded apparatus shall be capable of obtaining a speed of 50 to 55 mph on a level concrete highway.

D). The manufacturer shall furnish copies of the engine installation approvals signed by the appropriate engine company upon delivery of the chassis to the Fire Department.

E). The manufacturer shall furnish copies of the transmission approval signed by the transmission manufacturer upon delivery of the chassis to the Fire Department.

F). The manufacturer shall furnish copies of the front and rear axle approvals upon delivery of the apparatus to the Fire Department.

ROAD TEST FAILURE

In the event the apparatus fails to meet the test requirements of these specifications on the first trials, second trials may be made at the option of the manufacturer within thirty (30) days of the first trials. Such trials shall be final and conclusive and failure to comply with changes, as the purchaser may consider necessary to conform to any clause

of the specifications within thirty (30) days after notice is given to the manufacturer of such changes, shall be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser, or its use by the purchaser during the above-specified period with permission of the manufacturer, shall not constitute acceptance.

VEHICLE TOP SPEED

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

One (1)

LIABILITY

The manufacturer if deemed the successful bidder will defend any and all suits, assume all liability for the use of any patented process, advice or article forming a part of the apparatus or any appliance furnished under contract.

We respectfully request you carefully review our bid proposal and if you have any questions or require additional information, we welcome the opportunity to meet with you.

One (1)

LIABILITY INSURANCE

Due to the high cost of replacement of said Fire Apparatus and to protect the customer of his full rights, the manufacturer carries garage liability insurance equal to or in excess of \$1,000,000.00

One (1)

WARRANTY

The manufacturer will warrant the entire proposed apparatus, manufactured, and/or assembled by them to be free from defects in materials or workmanship under normal use and service for a period of one-(1) year from the date of delivery.

The manufacturer, from the date of delivery, warrant the body structure of the new Fire Apparatus against structure defects in workmanship for a period of ten-(10) years, to the original purchaser.

The manufacturer shall warrant to the original purchaser a four-(4) year body paint warranty. This warranty blistering, peeling, or any other adhesion defects caused by defective manufacturing methods, or material selection, for a warranty period of four-(4) year or 100,000 miles, which occurs first after the date of which the vehicle is first delivered to the original purchaser.

Each warranty is detailed in the "Warranty" section of the bid proposal and properly executed certificates of warranty be provided with the vehicle upon delivery and acceptance.

Schedule of Warranties

- A. Chassis by Ford
- B. Chassis Frame Rails-Five by Ford
- C. Engine by Ford
- D. Transmission by Ford
- E. Apparatus Body- One year
- F. Apparatus Rust/Corrosion Perforation- Ten Years
- G. Apparatus Paint- Four Years

One (1)

SERVICE

The manufacturer will have an authorized dealer and service center within 120 miles of the fire department.

The authorized dealer or manufacture's employs Fire Apparatus technicians to ensure the customer that service be provided.

One (1)

DELIVERY

The delivery of the completed apparatus shall be within _____calendar days after receipt of chassis

The manufacturer shall not be held liable for changes arising from its failure to make or delay in making delivery because of fire, flood, strike, riot, chassis shortage, accidents, acts of God, or any circumstances beyond their control.

One (1)

INFORMATION SUPPLIED AT TIME OF DELIVERY

Information required at time of delivery to be supplied by the manufacture. include:

(1) The manufacturer's record of apparatus construction details, including the following information:

- (a) Owner's name and address
- (b) Apparatus manufacturer, model, and serial number
- (c) Chassis make, model, and serial number
- (d) GAWR of front and rear axles
- (e) Front tire size and total rated capacity in pounds (kilograms)
- (f) Rear tire size and total rated capacity in pounds (kilograms)
- (g) Chassis weight distribution in pounds (kilograms) with water and manufacturer-mounted equipment (front and rear)

- (h) Engine make, model, serial number, rated horsepower and related speed, and governed speed
- (i) Type of fuel and fuel tank capacity
- (j) Electrical system voltage and alternator output in amps
- (k) Battery make, model, and capacity in cold cranking amps (CCA)
- (l) Chassis transmission make, model, and serial number; and if so equipped, chassis transmission PTO make, model, and gear ratio
- (m) Pump make, model, rated capacity in gallons per minute (liters per minute where applicable), and serial number
- (n) Pump transmission make, model, serial number, and gear ratio
- (o) Auxiliary pump make, model, rated capacity in gallons per minute (liters per minute where applicable), and serial number
- (p) Water tank certified capacity in gallons or liters
- (q) Aerial device type, rated vertical height in feet (meters), rated horizontal reach in feet (meters), and rated capacity in pounds (kilograms)
- (r) Paint manufacturer and paint numbers
- (s) Company name and signature of responsible company representative
- (2) Certification of slip resistance of all stepping, standing, and walking surfaces
- (3) If the apparatus has a fire pump or an industrial supply pump, the pump manufacturer's certification of suction capability
- (4) If the apparatus has a fire pump or an industrial supply pump, a copy of the apparatus manufacturer's approval for stationary pumping applications
- (5) If the apparatus has a fire pump or an industrial supply pump, the engine manufacturer's certified brake horsepower curve for the engine furnished, showing the maximum governed speed
- (6) If the apparatus has a fire pump or an industrial supply pump, the pump manufacturer's certification of the hydrostatic test
- (7) If the apparatus has a fire pump or an industrial supply pump, the certification of inspection and test for the fire pump or the industrial supply pump
- (8) If the apparatus has an aerial device, the certification of inspection and test for the aerial device

- (9) If the apparatus has an aerial device, all the technical information for required inspections to comply with NFPA 1914, Standard for Testing Fire Department Aerial Devices
- (10) If the apparatus has a fixed line voltage power source, the certification of the test for the fixed power source
- (11) If the apparatus is equipped with an air system, test results of due air quality, the SCBA fill station, and the air system installation
- (12) Weight documents from a certified scale showing actual loading on the front axle, rear axle, and overall fire apparatus (with the water tank full but without personnel, equipment, and hose)
- (13) Written load analysis and results of the electrical system performance tests required in Chapter 13
- (14) When the apparatus is equipped with a water tank, the certification of water tank capacity

The manufacture shall also provide documentation of the following items for the entire apparatus and each major operating system or major component of the apparatus:

- (1) Manufacturer's name and address
- (2) Country of manufacture
- (3) Source for service and technical information
- (4) Parts replacement information
- (5) Descriptions, specifications, and ratings of the chassis, pump (if applicable), and aerial device (if applicable)
- (6) Wiring diagrams for low voltage and line voltage systems to include the following information:
 - (a) Pictorial representations of circuit logic for all electrical components and wiring
 - (b) Circuit identification
 - (c) Connector pin identification
 - (d) Zone location of electrical components
 - (e) Safety interlocks
 - (f) Alternator-battery power distribution circuits
 - (g) Input/output assignment sheets or equivalent circuit logic implemented in multiplexing systems

- (7) Lubrication charts
- (8) Operating instructions for the chassis, any major components such as a pump or aerial device, and any auxiliary systems
- (9) Precautions related to multiple configurations of aerial devices, if applicable
- (10) Instructions regarding the frequency and procedure for recommended maintenance
- (11) Overall apparatus operating instructions
- (12) Safety considerations
- (13) Limitations of use
- (14) Inspection procedures
- (15) Recommended service procedures
- (16) Troubleshooting guide
- (17) Apparatus body, chassis, and other component manufacturer's warranties
- (18) Special data required by this standard
- (19) Copies of required manufacturer test data or reports, manufacturer certifications, and independent third-party certifications of test results
- (20) A material safety data sheet (MSDS) for any fluid that is specified for use on the apparatus

The manufacture shall deliver with the apparatus all manufacturers' operations and service documents supplied with components and equipment that are installed or supplied.

One (1)

SERVICE VEHICLES

The manufacturer shall have a minimum of 2 full time, company owned, service vehicles. The vehicles shall be available 24 hours a day, seven days a week to respond to customer needs. Full-time employees of the manufacturer shall drive them.

One (1)

REPLACEMENT PARTS

Replacement parts shall be available directly from the manufacturer or through the dealer.

One (1)

PRE-CONSTRUCTION CONFERENCE

A one (1) pre-construction conference will be held at the factory prior to the actual construction of the vehicles. The conference will be held in the manufacturer's facility with four (4) representatives of the Fire District and appropriate representatives of the manufacturer.

Any and all lodging, airport pick-up and drop-off if applicable, transportation, and meals will be the responsibility of the manufacturer.

Any Airfare costing will be the responsibility of manufacturer or Bidder.

One (1)

INSPECTION TRIP, FINAL

There will be up to a two (2) day final inspection for four (4) representatives of the Fire District at the facility where the apparatus is being constructed. The inspection trip will be completed when the apparatus is complete. Factory and Sales representatives will be available at the time of inspection.

The final inspection will include as a minimum:

- Full access to the build file and factory personnel to provide answers for any issues found.
- Road test shall be accommodated.
- Unit will be taken to pump test area where the pump and plumbing can be inspected while flowing water.
- General apparatus orientation and operation shall be provided at the pump test pit.

Any and all lodging, airport pick-up and drop-off if applicable, transportation, and meals will be the responsibility of the manufacturer.

Any and all airfare costing will be the responsibility of manufacturer or Bidder.

One (1)

VEHICLE FAMILIARIZATION & DEMONSTRATION

Familiarization and demonstration of the vehicle shall be by a competent and qualified person as defined in the current standard of NFPA 1901 standard.

Familiarization of the vehicle shall include the following:

How to locate gauges or indicators and check all fluid levels and operational issues of the vehicle

How to tilt the chassis cab or hood assembly for access to the engine, fire pump, or aerial control, or any other device to allow access to fluids or for required maintenance

Interior cab controls, instruments, mirrors, safety devices or alarms, brake operations, transmission control, pump controls, exhaust regeneration (if provided), seat adjustments, warning light engagement, and other operational equipment

If the apparatus is provided with a fire pump system, the following minimum instructions:

- Setting of parking brake, proper transmission gear, and fire pump engagement operations
- Throttle control
- Primer and tank-to-pump operation
- Use of pressure control devices
- Tank refilling operations
- Proper operation of discharge controls
- Proper shutdown and draining of system

If the apparatus is provided with a generator, the following minimum instructions

- Proper engagement if driven by the chassis
- Startup, operation, and shutdown of generator
- Monitoring of controls and instruments

If the apparatus is provided with a foam system, the following minimum instructions:

- a) Startup, operation, and shutdown of foam system
- b) Setting of foam percentages and other operational settings
- c) Proper flushing and draining of the system

If the apparatus is provided with a water tower or aerial device, the following minimum instructions:

- a) Positioning and locating the vehicle for safe operations
- b) Chassis parking brakes and engagement of hydraulic system
- c) Deployment of stabilization devices and use of ground pads
- d) Operation of elevation, extension, and rotation of the aerial device
- e) Operation of waterway, nozzle, and other firefighting devices of aerial device
- f) Operation and use of breathing air system (if provided)
- g) Specific aerial device maintenance and service areas for operators
- h) Shutdown and return to service operations
- i) Operation of tip controls and platform controls
- j) General familiarization and demonstration of aerial device
- k) Review of all safety devices, interlocks, and operational Hazards

One (1)

PRINCIPAL DIMENSIONS

The manufactures shall comply with the approximate dimensions of the apparatus being proposed. If different, please provide the exact dimensions for their apparatus.

1. Overall Length:	25.5' Super Cab
2. Overall Height:	113"
3. Wheelbase:	192"

4. Cab to Axle:	84"
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One (1)

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/ 1906.

One (1)

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/ 1906.

One (1)

DRAWING, APPROVAL

Prior to construction, the manufacturer shall provide approval drawings of the apparatus for the Fire District's review. The drawings shall show such items as the chassis being utilized, lights, horns, sirens, pump panels, and all compartment locations and dimensions. The blueprint shall be a visual interpretation of the unit as it is to be constructed. The buying authority shall sign all drawings. One-(1) print shall be retained by the Fire District, the dealer/sales representative shall retain one-(1) print, and one-(1) print shall be returned to the manufacturer.

One (1)

CUSTOMER SUPPLIED CHASSIS

MAKE/MODEL: 2026

F-550 Super Duty

4-Door Super Cab

ENGINE:

Powerstroke 6.7L V8 Turbo Diesel

COOLING:

HEAVY DUTY

TRANSMISSION:

TorqShift 10-Speed Automatic

GVWR:

19,500 LB. CAPACITY

WHEELBASE:

Ferdinand Fire Department, Ferdinand, IN - F550 Light Rescue

192"

CAB TO AXLE:

84"

FRONT AXLE:

7,000 LB. CAPACITY, FRONT DRIVE AXLE

FRONT SUSPENSION:

7,000 LB. CAPACITY W/ COIL SPRINGS, HEAVY DUTY SHOCKS &
FRONT ANTI-ROLL BAR

REAR AXLE:

14,700 LB. CAPACITY

REAR SUSPENSION:

14,700 LB. WITH AUXILIARY SPRINGS, HEAVY DUTY SHOCKS &
REAR ANTI-ROLL BAR

FRAME:

Single Channel Steel 8.5" X 3.00" X .280", 8.79 SM, 36,000 PSI

BRAKES:

Four-wheel disc brakes w/Hydro Boost, four-wheel anti-lock braking system

STEERING:

Hydraulic power-assist re-circulating ball steering

ALTERNATOR:

Dual alternators – 401 Total Amps

BATTERIES:

DUAL 12 VOLT 750 CCA EA., MOTORCRAFT

IGNITION:

SINGLE KEY

WHEELS:

Front and rear 19.5" Forged Polished Aluminum w/Bright Hub
Covers/Center Ornaments

TIRES

225/70R19.5 BSW Traction front tires

225/70R19.5 BSW Traction rear tires

GAUGES:

Tachometer, speedometer, oil pressure, engine temperature, turbocharger
boost, transmission fluid temperature, engine hourmeter

FUEL SYSTEM:

40 Gallon, rear mounted fuel tank

CHASSIS LIGHTING:

MEETS FEDERAL MOTOR VEHICLE SAFETY STANDARDS, FRONT AND REAR TURN SIGNALS, FOUR-WAY FLASHER, AND SINGLE HALOGEN RECTANGULAR HEADLIGHTS, STOP & TAILLIGHTS, BACK-UP LIGHTS, CAB, AND SIDE & REAR CLEARANCE MARKER LIGHTS.

PAINT:

PQ – Race Red

COLOR SCHEME:

Monotone

INTERIOR TRIM:

CHARCOAL GREY VINYL DELUXE TRIM PACKAGE

BUMPER:

Front chrome bumper with front tow hooks, Chrome grille

MIRRORS:

Power remote, manually extendable, trailer tow mirrors

WIPERS:

Variable intermittent front windshield wipers

RUNNING BOARDS:

6" Angular Black Molded-in-Color Running Boards

SEATING:

4-way adjustable driver and passenger seat with adjustable head restraints

SAFETY BELTS:

Front height adjustable seatbelts with front pre-tensioners

CAB:

TINTED GLASS, SUN VISORS, DUAL HORNS, CIGAR LIGHTER, HEADLINER, QUARTZ HALOGEN HEADLIGHTS, DRIVER AND PASSENGER AIR BAGS, POWER WINDOWS W/LOCKS, VINLY FLOOR, AM/FM RADIO WITH CD, SPEED CONTROL WITH TILT STEERING WHEEL. XLT TRIM

CAB INTERIOR:

HEATER/DEFROSTER, AIR CONDITIONING

ELECTRONIC FRONT WHEEL SHIFT

One (1)

TIRE PRESSURE MONITORING SYSTEM

A tire pressure monitoring device shall be provided at each individual valve stem, with red and green color bands monitoring the inflated condition of the tire, Green indicating proper inflation, half green half Red indicating an under inflated condition, and Red indicating 20% or more under inflated.

One (1)

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.

One (1)

CARRYING CAPACITY PLATE

There shall be a permanently attached plate mounted in plain view of the driver in accordance with NFPA 1901 Standards.

The tag shall include the following:

- Overall height
- Overall length
- GVWR
- Seating capacity

One (1)

SEATING CAPACITY PLATE

There shall be a permanently attached plate mounted in plain view in the cab. The plate shall read "Seating Capacity - 2 People".

Each seating position that is not intended to be used during transit shall be individually labeled as follows:

Warning: This seat is not to be occupied while vehicle is in motion.

Two (2)

UNDER CAB LIGHTS

Two (2) clear LED ground lights shall be installed - one (1) below each cab door illuminating the area below providing a safe entrance and exit for cab occupants. Lights shall be activated by cab door switches.

One (1)

OCCUPANCY/SEAT BELT PLATE

There shall be provided and installed plate(s), which read, "Occupants must be seated and belted when the apparatus is in motion". This plate(s) shall be visible from each seated position.

One (1)

LABEL "DO NOT WEAR HELMET"

A label stating "DO NOT WEAR HELMET WHILE SEATED" shall be installed in the visible from each seating position.

One (1)

OVERALL HEIGHT PLATE

The height of vehicle plate shall be mounted in the driving compartment and clearly identified and visible to the driver while seated. The plate shall show the completed fire apparatus height, length, (in feet and inches) and gross vehicle weight (in pounds). The information shall be current to the apparatus manufactured date.

If changes of the vehicle occur while in service, the fire department must revise the height plate.

One (1)

FLUID CAPACITY PLATE

A permanently affixed fluid date plate shall be installed in the driving compartment to indicate the type and quantities of the following fluid used in the vehicle.

A.	Engine Oil
B.	Engine Coolant
C.	Chassis Transmission Fluid
D.	Pump Transmission Lubrication Fluid (if applicable)
E.	Pump Primer Fluid (if applicable)
F.	Drive Axle(s) Lubrication Fluid
G.	Air Conditioning Refrigerant
H.	Air Conditioning Lubrication Oil
I.	Power Steering Fluid
J.	Cab Tilt Mechanism Fluid
K.	Transfer Case Fluid
L.	Equipment Rack Fluid
M.	Air Compressor System Lubricant
N.	Generator System Lubricant

O.	Front Tire Pressure - Cold
P.	Rear Tire Pressure - Cold

The following information shall also be supplied on the Fluid Data Plate:

A.	Chassis Manufacturer
B.	Production Number
C.	Paint Number
D.	Year Built
E.	Date Shipped
F.	Vehicle Identification Number

One (1)

APPARATUS MOVEMENT WARNING PLATE

A permanently affixed warning plate shall be installed near the door ajar light. The plate shall read:

"DO NOT MOVE APPARATUS WHEN LIGHT IS ON".

One (1)

DO NOT RIDE PLATE

A permanently affixed warning plate shall be installed stating "DO NOT RIDE". The plate shall be located on the apparatus at the rear step area, and at any cross walks if they exist. The plate is to warn personnel that riding on or in these areas while the vehicle in motion is prohibited.

One (1)

AIR INTAKE - COMMERCIAL CHASSIS

The air intake supplied shall be of the original commercial chassis manufacturer. The air intake shall not be modified in any way that is not approved by the chassis manufacturer, or in any manner that might reduce the amount of airflow and thus affect engine performance. The air intake, as supplied from the original commercial chassis manufacturer, may not comply with current NFPA 1901 Standards.

One (1)

FRONT MUD FLAPS

Mud flaps shall be made from black hard rubber and installed at the rear of the front cab fenders.

One (1)

REAR MUD FLAPS

Mud flaps shall be made from black hard rubber and installed at the rear of the rear body fenders.

One (1)

REAR TOW EYES

There shall be two-(2) rear tow eyes mounted to the frame at the rear of the vehicle.

One (1)

RECEIVER HITCH REAR- CLASS FOUR

One (1) class four receiver hitch mounted center of the rear bumper between the frame rails. The receiver hitch shall be constructed of structural tubing.

There shall be a 12-volt trailer connection for taillights etc installed at the rear of the apparatus.

One (1)

REFLECTIVE MATERIAL - 2 DOORS

There shall be 96 square inches of reflective material installed on the inside of the driver and officer doors.

One (1)

IGNITION ON LIGHT

A 1/2" green ignition on light shall be located on the cab dash and wired to indicate power to the ignition.

One (1)

IGNITION - KEY CHAIN

The key to the chassis ignition shall be permanently chained to the dash to prevent accidental removal of the key from the cab.

One (1)

MASTER LOAD DISCONNECT

A master load disconnect shall be provided between the starter solenoid and the remainder of the electrical loads on the apparatus. The batteries shall be connected directly to the starter solenoid.

One (1)

BATTERY CHARGER

A Kussmaul Auto Charge 1000 automatic battery charger shall be mounted in the vehicle to maintain the chassis electrical system.

The Auto Charge 1000 senses battery voltage drop and recharges the batteries to full capacity. The state of charge is indicated on a remotely located bar graph display whenever power is applied to the vehicle. The battery saver contained in the Auto Charge 1000 is a three-(3) amp power

supply with a relay to remove the accessory loads from the battery and connect them to the power supply when the charger is energized with AC power. This shall permit the charger to recharge the batteries without supplying the accessory load.

Specifications: Battery Charger

Input:

120 volts, 50/60 Hz, 3.5 amps

Output:

12V DC, @ 15 amps

Voltage Sense:

Remote, electronic

Battery Saver:

Output voltage 12V DC Output Current 3 amps

Indicators:

Power - indicates input power applied

Battery Saver - indicates battery saver load exceeds 3 amps

Bar Graph - remotely located, indicates state of charge of batteries.

One (1)

AUTO-EJECT MALE RECEPTACLE

A Kussmaul 120 VAC 20 amp Super Auto Eject receptacle shall be provided. A solenoid wired to the vehicle starter is energized when the engine is started. This instantaneously drives the plug from the receptacle. The receptacle shall be provided with a weatherproof cover. The cover shall be spring loaded to close, preventing water from entering when the shoreline is not connected. The auto eject receptacle shall be mounted in a location specified by the department and is designed to accept a 120 V AC from a shoreline plug. The UL maximum allowable amperage draw on receptacles is generally 80% of their listed rating, for example, the 20-amp receptacle should not carry more than 16-amp continuous load. When adding the different amperage draws of the components being installed on the chassis, be sure to figure in whether the components shall draw a continuous load or intermittent load.

Amp Draw Reference List	
Kussmaul 1000 Charger	3.5 Amps
Kussmaul 1200 Charger	10 Amps
Kussmaul 35/10 Charger	10 Amps
1000W Engine Heater	8.33 Amps
1500 Engine Heater	12.5 Amps
120 V Air Compressor	4.2 Amps

One (1)

SHORE POWER INLET PLATE

A shore-power "Inlet Plate" shall be permanently affixed at or near the power inlet. The plate shall indicate the following:

- A. Type of Line Voltage
- B. Current Rating in Amps
- C. Power Inlet Type (DC or AC)

Six (6)

120V DOUBLE DUPLEX RECEPTACLE

There shall be six (6) 120 volt, 15 amp double duplex receptacles installed on the apparatus. The receptacles shall be wired to shore power. The receptacles shall have a stainless steel cover and be a double duplex (4 way) outlet. The receptacle locations shall be determined at the preconstruction conference.

Location: TBD

Six (6)

12-VOLT FUSE BLOCKS

There shall be six (6) 12 volt fuse blocks installed in a location determined by the customer. Each unit shall include six-(6), 12 volt constant power supply ports and grounding buss with easily changeable fuses. The unit shall have a 100 amp total operating range.

Location: TBD

One (1)

CONSOLE - CUSTOM

There shall be a custom aluminum console installed in the floor of the cab, between the driver & passenger seat, extending to the OEM dash. The console shall provide space for the fuse and relay panels, siren control, switch control panel, customer supplied 2-way mobile radio, warning lamps and alarms not provided by the chassis manufacturer. It shall have a hinged custom faceplate to match the siren control, switch panel, & customer supplied radio. The hinged faceplate shall open up for easy access to fuses, radios, etc. for maintenance. The console shall have (2) cup holders and a hinged padded arm rest covering a storage/book slot area. The console shall have a powder-coat finish to match the vehicle interior.

One (1)

EMS STORAGE CONSOLE

There shall be a custom fabricated aluminum EMS storage compartment installed in the rear of the cab. The compartment shall be the full size of the rear cab area. The dimensions of compartment will be determined at the preconstruction conference. The EMS compartment shall have a powder-coat finish to match the vehicle interior.

One (1)

FUEL FILL- RECESSED WITH DOOR

There shall be a recessed fuel fill assembly with a non-locking door mounted on the left side of the apparatus body. The fuel fill assembly shall be equipped with a fuel fill cap, retention ring and a door. The assembly shall be properly labeled "DIESEL FUEL ONLY".

One (1)

MASTER LIGHT SWITCH PANEL

All warning lights shall be switched from a master light switch panel mounted in the cab. This panel shall have a master light cutoff switch.

One (1)

12' RESCUE BODY 3/16" ALUMINUM

The rescue body shall be constructed entirely of aluminum plate and subframe extrusions. Body and subframe shall be all aluminum.

The framework shall be formed from aluminum plate and electrically seam welded both internally and externally at each joint using 5356 aluminum alloy welding wire. All aluminum extrusions shall be made from 6063T6 and 6061T6 aluminum alloy. Body sides shall be formed from 5052-H32 smooth aluminum plate. The horizontal surfaces above the compartment tops shall be constructed from aluminum treadplate. The compartment top shall have a formed edge which serves as a drip rail for the compartments below. The tops shall be mounted with stainless steel screws and removable.

The complete rescue body structure shall be all welded construction and free from nuts, bolts, and other fasteners. Upon completion of the weldments, the body shall be completely sanded and deburred for the removal of all sharp edges.

COMPARTMENT CONSTRUCTION

All body compartment floors shall be formed from .1875" aluminum plate. The floors shall be welded in place with a continuous weld all around the perimeter to ensure maximum strength and water tightness. The external compartment tops and roof shall be constructed of .125" aluminum treadplate. The compartment tops shall be bolted in place to allow ease of removal for easy access to the body wiring harnesses. The compartment side walls shall be of one piece construction. The walls shall be formed from .1875" 5052-H32 smooth aluminum plate.

The compartment seams shall be sealed with permanent pliable silicone caulking and each compartment shall be louvered to provide adequate ventilation.

The wheel well liners shall be constructed of 3003 H-14 smooth aluminum plates. They shall be bolted in place for ease of maintenance. The wheel well fenders shall be polished stainless steel.

Three (3)

WHEEL WELL AIR BOTTLE COMPARTMENTS

There shall be three (3) air bottle compartments located in the rear wheel wells, one (1) on the left (driver's) side forward of the rear axle. And two (2) on the right (passenger) side. The compartments shall be fabricated from 1/8" (.125) smooth aluminum. The air bottle compartment shall be supported at the opening by seam welding the tube to the wheel well. The bottom of the tube is also to be supported to eliminate breakage from vibration. The tube is vented to facilitate moisture drainage. The compartment door shall be a brushed stainless steel door with a positive mechanical latch. The bottom of the compartment shall be lined with a material to protect the air bottle finish.

COMPARTMENTATION

LEFT SIDE:

L1-Compartment

There shall be one (1) compartment forward of the rear wheels. The compartment shall have a roll-up door. The interior compartment dimensions shall be approximately 58"W x 49"H x transverse in the upper section. The upper compartment shall have a useable door opening of approximately 52"W x 49"H. The lower compartment shall be 52"W x 15"H x 21"D

L2-Compartment

There shall be one (1) compartment over the rear wheels with a roll-up door. The interior compartment dimensions shall be approximately 38"W x 40"H x Transverse. The compartment shall have a useable opening of approximately 35"W x 40"H.

L3-Compartment

There shall be one (1) compartment directly behind the rear wheels. This compartment shall have a roll-up door. The interior dimensions shall be approximately 38"W x 63"H x 21"D. The compartment shall have a useable opening of approximately 32"W x 63"H.

RIGHT SIDE:

R1-Compartment

There shall be one (1) compartment forward of the rear wheels. The compartment shall have a roll-up door. The interior compartment dimensions shall be approximately 58"W x 49"H x transverse in the upper section. The

upper compartment shall have a useable opening of approximately 52"W x 49"H. The lower compartment shall be 52"W x 15"H x 21"D

R2-Compartment

There shall be one (1) compartment over the rear wheels with a roll-up door. The interior compartment dimensions shall be approximately 38"W x 40"H x Transverse. The compartment shall have a useable opening of approximately 35"W x 40"H.

R3-Compartment

There shall be one (1) compartment directly behind the rear wheels. This compartment shall have a roll-up door. The interior dimensions shall be approximately 38"W x 63"H x 21"D. The compartment shall have a useable opening of approximately 32"W x 63"H.

REAR:

B1-Compartment

There shall be a compartment at the rear of the apparatus. This compartment shall have a hinged door. The interior compartment dimensions shall be approximately 48"W x 44"H x 41"D in the lower section. There shall be a 48"W x 10"H x 96"D storage area in upper section divided for backboard and Stokes basket storage. The compartment shall have a useable opening of approximately 48"W x 44"H. The inner door pan shall not interfere with the compartment door opening dimensions.

One (1)

BACKBOARD COMPARTMENT

There shall be one (1) compartment with the capacity to hold two (2) long style backboards. The location of this compartment shall be in the top of the B1 compartment. The department must supply make and model of backboard.

One (1)

STOKES BASKET COMPARTMENT

There shall be one (1) compartment with the capacity to hold one (1) Stokes Basket. The location of this compartment shall be in the top of the B1 compartment. The department must supply make and model of basket.

One (1)

COMPARTMENT DOOR CONSTRUCTION – Side Doors

Six - (6) ROM roll-up compartment doors shall be installed on the sides of the apparatus.

All compartment door slats shall be constructed with two (2) double-wall (box frame) aluminum extrusions. The exterior shall be flat while the interior surfaces shall be concave preventing loose equipment from lodging in the door jams. Anodized slats shall be provided to prevent oxidation. Each slat shall have inner-locking end shoes secured by a Punch-Dimple process. The slats shall have interlocking joints with a folding locking flange. Between each slat shall be a PVC/vinyl inner seal to prevent any metal-to-metal contact.

The track shall be one (1) piece aluminum, which has an attaching flange and finishing flange incorporated into its design, which provides a finish look to installation without additional trim or caulking. The track shall have a replaceable side seal. The side seal prevents water and dust intrusion into the compartment.

There shall be an aluminum drip rail above each compartment door with a built in replaceable wiper seal.

Each roll-up door shall have a counter balance to assist in lifting and eliminate the risk of accidental closing.

A full width lift bar, operable by one-(1) hand, shall be used as a positive latch device for securing each individual compartment door in the closed position.

One (1)

COMPARTMENT DOOR CONSTRUCTION – Rear Door

One-(1) hinged double lap compartment door shall be installed on the B1 compartment. The door shall be constructed entirely from 5052-H32 smooth aluminum plate using a box pan configuration. The outer panel shall be constructed from 3/16" (.1875") smooth aluminum plate and the inner pan stitch welded in place from 1/8" (.125") smooth aluminum plate.

The door shall have a closed cell neoprene rubber gasket installed around the perimeter to remove water.

Exterior door latch shall incorporate a polished D-paddle handle with rotary style latch. For ease of operation, the D-handle opening shall be large enough to accommodate a gloved hand. The D-paddle latching design shall be subjected to corrosion, water infiltration, and cycle testing to 35,000 cycles. Double doors shall utilize concealed rotary latches on the secondary door, actuated by a recessed stainless steel paddle handle. The door design shall not impede into the compartment opening when in the open position. The watertight door seal shall exceed the current KKK-1822 water infiltration standards. The doors shall be securely fastened to the apparatus body with full-length stainless steel piano hinges using 1/4-20 stainless bolts and locking nuts. The hinges shall be slotted to allow for adjustments.

One (1)

COMPARTMENT DOORS

All compartment doors shall be non-locking.

Six (6)

ANODIZED ALUMINUM SILL PLATES

There shall be an anodized aluminum sill plate installed over each compartment door sill.

One (1)

COMPARTMENT STEP DOWN DOOR SEALS

The side compartment floors at the door opening shall have a set-down break. The step-down is designed to prevent water from entering the compartment from underneath the roll-up door seal.

One (1)

ROLL OUT TRAY, DUAL DIRECTION – L1/R1

There shall be one (1) Slide Master SM3-SP roll-out tray with a capacity of 1000 pounds, installed in the L1 compartment. The roll out unit shall be constructed of steel with a powdercoat finish. The roll out shall have a “spring lock” mechanism to lock the tray in the extended and retracted position. There shall be two (2) trays mounted to the roll out, one above the other. The upper tray shall be supported by four 1.5” square legs 18” above the lower tray. The trays shall be fabricated from 3/16" (.1875") smooth aluminum plate 40”W x 46”D with a 1.5" lip on all four sides for added strength. The trays and legs shall be welded together and bolted to the roll out unit.

One (1)

3-DRAWER TOOL BOX – L1

There shall be one (1) 3-Drawer Tool Box in the L1 lower compartment. The tool box shall be 48”W x 13”H x 19”D. Each drawer shall have ball bearing slides that lock in the stowed and extended positions, and have a 250lb load rating.

One (1)

ROLL OUT TRAY – L2

There shall be one (1) roll-out tray mounted to the floor of the L2 compartment. The tray shall be 32”W x 40”D, fabricated from 3/16" (.1875") smooth aluminum plate with a 2" lip on all four sides for added strength. The tray shall be mounted on ball bearing slides with a lock-in / lock-out latch, and shall have 250 lb. load rating.

One (1)

ROLL OUT TRAY, ADJUSTABLE HEIGHT – L2

There shall be one (1) adjustable height roll-out tray mounted in the L2 compartment. The tray shall be 32"W x 40"D, fabricated from 3/16" (.1875") smooth aluminum plate with a 2" lip on all four sides for added strength. The tray shall have full extension ball bearing slides with a lock-in / lock-out latch, and shall have 250 lb. load rating. The tray assembly shall be mounted to adjustable track made from aluminum extrusions which are the full height of the compartment.

One (1)

TIP DOWN ROLL OUT TRAY, ADJUSTABLE HEIGHT – L2

There shall be one (1) adjustable height tip down roll-out tray mounted in the L2 compartment. The tray shall be 32"W x 40"D, fabricated from 3/16" (.1875") smooth aluminum plate with a 2" lip on all four sides for added strength. The tray rail system will be designed to tilt down 30 degrees at 70% extension, and shall have a 250 lb. load rating. The tray assembly shall be mounted to adjustable track made from aluminum extrusions which are the full height of the compartment.

One (1)

3-DRAWER TOOL BOX – L1

There shall be one (1) 3-Drawer Tool Box in the L1 lower compartment. The tool box shall be 48"W x 13"H x 19"D. Each drawer shall have ball bearing slides that lock in the stowed and extended positions, and have a 250lb load rating.

Three (3)

ADJUSTABLE SHELVES – L3

There shall be three (3) adjustable shelves in the L3 compartment made from 3/16" (.1875") smooth aluminum. The trays shall be sized to fit the compartment. The adjustable track shall be made from aluminum extrusions and run the full height of the compartment. The shelf shall have a 2" lip on all sides for added strength.

One (1)

Slide Out Drawer – R1 LOWER

There shall be one (1) Slide Out Drawer in the R1 lower compartment. The drawer shall be 48"W x 13"H x 19"D. The drawer shall have ball bearing slides that lock in the stowed and extended position, and have a 250lb load rating.

One (1)

ROLL OUT TRAY – R2

There shall be one (1) roll-out tray mounted to the floor of the R2 compartment. The tray shall be 32"W x 40"D, fabricated from 3/16" (.1875") smooth aluminum plate with a 2" lip on all four sides for added strength. The tray shall be mounted on ball bearing slides with a lock-in / lock-out latch, and shall have 250 lb. load rating.

One (1)

ROLL OUT TRAY, ADJUSTABLE HEIGHT – R2

There shall be one (1) adjustable height roll-out tray mounted in the R2 compartment. The tray shall be 32"W x 40"D, fabricated from 3/16" (.1875") smooth aluminum plate with a 2" lip on all four sides for added strength. The tray shall have full extension ball bearing slides with a lock-in / lock-out latch, and shall have 250 lb. load rating. The tray assembly shall be mounted to adjustable track made from aluminum extrusions which are the full height of the compartment.

One (1)

TIP DOWN ROLL OUT TRAY, ADJUSTABLE HEIGHT – R2

There shall be one (1) adjustable height tip down roll-out tray mounted in the R2 compartment. The tray shall be 32"W x 40"D, fabricated from 3/16" (.1875") smooth aluminum plate with a 2" lip on all four sides for added strength. The tray rail system will be designed to tilt down 30 degrees at 70% extension, and shall have a 250 lb. load rating. The tray assembly shall be mounted to adjustable track made from aluminum extrusions which are the full height of the compartment.

One (1)

6-DRAWER TOOL BOX – R3

There shall be one (1) 3-Drawer Tool Box in the R3 compartment. The tool box shall be 48"W x 21"H x 19"D. Each drawer shall have ball bearing slides that lock in the stowed and extended positions, and have a 250lb load rating.

Two (2)

ADJUSTABLE SHELVES – R3

There shall be two (2) adjustable shelves in the R3 compartment made from 3/16" (.1875") smooth aluminum. The shelves shall be sized to fit the compartment. The adjustable track shall be made from aluminum extrusions and run the full height of the compartment. The shelves shall have a 2" lip on all sides for added strength.

Three (3)

ADJUSTABLE SHELF – B1

There shall be three (3) adjustable shelves in the B1 compartment fabricated from 3/16" (.1875") smooth aluminum. The shelves shall be sized to fit the compartment. The adjustable track shall be made from aluminum extrusions

and run the full height of the compartment. The shelves shall have a 2" lip on all sides for added strength.

One (1)

ALUMINUM RUBRAIL

There shall be an aluminum rubrail installed on both sides of the lower body compartments. The rubrail shall be constructed from 1" solid aluminum square bar. The aluminum rubrail shall be bolted in place with stainless steel bolts, and spaced from the fire body to provide body protection. The solid rubrail shall serve as protection to the side doors when encountering close objects. Treadplate rubrails or welded on shall not be acceptable.

One (1)

REAR TAILBOARD

The rear step shall be constructed with embossed aluminum treadplate. The perimeter of the step will be wrapped with serrated aluminum bar to provide superior traction during wet and cold. The rear step shall have a space of approximately 1/4" from the rear of the body to allow water runoff. The rear step shall bolt on with stainless steel nuts and bolts for replacement.

One (1)

ELECTRICAL SYSTEM

BODY ELECTRICAL

The body electrical system shall be designed as an integrated electrical package specifically engineered for fire apparatus application.

All internal wire end terminals, including locking bulkhead connectors, shall be mechanically affixed to the wire ends by terminal crimping presses.

All internal wiring shall be of the high temperature GXL type wire and shall be protected by wiring duct wherever possible.

All electrical equipment switches shall be mounted on a switch panel mounted in the cab convenient to the driver. Light switches shall be of the rocker type with integral indicator light to show when lights are energized. All switches shall be appropriately identified.

One (1)

VOLT TESTING

The apparatus low voltage system shall be tested and certified. A copy of certification shall be provided to the purchaser with the apparatus.

- RESERVE CAPACITY TEST
- The unit shall be run until all engines, engine compartment temperatures are stabilized, and the battery system is fully charged.

The engine shall be shut off and the minimum continuous electrical load be activated for ten-(10) minutes. All electrical loads shall be shutoff after ten-(10) minutes and the battery system shall then be capable of restarting the engine.

- ALTERNATOR PERFORMANCE TEST AT IDLE
- Minimum continuous electrical loads shall be activated while the unit is at idle speed.
- ALTERNATOR PERFORMANCE TEST AT FULL LOAD
- The total continuous electrical load shall be activated with the engine running up to the manufacturer's governed speed. The test duration shall be a minimum of two-(2) hours. Activation of the load management system shall be permitted during the test. If however, an alarm is sounded by excessive battery discharge as detected by the system or a system voltage of less than 11.8 volts DC for a 12-volt nominal system for more than 120 seconds, shall be considered a test failure.

One (1)

EMI/RFI PROTECTION

The apparatus shall be manufactured to incorporate the latest designs in the electrical system with components that are state of the art to ensure electromagnetic interference (EMI) and radio frequency interference (RFI) emissions are suppressed at the source.

The apparatus shall have the ability to operate in typical fire and rescue situations with no adverse effects from EMI and/or RFI.

The apparatus shall utilize components that are fully protected and wiring that utilizes shielding and loop backgrounds where required to control EMI/RFI susceptibility. The apparatus shall be bonded through ground straps. Relays and solenoids that are suspected to generating spurious electromagnetic radiation are diode and/or resistor protected to prevent transient voltage spikes.

In order to prevent the radio frequency interference completely the purchaser shall be requested to provide a listing of the type, power output, and frequencies of all radio and bio medical equipment that is proposed to be used on the apparatus.

One (1)

WHELEN RESCUE PACKAGE

This lighting package meets all of the zone requirements of the NFPA 1901 Standards.

One (1)

LIGHTBAR - WHELEN - MODEL EDGE 9XT

A Whelen Edge 9XT model 9XT2P3R DUO Color LED lightbar shall be mounted on the cab roof. The lightbar shall measure 54" in length and positioned as far forward as possible.

The lightbar shall be controlled in the following manner:

Calling for Right of Way - All Positions
Blocking Right of Way - Clear shall not be Active
Traffic Advisor on rear amber LEDS

The lights shall be activated by a single emergency light switch located on the master light switch panel in the cab.

The lightbar shall meet NFPA 1901 edition as configured.

Two (2)

LIGHTS - WHELEN TIR6 SUPER LED - ZONE A - FRONT LOWER

There shall be a pair of Whelen TIR6 Super LED Model 50R03ZRR lights and mounts provided. These lights shall be mounted on the grill one-(1) each side of the apparatus, as recommended by NFPA. The color shall be red.

Two (2)

LIGHTS - WHELEN 600 SERIES LED - ZONE C - REAR LOWER

There shall be a pair of Whelen Model 60R00FRR LED lights and mount provided. These lights shall be mounted on the rear face of the unit directly below the taillight assembly, one (1) each side of the apparatus, as recommended by NFPA. The color shall be Red.

Two (2)

LIGHTS - WHELEN 600 SERIES LED - ZONE C - REAR UPPER

There shall be a pair of Whelen Model 60R00FRR LED lights and mount provided. These lights shall be mounted on the rear face of the unit directly above the taillight assembly, one (1) each side of the apparatus, as recommended by NFPA. The color shall be Red.

Two (2)

LIGHTS - WHELEN TIR6 SUPER LED - ZONE B & D - LOWER

There shall be a pair of Whelen TIR6 Super LED Model 50R03ZRR lights provided and located on both the left and right lower sides of the apparatus with the optical center of the device at a distance of 18" to 62" above grade not to exceed 25' between optical warning devices as recommended by NFPA. The lens color shall be red.

One (1)

LIGHTS - WHELEN 600 SERIES LED - ZONE B & D - UPPER

There shall be two (2) pair of Whelen Model 60R00FRR LED lights and mount provided. lights provided and located on both the left and right upper sides of the apparatus as recommended by NFPA. The lens color shall be red.

One (1)

LIGHT, REAR DIRECTIONAL

A Whelen Traffic Advisor model TAM65 shall be provided. The traffic advisor shall incorporate a rectangular extruded black aluminum chassis with six amber TIR6™ Super-LED® lights. The TIR6 lights shall be installed with an amber optic hard coated polycarbonate lens. The TIR6 lights shall incorporate six amber Super-LEDs, a clear horizontal optic hard coated polycarbonate lens, and utilize a TIR reflector for maximum output. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The encapsulated TIR6 lens/reflector assembly and conformal coated PC board shall provide additional protection against environmental elements.

The solid state traffic advisor shall be vibration resistant. The TAM65 shall include model TACTLD1 control head that includes remote flash control. The TACTLD1 shall have four programmable directional sequence flash patterns of left, right, split, and flash. The TACTLD1 includes an auxiliary flash option when attached to +12v DC to flash the traffic advisor. The LED display on the control head shall replicate the TAM65 directional sequence. The traffic advisor control head shall have a rear panel dip switch for the ability to set eight additional Scan-Lock™ flash patterns. The TAM65 will contain a 15' interconnecting cable with quick disconnect feature. The LED modules are covered by a five year factory warranty. The TAM65 shall have for mounting rear PEM nuts/thru-bolt end caps with hardware.

Six (6)

LIGHTS, 12-VOLT SURFACE MOUNT SCENE

Six (6) Fire Research Spectra MAX LED Flood and Loading Lights model SPA260-Q20 surface mount light shall be installed. The lights shall be mounted with four (4) screws to a flat surface. It shall be no more than 5 7/8" high by 14 1/2" 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 lamphead.

Each lamphead shall have sixty (60) ultra-bright white LEDs, 56 for flood lighting and 4 to provide a spot light beam pattern. It shall operate at 12 volts DC, draw 13 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 shall be powder coated. The LED scene light shall be for fire service use.

One (1)

The scene lights shall be installed, two (2) each side of the body in the upper corners, and two (2) on the rear of the apparatus.

One (1)

The side body mounted scene lights shall be controlled by individual scene light switches located in the cab labeled LEFT SCENE and RIGHT SCENE.

One (1)

The upper rear body mounted scene lights shall be controlled by a scene light switch located in the cab labeled REAR SCENE.

Rear scene lights shall only operate when the transmission is in neutral or reverse.

One (1)

LED SCENE LIGHT- BROW

Fire Research CrestLight™ LED Scene Light model CLA101-A49 with brow mounting bracket shall be provided. The lamphead shall be supplied with a brow mount that attaches to the on the cab roof. The brow mount shall be fixed using a 2-bolt pattern. The lamphead shall be mounted using either M6 or 1/4" fasteners (not supplied). The mounting holes shall be 51 5/8" apart. Wiring shall extend from the rear of the lamphead and shall be a 32" long cable (3/8" OD) with 14 AWG wires.

The lamphead shall have (49) forty-nine ultra-bright white LEDs to provide a low beam/narrow flood/low beam light pattern. It shall operate at 12V/24V volts DC and generate 12,500 lumens of light. Power consumption shall be 165 Watts. The lamphead shall include both a set of low beam lenses and a set of narrow flood reflectors. The low beam shall lower the beam pattern below the horizontal, and the narrow flood beam shall project the beam straight ahead. The lamphead shall have the ability to independently control either the narrow flood or low beam. The lamphead shall weigh 9.75 pounds (with mounting bracket) and be powder coated in white. The lamphead shall measure 3" high with mounting bracket (1 13/16" high without mounting bracket), 52 1/2" wide with mounting bracket and 3 5/16" deep. The waterproof rating shall be IPX7. The LED scene light shall be for fire service use applications.

Location of light shall be: CAB ROOF.

One (1)

LIGHT TOWER

One (1) Knight 2, manufactured by Command Light, part number KL415D-CH, light tower will be provided for installation on the apparatus. The location of the light tower and its controls will be installed according to instructions given by the customer and the requirements of the light tower manufacturer.

The light tower will extend 87-1/2" above the mounting surface and will extend to full upright position in less than 15 seconds. The overall size of nested light tower will be approximately 28" wide x 47" long x 12" high and weigh approximately 165 pounds.

Light Tower Construction and Design:

The light tower assembly will be of aluminum construction, with stainless steel shafts and bronze bushings for long life and low maintenance.

The electrically controlled unit will not require usage of the vehicle's air supply for operation, thereby eliminating the chance for air leaks in the vehicle braking system. Hydraulic or pneumatic type floodlights are not acceptable alternatives to the specified all electric light tower.

The light tower will be tested in wind conditions of 90 mph (150 kph) minimum. Other type floodlights that have not been tested to these conditions are not acceptable.

The light tower will be capable of overhanging the side or back of the vehicle to provide maximum illumination to the vicinity adjacent to the vehicle for the safety of emergency personnel in high traffic conditions. Any tower that is only capable of rotations at the top of a pole is not an acceptable alternative to the specified tower.

Light Tower Electrical System:

The light tower will be a two-stage articulating device with a lighting bank on top of the second stage capable of continuous 360 degree rotation. The light will be elevated by electric linear actuators, one (1) actuator will elevate the light bank and one (1) actuator will adjust the light bank angle from 0 to 110 degrees. Power for the light bank will be supplied through power collecting rings thus allowing continuous 360 degree rotation in either direction.

The tower base will have a light that illuminates the envelope of motion during any movement of the light tower mast as required by NFPA1900.

Light Tower Floodlights:

The Command Light will be equipped with the following bank of floodlights:

Floodlight manufacturer: Fire Tech

Number of lamp heads: Six (6) Helios

Voltage: 12 VDC

Watts of each lamp head: 110 watt

Total watts of light tower: 660 watts

Amperage per lamp head: 9.2 amps

Total amperage of light tower: 55 amps

Total Lumens of light tower: 84,000 lumens

Configuration: The light heads will be mounted three (3) on each side of the light tower, giving two (2) vertical lines of three (3) when the lights are in the upright position.

BACK LIGHT, LIGHT TOWER

A backlight option will be provided on the light tower. The lower pair of light heads will be capable of being rotated about a horizontal axis. Thus, providing light down on the vehicle or up to 180 degrees from the fixed position of all other heads.

The control will have a switch supplied for the backlight rotation option.

One (1)

CLEARANCE LIGHTS AND REFLECTORS

Clearance lights and reflectors shall be LED lights, which include (2) red marker lights, (4) red rectangular reflectors, (2) amber rectangular reflectors and (1) red three light cluster recessed in the rear step.

One (1)

WHELEN STOP, TURN (LED) AND BACK-UP (HALOGEN) LIGHTS

Stop, turn, and backup lights shall be Whelen 600 Series, individual fixtures. Fixtures shall be mounted on each rear face of the body recessed in model TH64, highly polished, aluminum trim ring. The red stop (LED) light shall be model 60R00BRR, turn light shall be a model 60A00TAR amber (LED) type with directional arrow, and the backup light shall be model 60J000CU clear halogen light type.

One (1)

LICENSE PLATE LIGHT - LED

An LED license plate light with chrome plated housing shall be provided and installed on the rear of the vehicle.

One (1)

ENGINE COMPARTMENT LIGHT

One - (1) individually switched, clear lens light shall be installed illuminating the engine compartment for servicing.

One (1)

STEP LIGHTS - LED

All stepping surfaces - running boards, steps, etc. shall be illuminated to comply with NFPA standards with LED lighting.

One (1)

SIREN

There shall be one (1) Whelen model 295SL100 hands free siren provided. The siren amplifier and control panel shall be assembled as a single unit. The siren shall incorporate a rotary selector for six siren functions. There shall be an on/off power switch; a push button switch for manual siren or air horn tones, a noise-canceling microphone with volume control, and a horn ring override control. The unit shall be mounted in the cab.

One (1)

SPEAKER

There shall be one (1) 100 watt speaker mounted behind the grille. The speaker shall be wired to the siren in the cab.

One (1)

MECHANICAL SIREN

There will be a Federal Signal Q2B electro-mechanical siren surface mounted on the front bumper. The Q2B siren shall be streamlined and designed to provide reliable and long-life operation.

The activation switch(es) will be wired through the chassis park brake and operate in the "Response Mode" only.

A mechanical siren activation switch will be installed on the driver and officer's floor.

A siren brake switch will be located on the cab light control console.

Seven (7)

COMPARTMENT LIGHT

There shall be seven (9) 36" LED tube type compartment lights installed activated by the door ajar switch.

Six (6)

DOOR AJAR SYSTEM

All apparatus body doors shall be provided with an auto door switch. These switches shall operate the compartment interior lights and activate the door ajar indicator on each side of apparatus body when the door is opened. There shall be a red door ajar light mounted in the cab, in view of the driver to indicate an unsecured door. There shall be a buzzer mounted in the cab that shall alert the driver.

One (1)

BACK-UP ALARM

There shall be one (1) electronic back-up alarm installed at the rear of the apparatus. The alarm shall be wired to the transmissions output signal and is automatically activated when the transmission is shifted into reverse.

One (1)

BACK-UP CAMERA INSTALLATION

A back-up camera system shall be ordered and supplied with the chassis. The rear view camera shall be shipped loose and be installed by the body builder. The rear view camera shall be recessed into the body to protect it from damage.

One (1)

BODY PAINT FINISH

The body exterior shall have no mounted components prior to painting to assure full coverage of metal treatments. Box pan compartment doors shall be painted separately to assure proper paint coverage on body, doorjambs, and door edges.

All painted surfaces shall follow the following procedure to ensure a lasting finish:

- Metal surfaces shall be sanded to remove all burrs and imperfections, before etching and treatment.
- A wax & grease solvent shall be used to clean and prep the aluminum surface. This step removes wax, grease and other surface contaminants, thus leaving a bright, clean, and conditioned surface.
- A self-etching, metal primer shall be applied next. The self-etching primer shall fill all of the minor imperfections, scratches, etc. in the metal. This step produces a corrosion resisting conversion coating that prevents oxidation and other surface contaminants leaving a surface that gives excellent paint adhesion.
- A sandable primer shall be sprayed on the metal that seals the surface for the paint. A minimum coating thickness of 2 MIL shall be applied. Primer is then sanded smooth leaving the best surface for topcoat.
- The apparatus body shall then be painted with a minimum of two (2) coats of color followed by two (2) coats of urethane clearcoat.

These steps are followed as recommended by the paint manufacturer to provide a lasting and high quality gloss finish. PPG shall provide all paint products.

INTERIOR COMPARTMENT FINISH

The interior of the body compartments shall be coated with Zolatone industrial splatter finish. Color shall be silver/gray

The interior of all trays, shelves, and drawers shall be coated with spray on truck bed liner 1/8" thick. Color shall be gray

One (1)

SCOTCHLITE STRIPE

There shall be a 4" wide Scotchlite stripe, with an additional 1" wide stripe located above and below. The stripes shall be located no higher than 60" from the ground installed on the apparatus cab and body. The stripes shall cover a minimum of sixty percent (60%) of each side of the apparatus and forty percent (40%) of the front and rear of the apparatus. The stripe shall be installed to meet the current NFPA requirements.

One (1)

STRIPE - REAR REFLECTIVE

The rear surface of the unit shall be overlaid with 6" wide 3M Diamond Grade reflective material, installed in an alternating Red and Yellow "Chevron" pattern.

One (1)

ONE-YEAR PARTS & LABOR WARRANTY

There shall be a one (1) year mechanical parts and labor warranty provided with the apparatus. The apparatus shall be free of defects in material and workmanship for a warranty period of one (1) year after the date on which the apparatus is first delivered to the original purchaser.

One (1)

WARRANTY, BODY STRUCTURAL

There shall be a ten-(10) year body warranty on each new fire body/heavy-duty rescue apparatus. The bodies are to be free of structural failures caused by defective design or workmanship for a warranty period of ten-(10) years after the date on which the vehicle is first delivered to the original purchaser or 100,000 miles, whichever occurs first.

One (1)

WARRANTY, TEN YEARS BODY PAINT/CORROSION

There shall be a ten-(10) year paint/corrosion warranty provided. This warranty shall cover perforation, blistering, peeling, or any other adhesion defects caused by defective manufacturing methods, or material selections, for a warranty period of ten-(10) years or 100,000 miles

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which occurs first, after the date of which the vehicle is first delivered to the original purchaser.