REQUEST FOR PROPOSAL ("RFP") FOR THE PURCHASE OF A FIRE TANKER

CITY OF EATONTON, GEORGIA SOLICITATION #2019-001

Released: January 3, 2019
Proposals Due: February 4, 2019

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REQUEST FOR PROPOSAL
FIRE TANKER PURCHASE
CITY OF EATONTON, GEORGIA
SOLICITATION #2019-001

Objective: The objective of this project is to purchase a 3,000-gallon fire tanker truck.

Introduction:
The City of Eatonton is requesting complete proposals from qualified bidders to supply and deliver a 3,000-gallon fire tanker truck for the Eatonton Fire Department.

For consideration, proposals should be received no later than **4:00 pm** on **February 4, 2019**. Any submittals received after this date and time will not be considered and will be returned unopened to the submitting firm. Proposals should be submitted to:

Middle Georgia Regional Commission
c/o Susan Landfried
175 Emery Highway
Suite C
Macon, GA 31217

Interested and qualified firms are requested to make a response to accomplish the **Scope of Services** described herein. The response is to be signed by a duly authorized official of the firm and must be submitted in the time, manner, and form prescribed.

This solicitation does not constitute an offer by the City of Eatonton to enter into a contract and is not an offer which can be accepted by the firm to form a contract. No offer made in response to the terms and conditions of this Request for Proposal (RFP) may include any terms or conditions which can bind the City of Eatonton to the qualified, selected firm. The City of Eatonton reserves the right to reject any and all proposals and to waive technicalities as deemed in the best interest of the project. The City of Eatonton reserves the right to request additional information from firm(s) as deemed necessary to analyze proposals. The City of Eatonton is an equal opportunity employer.

Section 1: Terms and Conditions

1. **Invitation to Submit Proposal**
   Sealed proposals must be received by the Middle Georgia Regional Commission no later than **4:00 pm, Monday, February 4, 2019.** All questions regarding this solicitation, including specifications or scope of work, shall be submitted to Susan Landfried in writing at slandfried@mg-rc.org no later than **3:00 pm**, **January 18, 2019**. Questions and responses will be published on the City of Eatonton website for review no later than **January 22, 2019.**

   Proposals should be submitted to:
   Susan Landfried, Government Services Specialist
   Middle Georgia Regional Commission
   175 Emery Hwy, Suite C
   Macon, GA 31217
   478-751-6160 | slandfried@mg-rc.org

2. **Eligibility**
   Each firm promises and agrees that its proposal shall be irrevocable for a period of 60 calendar days after submittal date and will not be withdrawn or modified during that time unless by written agreement between the City of Eatonton and the firm. If necessary, the period of time specified may be extended by written agreement.

3. **Submission Content**
   Interested respondents must respond to the Request for Proposal (RFP) in writing, as well as provide a USB Flash Drive with the proposal in either a Microsoft Word (or compatible file) or a PDF file. Respondents should provide five (5) copies of the written proposal. Submissions must include the following:

   a. Letter of Transmittal: This letter should contain the following:
      i. Proposer's understanding of the scope of work and commitment to timely perform the work.
      ii. Signature by an authorized agent of the firm and indication of the agent's title or authority.

   b. Section A: Pricing - In this section, include the following:
      i. Your pricing proposal for the apparatus.
      ii. Separately listed price for each additional item listed in Section 4 of this proposal.

c. Section B: Specifications
Respondent should note compliance status and exceptions, if needed, in Section 3 next to the paragraph where these specifications appear.

A letter must be included affirming the proposed apparatus meets the requirements detailed in Sections 2 and 3 of the solicitation.

In addition to noting exceptions in Section 3, respondent should note any requirement(s) that are not met and provide information as to why they were not, if they were met through alternative means, or why they cannot be met using Appendix A.

d. Section C: Service and Support/Warranty
Provide information on location of service center(s) that will be used to service the apparatus following delivery to the city.
Answer the following questions at a minimum:

- Where will the work be done if the apparatus needs service or repairs?
- Does the city have to deliver the apparatus, or will the service center pick it up?
- How long has the service center been operational?

Provide information that demonstrates your company's experience, expertise, and quality of service and support of the apparatus after the sale.

Also, include a document that details the warranty coverage of the apparatus and the covered components.

e. Section D: References

Complete and include Appendix B providing up to five (5) references for a similar apparatus constructed, delivered, and currently in service. Referenced apparatus must have been in service for no less than one (1) year. Apparatus referenced not in service for at least one (1) year will not be considered and may negatively impact scoring

f. Section D: Build and Delivery Schedule
This section should provide detail on the estimated build and delivery schedule beginning after the contract award. Please estimate the schedule in weeks.

4. **Evaluation Criteria**
   Proposals will be evaluated based on the following criteria:

Criteria	Points
Price/Cost – Respondent's base/cost proposal	30
Specifications- Compliance with minimum requirements provided	25
Service and Support and Warranty – Location of service center(s) and longevity. Warranty coverages on overall apparatus and components	10
Experience and References - Verification of reference builds provided	15
Delivery Schedule – Design, build, and delivery schedule of equipment	10
Completeness of Proposal – Provision of requested and necessary information to properly evaluate proposal	10
Total Score	**100**

5. **Delivery of Response**
   To be considered, a complete bid response must be received and accepted by the Middle Georgia Regional Commission no later than **4:00 pm, Monday, February 4, 2019**. Allow sufficient time for transportation. Ensure that your bid is securely sealed in an opaque envelope/package to provide confidentiality of the bid prior to the solicitation closing. Include five (5) copies of the written proposal and a USB Flash Drive with the proposal in either a Microsoft Word (or compatible file) or a PDF file.

Section 2: General Specifications

1. **Intent of Specifications**

It is the intent of these specifications to cover the furnishing and delivery to the Purchaser of the apparatus equipped as hereinafter specified. These specifications cover minimum requirements as to the type of construction, finish, and test to which the apparatus must conform, together with certain details as to equipment and appliances to be furnished. Should the manufacturer's current, published data or specifications exceed these, they shall be considered minimum and be furnished.

2. **General Specifications**
   a. The apparatus shall be of the latest type, symmetrically proportioned and constructed with due consideration of the load to be sustained.

b. All parts not specifically mentioned herein, but which are necessary in order to furnish a complete fire apparatus, shall be furnished and shall conform to the best practices known to the fire apparatus industry.
c. The apparatus shall comply with all federal, state, and local requirements pertaining to vehicles used for firefighting, and emergency vehicles at time of contract signing. The apparatus must also comply with all requirements as specified in National Fire Protection Association (NFPA) standards that are applicable on the date of contract signing.
d. The apparatus is to be of current year manufacture and is to be new and unused. The bid price shall not include any local, state, or federal taxes. The Bidder shall not be liable for any state or federally-mandated tax or program after the sale of this apparatus.
e. These specifications shall be construed as minimum. Should the manufacturer's current, published data or specifications exceed these, they shall be considered minimum and be furnished.

3. Qualification of Bidders

a. 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 twenty (20) years in the manufacturing of fire apparatus.
b. 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.
c. Vendor/manufacturer must have an established service/repair facility located within a 150-mile radius of the City of Eatonton's fire department. The facility must have a staff of trained mechanics, well-versed in all aspects of service for all major components of the apparatus.

4. Bid Compliance Instructions

The bid should strive to comply with all specifications detailed in this document. If there are deviations from the specifications, no matter how small, they must be notated in Section 3 and fully explained on a separate page, titled "Exceptions" (see Appendix A). Each exception shall reference the page and paragraph where the exception is being taken. Failure to comply with this requirement shall result in the bid proposal being rejected.

The Eatonton Fire Department shall be the sole arbiter as to what exceptions may be allowed or disallowed. In the event a bidder fails to make any indication of

compliance for any or all provisions, it will be assumed that the bidder is taking total exception to the specification and the bid shall be disallowed.

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

6. **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 costs. The use of proprietary parts may not be acceptable to the Purchaser.

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

8. **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-ons shall be done so that the Purchaser has no responsibility for performance by either the manufacturer or the agency using the contract.

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

10. **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.

11. Insurance Requirements

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

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

12. Payment Terms

Full payment for the apparatus shall be made at the time of delivery of the completed apparatus. 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 federally-mandated tax or program after sale or delivery of the apparatus.

13. Fuel Tank at Delivery

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

14. Training

A qualified training engineer shall be provided by the vendor. The training engineer shall instruct the Eatonton Fire Department personnel in the operation and maintenance of the apparatus for a period not less than three (3) days.

15. Warranties

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

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

b. *Structural Warranty, Ten-Year*
A structural warranty shall be provided by the apparatus manufacturer for its products to be free from defects in material and workmanship, under normal use and service, for a period of ten (10) years, effective upon final payment by the Purchaser, and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the apparatus shall void this warranty.

c. *Plumbing Warranty, Ten-Year*
A stainless-steel Plumbing/Piping warranty shall be provided by the apparatus manufacturer for its products to be free from defects in material and workmanship, under normal use and service, for a period of ten (10) years effective upon final payment by the Purchaser, and delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the plumbing shall void this warranty.

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

e. *Tank Warranty, Lifetime*
For normal fire department applications, the tank shall have a limited lifetime warranty that provides warranty service for the life of the fire apparatus in which the tank is installed. Warranties are transferable if the apparatus ownership changes by requesting the transfer from United Plastic Fabricating (UPF). In applications where the tank will be subject to severe conditions, the tank may have a warranty unique to the application that is clearly defined for each such application

f. Apparatus Electrical Warranty Two-Year

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

Section 3. Technical Specifications

Specifications	Bidder Complies		Notes
APPARATUS DIMENSIONS These are standard truck dimensions. Changes in configuration or additional options may affect these dimensions. The contract specification shall contain the exact dimensions. **OVERALL HEIGHT** The overall height shall be 9' 6". **OVERALL LENGTH** The overall length shall be no longer than 32'. **OVERALL WIDTH** The overall width of the body shall be no more than 96" wide. The chassis mirrors will extend out past this width, but no more than 110". **OVERALL WHEELBASE** No overall wheelbase restriction has been specified for this apparatus. **PUMP MODULE WIDTH** No pump module width restriction has been specified for this apparatus. **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.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
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. **NFPA COMPLIANCE** The National Fire Protection Association standard #1901 (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. **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.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
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 60 mph at engine governed RPM. **NFPA TOP SPEED STATEMENT** NFPA-1901, 2009 Edition - 4.15.2. The maximum top speed of fire apparatus with a GVWR over 26,000 lbs. shall not exceed either 68 MPH or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower. NFPA-1901, 2009 Edition - 4.15.3. If the combined water tank and foam agent tank capacities on the fire apparatus exceed 1250 gallons, or the GVWR of the vehicle is over 50,000 lbs., the maximum top speed of the apparatus shall not exceed either 60 MPH or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
CAB SAFETY SIGNS The following safety signs shall be provided in the cab: • A label displaying the maximum number of personnel the vehicle is designed to carry shall be visible to the driver. • "Occupants shall be seated and belted when apparatus is in motion" signs shall be visible from each seat. • "Do Not Move Apparatus When Light Is On" sign adjacent to the warning light indicating a hazard if the apparatus is moved (as described in subsequent section). • A label displaying the height, length, and GVWR of the vehicle shall be visible to driver. **CHASSIS DATA LABELS** The following information shall be on labels affixed to the vehicle: Fluid Data: • Engine oil • Engine coolant • Chassis transmission fluid • Pump transmission lubrication fluid • Pump primer fluid (if applicable) • Drive axle(s) lubrication fluid • Air conditioning refrigerant • Air conditioning lubrication • Power steering fluid • Cab tilt mechanism fluid (if applicable) • Transfer case fluid • Equipment rack fluid (if applicable) • Air compressor system lubricant • Generator system lubricant (if applicable) Chassis Data: • Chassis Manufacturer • Production Number • Year Built • Month Manufactured • Vehicle Identification Number Location shall be in the driver's compartment of the chassis cab.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
"NO RIDE" LABEL A label shall be located on the vehicle at the rear step areas, and at any cross walkways, if they exist. The label(s) shall warn personnel that riding in or on these areas while the vehicle is in motion is prohibited. **DO NOT WEAR HELMET LABEL** One (1) label shall be provided stating "DO NOT WEAR HELMET WHILE SEATED" and shall be visible from each seated position. **COMMERCIAL CHASSIS SPECIFICATION** **CHASSIS PROVIDER** The chassis, as detailed in these specifications, shall be ordered and supplied by the apparatus manufacturer. **MAKE:** Freightliner **MODEL:** M2 106 **CAB:** Two Door Cab **MODEL YEAR:** 2018 **APPLICATION:** Fire Truck Service **MAX EXPECTED GRADE:** 8% **ENGINE** Cummins ISL 350 HP @ 2000 RPM, 2200 GOV RPM, 1000 LB/FT @ 1400 RPM **ELECTRONIC PARAMETERS** CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT PTO MODE ENGINE RPM LIMIT - 1100 RPM PTO MODE BRAKE OVERRIDE - SERVICE BRAKE ONLY ENABLED PTO RPM WITH CRUISE SET SWITCH - 700 RPM PTO RPM WITH CRUISE RESUME SWITCH - 800 RPM PTO MODE CANCEL VEHICLE SPEED - 5 MPH PTO GOVERNOR RAMP RATE - 250 RPM PER SECOND PTO MINIMUM RPM - 700 REGEN INHIBIT SPEED THRESHOLD - 5 MPH	**Yes**	**No**	

Specifications	Bidder Complies		Notes
ENGINE EQUIPMENT	**Yes**	**No**	
2013 ONBOARD DIAGNOSTICS/2010 EPA/CARB/GHG14 2008 CARB EMISSION CERTIFICATION - EXEMPTED VEHICLE; NO CLEAN IDLE LABEL REQUIRED STANDARD OIL PAN ENGINE MOUNTED OIL CHECK AND FILL ONE-PIECE VALVE COVER SIDE OF HOOD AIR INTAKE WITH NFPA COMPLIANT EMBER SCREEN AND FIRE RETARDANT DONALDSON AIR CLEANER CUMMINS TURBOCHARGED 18.7 CFM AIR COMPRESSOR WITH INTERNAL SAFETY VALVE NON-ADJUSTABLE HIGH TEMPERATURE AIR COMPRESSOR GOVERNOR AIR COMPRESSOR DISCHARGE LINE GVG, FIRE AND EMERGENCY SERVICE VEHICLES ENGINE WARNING 6-GALLON DIESEL EXHAUST FLUID TANK LH MEDIUM DUTY STANDARD DIESEL EXHAUST FLUID TANK LOCATION STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING STANDARD DIESEL EXHAUST FLUID TANK CAP HORTON DRIVEMASTER ON/OFF FAN DRIVE AUTOMATIC FAN CONTROL WITH DASH SWITCH AND INDICATOR LIGHT, NON-ENGINE MOUNTED CUMMINS SPIN ON FUEL FILTER COMBINATION FULL FLOW/BYPASS OIL FILTER 1100 SQUARE INCH ALUMINUM RADIATOR ANTIFREEZE TO -34F, ETHYLENE GLYCOL PRE-CHARGED SCA HEAVY DUTY COOLANT GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES RADIATOR DRAIN VALVE LOWER RADIATOR GUARD ALUMINUM FLYWHEEL HOUSING ELECTRIC GRID AIR INTAKE WARMER DELCO 12V 38MT HD STARTER WITH INTEGRATED MAGNETIC SWITCH			
EXHAUST BRAKE			
CUMMINS EXHAUST BRAKE INTEGRAL WITH VARIABLE GEOMETRY TURBO WITH ON/OFF DASH SWITCH			
AUXILIARY ENGINE COOLER			
AUXILIARY ENGINE COOLING USING WATER FROM FIRE PUMP			

Specifications	Bidder Complies		Notes
EXHAUST SYSTEM	**Yes**	**No**	
RH OUTBOARD UNDER STEP MOUNTED HORIZONTAL AFTERTREATMENT SYSTEM ASSEMBLY WITH RH HORIZONTAL TAILPIPE EXITING FORWARD OF REAR TIRES ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD REGENERATION AND DASH MOUNTED REGENERATION REQUEST SWITCH RH HORIZONTAL TAILPIPE, EXIT FORWARD OF REAR TIRES			
ALTERNATOR			
DR 12V 275 AMP 40-SI BRUSHLESS PAD ALTERNATOR WITH REMOTE BATTERY VOLTAGE SENSE			
BATTERIES			
(2) ALLIANCE MODEL 1231, GROUP 31, 12 VOLT MAINTENANCE FREE 2250 CCA THREADED STUD BATTERIES BATTERY BOX FRAME MOUNTED STANDARD BATTERY JUMPERS SINGLE BATTERY BOX FRAME MOUNTED LH SIDE UNDER CAB WIRE GROUND RETURN FOR BATTERY CABLES WITH ADDITIONAL FRAME GROUND RETURN NON-POLISHED BATTERY BOX COVER POSITIVE LOAD DISCONNECT WITH CAB MOUNTED CONTROL SWITCH MOUNTED OUTBOARD DRIVER SEAT			
TRANSMISSION, 5-SPEED			
ALLISON 3000 EVS AUTOMATIC TRANSMISSION WITH PTO PROVISION			
TRANSMISSION EQUIPMENT			
ALLISON VOCATIONAL PACKAGE 198 - AVAILABLE ON 3000/4000 PRODUCT FAMILIES WITH VOCATIONAL MODEL EVS ALLISON VOCATIONAL RATING FOR FIRE TRUCK/EMERGENCY VEHICLE APPLICATIONS AVAILABLE WITH ALL PRODUCT FAMILIES PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 5, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 5, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY			

Specifications	Bidder Complies		Notes
VEHICLE INTERFACE WIRING AND PDM WITH BODY BUILDER CONNECTOR, BACK OF CAB ELECTRONIC TRANSMISSION CUSTOMER ACCESS CONNECTOR FIREWALL MOUNTED PTO MOUNTING, LH SIDE OF MAIN TRANSMISSION MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN PUSH BUTTON ELECTRONIC SHIFT CONTROL, DASH MOUNTED TRANSMISSION PROGNOSTICS - ENABLED 2013 WATER TO OIL TRANSMISSION COOLER, IN RADIATOR END TANK TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT) **TRANSMISSION WARRANTY** The transmission shall have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty is to be provided by Allison Transmission and not apparatus builder. **FRONT AXLE AND EQUIPMENT** DETROIT DA-F-14.7-3 14,700# FF1 71.5 KPI/3.74 DROP SINGLE FRONT AXLE MERITOR 16.5X5 Q+ CAST SPIDER CAM FRONT BRAKES, DOUBLE ANCHOR, FABRICATED SHOES FIRE AND EMERGENCY SEVERE SERVICE, NON-ASBESTOS FRONT LINING CONMET CAST IRON FRONT BRAKE DRUMS SKF SCOTSEAL PLUS XL FRONT OIL SEALS VENTED FRONT HUB CAPS WITH WINDOW, CENTER AND SIDE PLUGS - OIL STANDARD SPINDLE NUTS FOR ALL AXLES MERITOR AUTOMATIC FRONT SLACK ADJUSTERS TRW TAS-85 POWER STEERING POWER STEERING PUMP 2-QUART SEE THROUGH POWER STEERING RESERVOIR ORGANIC SAE 80/90 FRONT AXLE LUBE	**Yes**	**No**	

Specifications	Bidder Complies		Notes
FRONT SUSPENSION	**Yes**	**No**	
14,600# TAPERLEAF FRONT SUSPENSION MAINTENANCE FREE RUBBER BUSHINGS - FRONT SUSPENSION FRONT SHOCK ABSORBERS			
REAR AXLE AND EQUIPMENT			
MT-40-14X 40,000# R-SERIES TANDEM REAR AXLE IRON REAR AXLE CARRIER WITH OPTIONAL HEAVY-DUTY AXLE HOUSING MXL 17T MERITOR EXTENDED LUBE MAIN DRIVELINE WITH HALF ROUND YOKES MXL 17T MERITOR EXTENDED LUBE INTERAXLE DRIVELINE WITH HALF ROUND YOKES DRIVER CONTROLLED TRACTION DIFFERENTIAL - BOTH TANDEM REAR AXLES (1) INTERAXLE LOCK VALVE, (1) DRIVER CONTROLLED DIFFERENTIAL LOCK FORWARD-REAR AND REAR-REAR AXLE VALVE BLINKING LAMP WITH EACH MODE SWITCH, INTERAXLE UNLOCK DEFAULT WITH IGNITION OFF BLINKING LAMP WITH EACH MODE SWITCH, DIFFERENTIAL UNLOCK WITH IGNITION OFF, ACTIVE <5 MPH MERITOR 16.5X7 Q+ CAST SPIDER CAM REAR BRAKES, DOUBLE ANCHOR, FABRICATED SHOES FIRE AND EMERGENCY SEVERE SERVICE NON-ASBESTOS REAR BRAKE LINING BRAKE CAMS AND CHAMBERS ON FORWARD SIDE OF DRIVE AXLE(S) CONMET CAST IRON REAR BRAKE DRUMS SKF SCOTSEAL PLUS XL REAR OIL SEALS HALDEX GOLDSEAL LONGSTROKE 2-DRIVE AXLES SPRING PARKING CHAMBERS HALDEX AUTOMATIC REAR SLACK ADJUSTERS ORGANIC SAE 80/90 REAR AXLE LUBE			
REAR SUSPENSION HENDRICKSON RTE403 REAR SUSPENSION @ 40,000# HENDRICKSON RT/RTE - 7.19" SADDLE STANDARD U-BOLT PAD 52 INCH AXLE SPACING STEEL BEAMS AND RUBBER CENTER BUSHINGS WITH BAR PIN ADJUSTABLE END CONNECTIONS FORE/AFT CONTROL RODS ENHANCED STABILITY CONTROL			

Specifications	Bidder Complies		Notes
BRAKE SYSTEM	**Yes**	**No**	
AIR BRAKE PACKAGE WABCO 4S/4M ABS REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES FIBER BRAID PARKING BRAKE HOSE STANDARD BRAKE SYSTEM VALVES STANDARD AIR SYSTEM PRESSURE PROTECTION AND 85 PSI PRESSURE PROTECTION FOR AIR HORN(S) STD U.S. FRONT BRAKE VALVE RELAY VALVE WITH 5-8 PSI CRACK PRESSURE, NO REAR PROPORTIONING VALVE BW AD-9 BRAKE LINE AIR DRYER WITH HEATER AIR DRYER MOUNTED INBOARD ON LH RAIL STEEL AIR BRAKE RESERVOIRS CLEAR FRAME RAILS FROM BACK OF CAB TO FRONT REAR SUSPENSION BRACKET, BOTH RAILS OUTBOARD BW DV-2 AUTO DRAIN VALVE WITHOUT HEATER - WET TANK			
FRAME 11/32X3-1/2X10-15/16-INCH STEEL FRAME (8.73MMX277.8MM/0.344X10.94 INCH) 120KSI			
CHASSIS EQUIPMENT FRONT TOW HOOKS - FRAME MOUNTED FENDER AND FRONT OF HOOD MOUNTED FRONT MUDFLAPS CLEAR FRAME RAILS FROM BACK OF CAB TO FRONT REAR SUSPENSION BRACKET, BOTH RAILS OUTBOARD			
FRONT BUMPER THREE-PIECE 14-INCH CHROMED STEEL BUMPER WITH COLLAPSIBLE ENDS BUMPER MOUNTING FOR SINGLE LICENSE PLATE			

Specifications	Bidder Complies		Notes
FUEL TANK	**Yes**	**No**	
50-GALLON/189 LITER SHORT RECTANGULAR ALUMINUM FUEL TANK - LH RECTANGULAR FUEL TANK PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH PAINTED BANDS FUEL TANK FORWARD PLAIN STEP FINISH FUEL TANK CAP ALLIANCE FUEL FILTER/WATER SEPARATOR EQUIFLO INBOARD FUEL SYSTEM HIGH TEMPERATURE REINFORCED NYLON FUEL LINE FUEL COOLER			
DEF TANK			
6-GALLON DIESEL EXHAUST FLUID TANK STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING LH UNDER CAB DIESEL EXHAUST FLUID TANK LOCATION STANDARD DIESEL EXHAUST FLUID TANK CAP			
FRONT TIRES			
MICHELIN XZE 12R22.5 16 PLY RADIAL FRONT TIRES			
REAR TIRES			
MICHELIN XDE M/S 11R22.5 14 PLY RADIAL REAR TIRES			
HUBS			
CONMET PRE-SET BEARING IRON FRONT HUBS CONMET PRE-SET BEARING IRON REAR HUBS			
WHEELS			
ALCOA LVL ONE ALUMINUM DISC FRONT WHEELS ALCOA LVL ONE ALUMINUM DISC REAR WHEELS			

Specifications	Bidder Complies		Notes
CAB EXTERIOR	**Yes**	**No**	
106-INCH BBC FLAT ROOF ALUMINUM CONVENTIONAL CAB AIR CAB MOUNTS LH AND RH EXTERIOR GRAB HANDLES WITH SINGLE RUBBER INSERT HOOD MOUNTED CHROMED PLASTIC GRILLE CHROMED HOOD MOUNTED AIR INTAKE GRILLE FIBERGLASS HOOD SINGLE ELECTRIC HORN INTEGRAL HEADLIGHT/MARKER ASSEMBLY WITH CHROME BEZEL LED AERODYNAMIC MARKER LIGHTS INTEGRAL STOP/TAIL/BACKUP LIGHTS STANDARD FRONT TURN SIGNAL LAMPS 102 INCH EQUIPMENT WIDTH LH AND RH 8 INCH BRIGHT FINISH CONVEX MIRRORS MOUNTED UNDER PRIMARY MIRRORS STANDARD SIDE/REAR REFLECTORS 63X14 INCH TINTED REAR WINDOW TINTED DOOR GLASS LH AND RH WITH TINTED NON-OPERATING WING WINDOWS TINTED WINDSHIELD 2-GALLON WINDSHIELD WASHER RESERVOIR WITHOUT FLUID LEVEL INDICATOR, FRAME MOUNTED MANUAL DOOR WINDOW REGULATORS			
MIRRORS			
DUAL WEST COAST BRIGHT FINISH HEATED MIRRORS WITH LH AND RH REMOTE REMOTE MOUNTED MIRRORS			
CAB INTERIOR			
OPAL GRAY VINYL INTERIOR MOLDED PLASTIC DOOR PANEL MOLDED PLASTIC DOOR PANEL BLACK MATS WITH SINGLE INSULATION FORWARD ROOF MOUNTED CONSOLE WITH UPPER STORAGE COMPARTMENTS WITHOUT NETTING IN DASH STORAGE BIN (2) CUP HOLDERS LH AND RH DASH GRAY/CHARCOAL FLAT DASH HEATER, DEFROSTER AND AIR CONDITIONER			

Specifications	Bidder Complies		Notes
STANDARD HVAC DUCTING MAIN HVAC CONTROLS WITH RECIRCULATION SWITCH STANDARD HEATER PLUMBING DENSO HEAVY DUTY AIR CONDITIONER COMPRESSOR BINARY CONTROL, R-134A PREMIUM INSULATION SOLID-STATE CIRCUIT PROTECTION AND FUSES 12V NEGATIVE GROUND ELECTRICAL SYSTEM DOME DOOR ACTIVATED LH AND RH, DUAL READING LIGHTS, FORWARD CAB ROOF DRIVER AND PASSENGER INTERIOR SUN VISORS (1) 12-VOLT POWER SUPPLY IN DASH ADJUSTABLE TILT AND TELESCOPING STEERING COLUMN 4-SPOKE 18-INCH (450MM) STEERING WHEEL CAB DOOR LATCHES WITH MANUAL DOOR LOCKS **DRIVER'S SEAT** SEATS INC 911 UNIVERSAL SERIES HIGH BACK AIR SUSPENSION DRIVER SEAT WITH NFPA 1901-2009 COMPLIANT SEAT SENSOR GRAY VINYL DRIVER SEAT COVER WITH GRAY CORDURA CLOTH BOLSTER AND HEADREST **PASSENGER'S SEAT** SEATS INC 911 UNIVERSAL SERIES HIGH BACK NON-AIR SUSPENSION PASSENGER SEAT WITH UNDERSEAT STORAGE AND NFPA 1901-2009 COMPLIANT SEAT SENSOR GRAY VINYL FRONT PASSENGER SEAT COVER WITH GRAY CORDURA CLOTH BOLSTER AND HEADREST 3-POINT HIGH VISIBILITY ORANGE RETRACTOR DRIVER AND RH FRONT PASSENGER SEAT BELTS WITH NFPA 1901-2009 COMPLIANT SENSOR AND DASH HARNESS	**Yes**	**No**	

Specifications	Bidder Complies		Notes
INSTRUMENTS AND CONTROLS	**Yes**	**No**	
GRAY DRIVER INSTRUMENT PANEL GRAY CENTER INSTRUMENT PANEL ENGINE REMOTE INTERFACE WITH PARK BRAKE AND NEUTRAL INTERLOCKS BLACK GAUGE BEZELS LOW AIR PRESSURE LIGHT AND BUZZER 2-INCH PRIMARY AND SECONDARY AIR PRESSURE GAUGES ENGINE COMPARTMENT MOUNTED AIR RESTRICTION INDICATOR WITH GRADUATIONS, WITH WARNING LIGHT IN DASH ELECTRONIC CRUISE CONTROL WITH SWITCHES IN LH SWITCH PANEL IGNITION SWITCH WITH NON-REMOVABLE KEY ODOMETER/TRIP/HOUR/DIAGNOSTIC/VOLTAGE DISPLAY: 1X7 CHARACTER, 26 WARNING LAMPS, DATA LINKED, ICU3 DIAGNOSTIC INTERFACE CONNECTOR, 9 PIN, SAE J1939, LOCATED BELOW DASH 2-INCH ELECTRIC FUEL GAUGE PROGRAMMABLE RPM CONTROL - ELECTRONIC ENGINE ELECTRICAL ENGINE COOLANT TEMPERATURE GAUGE 2-INCH TRANSMISSION OIL TEMPERATURE GAUGE ENGINE AND TRIP HOUR METERS INTEGRAL WITHIN DRIVER DISPLAY ELECTRIC ENGINE OIL PRESSURE GAUGE OVERHEAD INSTRUMENT PANEL ELECTRONIC MPH SPEEDOMETER WITH SECONDARY KPH SCALE, WITHOUT ODOMETER STANDARD VEHICLE SPEED SENSOR ELECTRONIC 3000 RPM TACHOMETER IDLE LIMITER, ELECTRONIC ENGINE DIGITAL VOLTAGE DISPLAY INTEGRAL WITH DRIVER DISPLAY SINGLE ELECTRIC WINDSHIELD WIPER MOTOR WITH DELAY MARKER LIGHT SWITCH INTEGRAL WITH HEADLIGHT SWITCH ONE VALVE PARKING BRAKE SYSTEM WITH WARNING INDICATOR SELF CANCELING TURN SIGNAL SWITCH WITH DIMMER, WASHER/WIPER AND HAZARD IN HANDLE INTEGRAL ELECTRONIC TURN SIGNAL FLASHER WITH HAZARD LAMPS OVERRIDING STOP LAMPS DUAL 25-INCH ROUND STUTTER TONE HOOD MOUNTED AIR HORNS (2) LH AND RH FOOT SWITCHES WITH DASH SWITCH FOR HORN BUTTON TO CONTROL AIR HORN, DEFAULT TO ELECTRIC <85 PSI			

Specifications	Bidder Complies		Notes
CHASSIS PAINT COLOR The cab shall be painted a single color. **Color: Match** Fouts Bros. Red **Paint Number:** 763572EA **CAB STEPS** The cab steps shall be left as it comes from the chassis OEM, NO modifications shall be made by the apparatus manufacturer. **HELMET STORAGE, PROVIDED BY PURCHASER** NFPA 1901, 2009 edition, section 14.1.8.4.1 requires a location for helmet storage be provided. There is no helmet storage on the apparatus as manufactured. The Purchaser shall provide a location for storage of helmets. **TIRE PRESSURE MONITORING** The apparatus shall be provided with tire pressure indicating valve stem caps. The indicators shall be installed on each tire and be a heavy-duty design manufactured specifically for trucks. When tire is properly inflated, the indicator inside the cap shall be green, and when the tire is underinflated by 10%, the indicator inside the cap shall be red. **HUB COVERS (front)** Stainless steel hub covers shall be provided on the front axle. **HUB COVERS (rear)** A pair of stainless-steel high-hat hub covers shall be provided on each of the rear axle hubs. **COVERS, LUG NUT, CHROME** Chrome lug nut covers shall be supplied on front and rear wheels.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
EXHAUST SYSTEM The chassis exhaust system shall be left as it comes from the chassis OEM, NO modifications shall be made by the apparatus manufacturer. **BUMPER EXTENSION** The chassis frame shall be extended 16" with a reinforced steel angle and channel framework. The extension shall adequately support the bumper and other equipment to be installed. **FRONT BUMPER GRAVELSHIELD** A 16" front to rear filler panel constructed from NFPA compliant, slip resistant .125" aluminum tread plate material shall be provided on the front chassis frame extension. The extension shall be reinforced to support one (1) firefighter (approximately 250 pounds) and the equipment specified to be installed. **FRONT BUMPER COMPARTMENT CENTER** The front bumper shall include a compartment in the bumper apron located in the center between the frame rails which may be used as a hose well. The compartment shall be constructed of smooth aluminum and shall include drain holes in the bottom corners to allow excess moisture to escape. The floor of the compartment shall be covered with Turtle Tile. The bumper compartment shall have hinged cover made of .125" treadplate aluminum, with push button latches that raise towards the chassis hood. **FRONT HOSEWELL CAPACITY** The front bumper hose well shall have the capacity of 100 feet of 2-1/2" DJ fire hose. **CHASSIS TOW HOOKS** The front tow hooks shall be supplied by the chassis manufacturer.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
REAR TOW PLATES Two (2) rear tow plates with 1-1/2" I.D. holes, constructed with 1" steel plate shall be provided on the apparatus. These shall be located below the apparatus body and fastened to the rear chassis frame rails. **FRONT MUD FLAPS** A pair of black rubber mud flaps shall be provided and installed behind the front wheels by the chassis manufacturer. **REAR MUD FLAPS** A pair of black rubber mud flaps, with the Manufacturer's logo, shall be provided and installed behind the rear wheels. **VEHICLE DATA RECORDER** The apparatus shall be equipped with a Class1 “Vehicle Data Recorder and Seat Belt Warning System” (VDR/SBW) that is connected to the power train CAN (Controller Area Network) bus consisting of transmission (TCM), engine control (ECM) and antilock brake (ABS) modules mounted on the apparatus. The VDR/SBW will function per NFPA 1901-2009 sections 4.11 (Vehicle Data Recorder) utilizing the power train’s J1939 data and 14.1.3.10 (Seat Belt Warning) using the Class1 “Seat Belt Input Module” for seat occupied and belt status information. The VDR data shall be downloadable by USB cable to a computer using either Microsoft™ or Apple™ Operating Systems using Class 1/ O.E.M. supplied reporting software. **SEAT BELT WARNING SYSTEM** There shall be a seat belt indicator system supplied in the cab. The indicator system shall indicate seat belt use for each individual seating position when the seat is occupied, the seat belt remains unfastened and the parking brake is released. A display panel shall be supplied in the dash area. The panel shall have an audible indicator and a red light display to indicate that a seat belt has not been fastened.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
VEHICLE DATA RECORDER DOWNLOAD HARNESS	**Yes**	**No**	
A Class1 model #629-00025 USB VDR download harness shall be supplied with the system to allow the data to be downloaded to a computer.			
CENTER CONSOLE			
A center console shall be furnished and shall be located between the driver and officer's seats. The top face of the console shall be designed as the switch panel for all emergency light switches.			
KEYLESS IGNITION SWITCH			
One (1) non-removable, keyless style ignition switch shall be provided with the chassis.			
MASTER BATTERY SWITCH (Chassis Provided)			
A master battery switch shall be provided as detailed in the chassis specifications.			
BACK-UP ALARM			
One (1) 97 DB back up alarm shall be provided and installed at the rear of the unit. It shall be wired to activate when the transmission is placed in reverse.			
PUMP, MODULE, AND RELATED ITEMS			
NFPA 1901 COMPLIANT PUMP The fire pump and related plumbing on the specified apparatus shall be installed in accordance with applicable NFPA 1901 guidelines at the time the contract was placed.			
SINGLE STAGE FIRE PUMP The pump shall be a Darley LDM single stage fire pump.			
Power to drive the pump shall be provided by the same engine used to propel the apparatus. The pump shall be mid-ship mounted and designed to operate through an integral transmission, including a means for power selectivity to the driving axle or to the pump.			
The pump casing shall be a fine grain cast iron allow, vertically split, with a minimum 30,000 psi tensile strength and bronze fitted.			

Specifications	Bidder Complies		Notes
PUMP SHAFT	**Yes**	**No**	
The pump shaft shall be precision ground stainless steel with long wearing Chromium Oxide hard coating under the packing glands with a hardness level of Rc 72. The shaft shall be splined to receive broached impeller hubs, for greater resistance to wear, torsional vibration, and torque imposed by engine, as well as ease of maintenance and repair. The bearings provided shall be heavy duty, deep groove, radial type ball bearings. Sleeve bearings on any portion of the pump or transmission shall be prohibited due to wear, deflection, and alignment concerns. The bearings shall be protected at all openings from road dirt and water splash with oil seals and water slingers. **IMPELLER** The impeller shall be a high strength bronze alloy of mixed flow design, splined to the pump shaft for precision fit, durability, and ease of maintenance. Impeller shall be vacuum cast designed for maximum lift and highest capacity. The impeller shall feature a double suction inlet design to minimize axial thrust. Pump casing shall feature opposed volute cutwaters to minimize radial thrust. The seal rings shall be renewable, double labyrinth, wrap around bronze type. Impeller shaft oil seals shall be constructed to be free from steel components except for the internal lip spring. The impeller shaft oil seals shall carry a lifetime warranty against damage from corrosion from water and other fire-fighting fluids. **PUMP TRANSMISSION** The transmission case shall be heavy duty cast iron. A magnetic drain plug shall be provided. Transmission case shall include a dip stick for checking oil level. Transmission case interior shall be powder coated to reduce oil contamination. Transmission case shall be equipped with a removable plate for quick inspection of gears, shafts, and bearings inside the transmission.			

Specifications	Bidder Complies		Notes
The pump drive shaft shall be precision ground, heat treated alloy steel, with a minimum 2.5" x 10" spline. The net through-torque rating of the gearbox shall exceed 19,000 ft-lbs. Gears shall be helical design and shall be precision ground for quiet operation and extended life. The gears shall be manufactured from alloy steel and carburized for surface hardness and strength. The pump clutch gear shall be a heat-treated alloy-steel splined spur gear to engage either the pump drive gear or the truck drive shaft gear and shall have bullet-nosed teeth to reduce the possibility of a butt-tooth condition. The pump clutch gear shall be separate from the main drive gear in order to maintain the greatest precision for driving the pump gear train. The pump transmission shall require no further lubrication beyond that provided by the intrinsic action of the gears, to reduce the likelihood of failure due to loss of auxiliary lubrication. **DISCHARGE MANIFOLD** A discharge manifold, as supplied as part of the pump by the pump manufacturer, shall include a discharge check valve assembly to allow priming of the pump from draft with discharges open and caps off. Due to the importance of the above discharge manifold and check valve assembly, intended to be included with the overall pump design, there shall be no exception allowed to this requirement. **SIX YEAR FIRE PUMP WARRANTY** A six (6) year warranty for the Darley fire pump shall be provided. **DARLEY MECHANICAL SEAL** The fire pump shall be furnished with a Darley maintenance free mechanical seal; manufactured using the material silicon carbide (no exceptions). The mechanical seal shall be a non-contacting, non-wearing dual seal design. The lip seal shall eliminate leakage on a wet pump while parked on standby. The second seal shall allow a drip rate for cooling and lubrication while pumping.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
1250 GPM FIRE PUMP SPECIFICATIONS	**Yes**	**No**	
The centrifugal type fire pump shall be a Darley model LDM mid-ship mounted with a rated capacity of 1250 GPM. The pump shall meet NFPA 1901 requirements. The pump shall be certified to meet the following deliveries: 1250 GPM (4731 L/M) @ 150 psi (10.3 bar) 875 GPM (3312 L/M) @ 200 psi (13.8 bar) 625 GPM (2365 L/M) @ 250 psi (17.2 bar) **ALTITUDE REQUIREMENTS** The apparatus shall be designed to meet the specified rating at 0 to 2000' altitude. **LEFT SIDE INLET - 6.00"** One (1) 6.00" suction steamer inlet with male NH threads shall be provided, on the left side pump panel. The inlet shall have a removable screen. **INTAKE TRIM RING WITH WARNING LABEL - BURGUNDY** An Innovative Controls chrome plated molded plastic trim ring shall be installed for the pump intake. A warning label shall be installed on the bezel that states the following: "WARNING: Do not supply inlet with a pressurized source when valve is closed. Serious injury or death can result." **INLET CAP** One (1) 6.00" chrome plated cap with long handles and NST threads shall be supplied. The cap shall be capable of withstanding 500 PSI and be trimmed with the apparatus manufacturer's logo in the center of the cap. **RIGHT SIDE INLET - 6.00"** One (1) 6.00" suction steamer inlet with male NH threads shall be provided, on the right-side pump panel. The inlet shall have a removable screen.			

Specifications	Bidder Complies		Notes
	Yes	No	
INTAKE TRIM RING WITH WARNING LABEL - BURGUNDY An Innovative Controls chrome plated molded plastic trim ring shall be installed for the pump intake. A warning label shall be installed on the bezel that states the following: "WARNING: Do not supply inlet with a pressurized source when valve is closed. Serious injury or death can result." **INLET CAP** One (1) 6.00" chrome plated cap with long handles and NST threads shall be supplied. The cap shall be capable of withstanding 500 PSI and be trimmed with the apparatus manufacturer's logo in the center of the cap. **ELECTRIC/PNEUMATIC PUMP SHIFT SPECIFICATIONS** An air powered pump shift shall be installed in the cab driver's area where not subject to accidental engagement. The pump shift shall be air operated and shall incorporate an air cylinder with an electric actuated switch to shift from road to pump and back. The apparatus pump shift shall be engaged only when apparatus is in a stationary position and the parking brake is engaged. The following indicator lights shall be included with pump shift. **1.** A green indicator light, labeled "PUMP ENGAGED" shall indicate pump shift has successfully been completed. **2.** A green indicator light, labeled "OK TO PUMP" shall indicate the chassis transmission is in pump gear and parking brake is engaged. **3.** Pump shift and interlocks shall comply with applicable sections of NFPA standards. **TRANSMISSION LOCK-UP DEVICE** The automatic chassis transmission shall be delivered to the body builder with high gear lock up device installed on the automatic transmission, to allow proper gear ratio for pump operation. The transmission shall be programmed by the chassis manufacturer to include this feature. **DRIVELINE MODIFICATION** The chassis driveline shall be modified to accommodate any changes required by the installation of the fire pump.			

Specifications	Bidder Complies		Notes
PLUMBING SYSTEM	**Yes**	**No**	
The plumbing system shall consist of stainless steel hard piping, or flexible high-pressure hose, as deemed necessary for the application. Upon completion, the entire system shall be fully pressure tested. Each gated intake shall be equipped with a 0.75" bleeder valve located in close proximity to the intake. All intakes shall be provided with suitable closures (valves or caps) capable of withstanding 500 PSI. When any 3.00" or larger intake or discharge is gated (except tank to pump valve), the valve shall have a mechanism to allow the valve to fully open or fully close no faster than 3 seconds. Any 2.50" or larger discharge outlet, mounted 42.00" or higher from ground, which hose is to be connected, and which is not in a hose storage area, shall be supplied with a sweep elbow of at least 30 degrees. Each gated 1.50" or larger inlet and discharge shall have a quarter turn drain valve installed. The drain valves shall be located along the bottom on each pump panel. Inlets & discharges shall be plumbed to each drain at the lowest point. Each drain shall be plumbed with low-pressure hose to drain below bottom of the apparatus and be directed away from the pump operator. Each drain valve shall have a color-coded function label. Small lines within the pump enclosure shall be constructed from Synflex hose. Uses include but are not limited to such lines as priming control, gauge lines, drain lines, air control valves, pump shift, supplemental cooling, foam flush and air bleeder valves. **PLUMBING SYSTEM** The plumbing system shall be left unpainted by the apparatus manufacturer. **HOSE THREADS- NST** All hose threads shall be National Standard Thread (NST) on all base threads on the apparatus intake and discharges, unless otherwise specified.			

Specifications	Bidder Complies		Notes
INTAKE RELIEF VALVE One (1) Task Force Tips model #A1821 pressure relief valve shall be provided. The valve shall have an easy to read adjustment range from 90 to 300 PSI with easy to read 90, 125, 150, 200, 250, 300 psi settings and an “OFF” position. Pressure adjustment can be made utilizing a ¼” hex key, 9/16” socket or 14mm socket. For corrosion resistance the cast aluminum valve shall be hardcoat anodized with a powder coat interior and exterior finish. The valve shall be configured with a 2.5" male NPT threaded inlet. The valve shall have a 2.00" male NPT threaded discharge outlet. The valve shall meet NFPA 1901 requirements for pump inlet relief valve. The unit shall be covered by a five-year warranty. **ELECTRIC PRIMER (FLUIDLESS)** The fire pump priming system shall consist of one (1) 12V positive displacement type rotary vane primer of a fluidless design. A single, push-pull control shall be located on the pump operator's panel with a "Pull to Prime - Push to Close" label. The primer shall not require a lubrication tank. The priming pump shall be constructed of heat treated aluminum and hard coat anodized. **PRIMER FUSE** The primer shall be protected with a 250 amp fusible link that is designed to protect the apparatus 12-volt electrical system if the primer motor malfunctions. **U.L. TEST POINTS** Two (2) U.L. test plugs shall be mounted on the pump panel for testing of the vacuum and pressures. **MASTER DRAIN** One (1) rotary style master drain shall be installed on the lower portion of the side control panel. It shall be of brass construction and use a rotary screw mechanism against a rubber sealing surface. Each port shall be isolated. An "open and closed" label with arrows indicating direction shall be installed.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
1/4 TURN DRAINS Each gated 1.50" or larger inlet and discharge shall have a quarter turn drain valve installed. The drain valves shall be located along the bottom on each pump panel. Inlets & discharges shall be plumbed to each drain at the lowest point. Each drain shall be plumbed with low-pressure hose to drain below bottom of the apparatus and be directed away from the pump operator. Each drain valve shall have a color-coded function label. **SYNFLEX SUCTION, DISCHARGE, PRESSURE AND CONTROL LINES** Small lines within the pump enclosure shall be constructed from Synflex hose. Uses include but are not limited to such lines as priming control, gauge lines, drain lines, air control valves, pump shift, supplemental cooling, foam flush and air bleeder valves. **PRESSURE GOVERNOR and ENGINE MONITORING DISPLAY** Fire Research PumpBoss series PBA401 pressure governor and monitoring display kit shall be installed. The kit shall include a control module, intake pressure sensor, discharge pressure sensor, and cables. The control module case shall be waterproof and have dimensions not to exceed 6.75" high by 4.625" wide by 1.50" deep. The control knob shall be 2.00" in diameter with no mechanical stops, have a serrated grip, and a red idle push button in the center. It shall not extend more than 1.75" from the front of the control module. Inputs for monitored information shall be from a J1939 databus or independent sensors. Outputs for engine control shall be on the J1939 databus or engine specific wiring. Inputs to the control module from the pump discharge and intake pressure sensors shall be electrical. The following continuous displays shall be provided: Engine RPM; shown with four daylight bright LED digits more than 0.50" high • Check engine and stop engine warning LEDs • Oil pressure; shown on a dual color (green/red) LED bar graph display • Engine coolant temperature; shown on a dual color (green/red) LED bar graph display • Transmission Temperature: shown on a dual color (green/red) LED bar graph display • Battery voltage; shown on a dual color (green/red) LED bar graph display • Pressure and RPM operating mode LEDs • Pressure / RPM setting; shown on a dot matrix message display • Throttle ready LED.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
	Yes	No	
The dot-matrix message display shall show diagnostic and warning messages as they occur. It shall show monitored apparatus information, stored data, and program options when selected by the operator. All LED intensity shall be automatically adjusted for day and night time operation. The program shall store the accumulated operating hours for the pump and engine to be displayed with the push of a button. It shall monitor inputs and support audible and visual warning alarms for the following conditions: • High Battery Voltage • Low Battery Voltage (Engine Off) • Low Battery Voltage (Engine Running) • High Transmission Temperature • Low Engine Oil Pressure • High Engine Coolant Temperature • Out of Water (visual alarm only) • No Engine Response (visual alarm only). The program features shall be accessed via push buttons located on the front of the control module. There shall be a USB port located at the rear of the control module to upload future firmware enhancements. The governor shall operate in two (2) control modes, pressure and RPM. No discharge pressure or engine RPM variation shall occur when switching between modes. A throttle ready LED shall light when the interlock signal is recognized. The governor shall start in pressure mode and set the engine RPM to idle. In pressure mode the governor shall automatically regulate the discharge pressure at the level set by the operator. In RPM mode the governor shall maintain the engine RPM at the level set by the operator except in the event of a discharge pressure increase. The governor shall limit a discharge pressure increase in RPM mode to a maximum of 30 psi. Other safety features shall include recognition of no water conditions with an automatic programmed response and a push button to return the engine to idle.			

Specifications	Bidder Complies		Notes
AUXILARY INTAKE- 2.50" - LEFT SIDE One (1) 2.50" suction shall be installed on the left pump panel with the valve body mounted behind the pump panel. A 2.50", Darley bronze valve shall be provided for the LH auxiliary intake. It shall be a quarter turn ball type, self-locking, fixed pivot design and have a high polished stainless-steel ball. The valve inlet shall be a 2.50" female NST hose thread adapter with a wire screen inlet strainer and a polished chrome swivel. The intake valve shall be manually operated with a swing-type manual control located adjacent the intake. One (1) 2.50 chrome plated plug shall be provided. The threads shall be NST and the plug shall be equipped rocker lugs and chain. There shall be an Innovative Controls 0.75" quarter turn drain valve included. The drain valve shall be connected to the valve with flexible hose that is routed in such a manner as to assure complete drainage to below the apparatus. A matching color-coded bezel shall be included. **TANK TO PUMP LINE** One (1) 4.00" tank to pump line shall be provided for connection between the water tank and the fire pump. The valve shall be a 4.00" butterfly type with 4.00" piping, flex hose and stainless-steel hose clamps. The valve shall be controlled electrically with a momentary switch at the pump panel. The control shall have one (1) amber and one (1) green light to show the position of the electric valve. **TANK FILL** One (1) 2.00" gated full flow pump to tank refill line shall be provided. Tank fill plumbing shall utilize 2.00" high pressure hose for tank connection to accommodate flexing between components. An Elkhart Brass Unibody, model EB20, 2.00" valve shall be provided between the pump discharge manifold and the water tank. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. The quarter turn valve shall be manually operated with a locking push/pull "T" handle located on the left-hand side pump operator's panel.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
LEFT SIDE FRONT DISCHARGE - 2.50" One (1) 2.50" discharge outlet shall be supplied at the left-hand side pump panel. The valve shall be a 2.50" Darley bronze valve. It shall be a quarter turn ball type, self-locking, fixed pivot design and have a high polished stainless-steel ball. The quarter turn valve shall be manually operated with a lever control from the left-hand side pump operator's panel. One (1) 2.50" Noshok discharge pressure gauge (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. There shall be an Innovative Controls 0.75" quarter turn drain valve included. The drain valve shall be connected to the valve with flexible hose that is routed in such a manner as to assure complete drainage to below the apparatus. A matching color-coded bezel shall be included. The discharge shall have a 2.50" Female NST swivel rocker lug x 2.50" Male NST 30-degree chrome elbow adapter provided. One (1) 2.50" chrome plated cap shall be provided. The threads shall be NST and the cap shall be equipped rocker lugs and chain.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
LEFT SIDE REAR DISCHARGE - 2.50"	**Yes**	**No**	
One (1) 2.50" discharge outlet shall be supplied at the left-hand side pump panel. The valve shall be a 2.50" Darley bronze valve. It shall be a quarter turn ball type, self-locking, fixed pivot design and have a high polished stainless-steel ball. The quarter turn valve shall be manually operated with a lever control from the left-hand side pump operator's panel. One (1) 2.50" Noshok discharge pressure gauge (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. There shall be an Innovative Controls 0.75" quarter turn drain valve included. The drain valve shall be connected to the valve with flexible hose that is routed in such a manner as to assure complete drainage to below the apparatus. A matching color-coded bezel shall be included. The discharge shall have a 2.50" Female NST swivel rocker lug x 2.50" Male NST 30-degree chrome elbow adapter provided. One (1) 2.50" chrome plated cap shall be provided. The threads shall be NST and the cap shall be equipped rocker lugs and chain.			
RIGHT SIDE FRONT DISCHARGE - 2.50" One (1) 2.50" discharge outlet shall be supplied at the right-hand side pump panel. The valve shall be a 2.50" Darley bronze valve. It shall be a quarter turn ball type, self-locking, fixed pivot design and have a high polished stainless-steel ball. The quarter turn valve shall be remotely operated with a lever control from the left-hand side pump operator's panel. The discharge shall have a 2.50" Female NST swivel rocker lug x 2.50" Male NST 30-degree chrome elbow adapter provided. One (1) 2.50" chrome plated cap shall be provided. The threads shall be NST and the cap shall be equipped rocker lugs and chain.			

Specifications	Bidder Complies		Notes
RIGHT SIDE REAR DISCHARGE - 2.50"	**Yes**	**No**	
One (1) 2.50" discharge outlet shall be supplied at the right-hand side pump panel. The valve shall be a 2.50" Darley bronze valve. It shall be a quarter turn ball type, self-locking, fixed pivot design and have a high polished stainless-steel ball. The quarter turn valve shall be remotely operated with a lever control from the left-hand side pump operator's panel. One (1) 2.50" Noshok discharge pressure gauge (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. There shall be an Innovative Controls 0.75" quarter turn drain valve included. The drain valve shall be connected to the valve with flexible hose that is routed in such a manner as to assure complete drainage to below the apparatus. A matching color-coded bezel shall be included. The discharge shall have a 2.50" Female NST swivel rocker lug x 2.50" Male NST 30-degree chrome elbow adapter provided. One (1) 2.50" chrome plated cap shall be provided. The threads shall be NST and the cap shall be equipped rocker lugs and chain. **CROSSLAY PRE-CONNECT #1** One (1) 1.75" crosslay pre-connect shall be installed in the pump module above the pump. The crosslay shall be plumbed using 2.00" stainless steel pipe, and/or flexible piping. The crosslay hose bed floor shall be slotted to allow the swivel to extend up through the floor, allowing the pre-connected hose to be pulled off either side of the apparatus without kinking the hose at the coupling connection.			

Specifications	Bidder Complies		Notes
The crosslay discharge shall terminate below the hose bed floor with a 1.50" NST male chicksan swivel adapter. A 2.00" Elkhart Brass Unibody model EB20 valve shall be provided for the crosslay #1 discharge. The valve shall have an all brass valve body and stainless-steel ball. The quarter turn valve shall be manually operated with a locking push/pull "T" handle located on the left-hand side pump operator's panel. One (1) 2.50" Noshok discharge pressure gauge (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. There shall be an Innovative Controls 0.75" quarter turn drain valve included. The drain valve shall be connected to the valve with flexible hose that is routed in such a manner as to assure complete drainage to below the apparatus. A matching color-coded bezel shall be included. Crosslay discharge #1 shall have the capacity to hold 200 feet of 1.75" fire hose and nozzle. **CROSSLAY PRE-CONNECT #2** One (1) 1.75" crosslay pre-connect shall be installed in the pump module above the pump. The crosslay shall be plumbed using 2.00" stainless steel pipe, and/or flexible piping. The crosslay hose bed floor shall be slotted to allow the swivel to extend up through the floor, allowing the pre-connected hose to be pulled off either side of the apparatus without kinking the hose at the coupling connection. The crosslay discharge shall terminate below the hose bed floor with a 1.50" NST male chicksan swivel adapter. A 2.00" Elkhart Brass Unibody model EB20 valve shall be provided for the crosslay #2 discharge. The valve shall have an all brass valve body and stainless-steel ball.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
	Yes	No	
The quarter turn valve shall be manually operated with a locking push/pull "T" handle located on the left-hand side pump operator's panel. One (1) 2.50" Noshok discharge pressure gauge (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. There shall be an Innovative Controls 0.75" quarter turn drain valve included. The drain valve shall be connected to the valve with flexible hose that is routed in such a manner as to assure complete drainage to below the apparatus. A matching color-coded bezel shall be included. Crosslay discharge #2 shall have the capacity to hold 200 feet of 1.75" fire hose and nozzle. **CROSSLAY #3, 2.50" HOSEBED ("DEADLAY")** One (1) deadlay hosebed, without plumbing, shall be installed above the pump compartment. The deadlay shall have the capacity to hold 250 feet of 2.50" fire hose and nozzle. **CROSSLAY HOSEBED** The crosslays shall be arranged on top of the pump module with the #1 crosslay toward the front of the pump house and the #2 crosslay immediately behind the first, and the #3 crosslay at the rear of the module. **VINYL CROSSLAY COVER** The crosslays shall be equipped with a heavy duty 18 oz. vinyl cover with side flaps. The top portion will be fastened to the pump house with Velcro and the side flaps will be held in place with a hook and bungee system. The vinyl cover shall be red in color.			

Specifications	Bidder Complies		Notes
FRONT DISCHARGE - 2.50"	**Yes**	**No**	
One (1) 2-.50" discharge shall be located on the front of the apparatus. A 2.50" Elkhart Brass Unibody model EB25 valve shall be provided for the front discharge. The valve shall have an all brass valve body and stainless-steel ball. One (1) 2.50" Noshok discharge pressure gauge (0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauge will be located on the pump instrument panel. The quarter turn valve shall be manually operated with a locking push/pull "T" handle located on the left-hand side pump operator's panel. There shall be an Innovative Controls 3/4" quarter turn drain valve included. The drain valve shall be connected to the valve with flexible hose that is routed in such a manner as to assure complete drainage to below the apparatus. A matching color-coded bezel shall be included. **DISCHARGE ADAPTER** One (1) 2-.50" NPT x 2.50" NST Chrome Mattydale swivel shall be located on the right side of the hose box. **PRESSURE GAUGES** Each line pressure gauge shall be mounted immediately near the control for the corresponding valve. The individual line pressure gauges for the discharges shall be 2.50" in diameter with white dial face gauges with black lettering and markings. The gauges shall be a compound style gauge with a vacuum/pressure range of 0 to +400 psi. The gauges shall be fluid filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to -40° F. The cases shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area.			

Specifications	Bidder Complies		Notes
The gauge accuracy for the gauge shall be plus or minus 2% mid-scale, plus or minus 3% balance, per ANSI B40.1, Grade 1A. To prevent internal freezing and to keep contaminants from entering the gauge, the stem and bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. **MASTER DISCHARGE AND INTAKE GAUGES** Two (2) 4.00" diameter Noshok discharge pressure and intake gauges shall be provided. The face of the gauge shall be a white dial with black letters. The gauges will be located on the pump instrument panel. The master vacuum gauge shall be a compound style gauge with a vacuum/pressure range of -30" - 0 - 400 psig with the dial face of the gauge labeled in black "PUMP INTAKE". The master pressure gauge shall be provided with a range of 0-400 psig and the dial face of the gauge labeled in black "PUMP DISCHARGE". The master gauges shall have clear scratch resistant molded crystals with captive O-ring seals shall be used to ensure distortion free viewing and to seal the gauge. The gauges shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from –40° F to +160° F. Each gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy. A polished chrome plated brass bezel shall be provided to prevent corrosion and protect the lens and gauge case. **LED WATER LEVEL GAUGE (PUMP PANEL)** One (1) Innovative Controls SL-PLUS model #3030730-02-37, Ultra-Bright LED water level monitor shall be provided on the left-hand side pump operator's control panel. The gauge shall feature a 180 degree highly visible wide view ultra-brite LED display showing the level of the booster tank. The gauge shall use a pressure transducer #3030376-01 installed near the bottom of the water tank to determine the correct volume in the tank.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
CAB MOUNTED WATER TANK INDICATOR	**Yes**	**No**	
One (1) Innovative Controls SL-PLUS model #3030698-37, Ultra-Bright LED water level monitor shall be provided in the cab. The level gauge shall contain four (4) high intensity LED's on the display in a vertical pattern allowing the full, 3/4, 1/4, and refill levels to be easily distinguished at a glance.			
SIDE DESIGN PUMP OPERATOR'S PANEL & MODULE			
SIDE PANEL MODULE			
A pump operator's side panel pump module shall be provided. It shall be assembled and mounted independently from both the chassis and the body, to allow sufficient flexing and prevent component fatigue. The module shall be constructed using square steel tubing. The welded ends of the tubing shall be chamfered prior to welding and shall be ground smooth prior to finishing. The exterior module shall be sanded, prepped, and primed using paint manufacturer's recommendations. The module structure shall be finish painted to match the body and chassis cab. A heavy-duty rubber isolation material shall be provided between dissimilar metals during the mounting process. The substructure and extrusions shall be painted and undercoated before bolting to the chassis frame.			
SIDE PANELS - BLACK VINYL			
The pump compartment module shall have left and right-side pump panels constructed of black vinyl clad aluminum sheets.			
GAUGE PANEL			
The pump operator's upper gauge panel shall be located on the left-hand side of the pump module above the main control panel. It shall be vertically hinged and shall have two (2) latches.			
LEFT SIDE PUMP PANEL			
The pump panel installed on the left-hand side of the pump enclosure shall be fastened to the pump enclosure with stainless steel bolts.			
RIGHT SIDE PUMP PANEL			
The pump panel installed on the on the right-hand side of the pump enclosure shall be fully removable without the use of hand tools.			

Specifications	Bidder Complies		Notes
PUMP PANEL/ ENCLOSURE LIGHTS	**Yes**	**No**	
PUMP PANEL LIGHT SHIELD LEFT One (1) extruded aluminum light shield assembly shall be provided above the left side pump panel area. One (1) waterproof strip light with 72 LEDs shall be installed within the shield. The light(s) shall be 23.80" in length, have a clear acrylic lens, aluminum housing, and have a minimum effective output of 950 lumens. **PUMP PANEL LIGHT SHIELD RIGHT** One (1) extruded aluminum light shield assembly shall be provided above the right-side pump panel area. One (1) waterproof strip light with 72 LEDs shall be installed within the shield. The light(s) shall be 23.80" in length, have a clear acrylic lens, aluminum housing, and have a minimum effective output of 950 lumens. A weather resistant switch located on the pump operator's panel shall be provided to activate the lights. **PUMP COMPARTMENT LIGHTS** Two (2) LED lights shall be provided inside the pump compartment area. The dimensions of the lights shall be 1.00" x 3.00". Each light shall operate at 12 volts DC, generate 120 lumens, and shall be mounted on an adjustable bail mount bracket. The lights shall function with the switch for pump operator's gauge panel lights. **LEFT SIDE RUNNING BOARD** The left pump panel shall be equipped with a side running board. The running board shall be constructed of 0.125" embossed fire apparatus bright aluminum treadplate. It shall be a minimum of approximately 11" deep x the width of the side panel module. The running board shall have an upward bend on the inside edge to act as a kick plate. The running board shall be attached to a frame mounted outrigger support structure. The running board shall have a 3" downward bend on the front and side faces with a 1" underside return for superior strength.			

Specifications	Bidder Complies		Notes
RIGHT SIDE RUNNING BOARD The right pump panel shall be equipped with a side running board. The running board shall be constructed of 0.125" embossed fire apparatus bright aluminum treadplate. It shall be a minimum of approximately 11" deep x the width of the side panel module. The running board shall have an upward bend on the inside edge to act as a kick plate. The running board shall be attached to a frame mounted outrigger support structure. The running board shall have a 3" downward bend on the front and side faces with a 1" underside return for superior strength. **FRONT PUMP HOUSE ENCLOSURE** The front of the pump enclosure shall be enclosed with .08" bright aluminum treadplate. **WARNING - PUMP OPERATOR** A warning plate shall be installed on the pump operator's panel that states the following: WARNING: Death or serious injury might occur if proper operating procedures are not followed. The pump operator as well as individuals connecting supply or discharge hoses to the apparatus must be familiar with water hydraulics hazards and component limitations. **PUMP PANEL ID PLATE** An identification plate shall be installed on the pump operator control panel to identify the fire pump serial number, model number, and performance. **COLOR CODED PUMP PANEL LABELING AND NAMEPLATES** Discharge and intake valve controls shall be color coded in compliance to guidelines of applicable sections of NFPA standards. Innovative Controls permanent type nameplates and instruction panels shall be installed on the pump panel for safe operation of the pumping equipment and controls.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
PUMP PANEL COLOR TRIM PANELS	**Yes**	**No**	
Innovative Controls intake and discharge trim rings shall be installed to the apparatus with mounting bolts. These bezel assemblies will be used to identify intake and discharge ports with color and verbiage. These trim rings are designed and manufactured to withstand the specified apparatus service environment and shall be backed by a warranty equal to that of the exterior paint and finish. The specified assemblies feature a chrome-plated panel-mount bezel with durable UV resistant polycarbonate inserts. These UV resistant polycarbonate graphic inserts shall be sub-surface screen printed to eliminate the possibility of wear and protect the inks from fading. All insert labels shall be backed with 3M permanent adhesive (200MP), which meets UL969 and NFPA standards. **WATER TANK AND RELATED COMPONENTS** **3000 GALLON POLY TANK** Tank capacity shall be 3000 US gallons / 2498 Imperial gallons / 11356 Liters. The tank shall be constructed of PT3 polypropylene material. **TANK MATERIAL** This material shall be a non-corrosive stress relieved thermoplastic and UV stabilized for maximum protection. Tank shell thickness may vary depending on the application and may range from 0.50" to 1.00” as required. Internal baffles are generally 0.375” in thickness. **ISO CERTIFICATION** The tank must be designed and fabricated by a tank manufacturer that is ISO 9001:2008 certified in each of its locations. The ISO certification must be to the current standard in effect at the time of the design and fabrication of the tank.			

Specifications	Bidder Complies		Notes
CONSTRUCTION The booster and/or foam tank shall be of a specific configuration and is so designed to be completely independent of the body and compartments. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include PolyProSeal™ technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise. The top of the booster tank is fitted with removable lifting assembly designed to facilitate tank removal. The transverse and longitudinal swash partitions shall be manufactured of a minimum of 0.375" PT3™ polypropylene. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions interlock with one another and are completely fused to each other as well as to the walls of the tank. All partitions and spacing shall comply with NFPA 1901. The walls shall be welded to the floor of the tank providing maximum strength as part of the tank's unique Full Floor Design™. Tolerances in design allow for a maximum variation of 0.125" on all dimensions. The tank cover shall be constructed of 0.50" thick PT3 polypropylene and UV stabilized, to incorporate a multi-piece locking design, which allows for individual removal and inspection if necessary. The tank cover(s) shall be flush or recessed 0.375" from the top of the tank and shall be fused to the tank walls and longitudinal partitions for maximum integrity. Each one of the covers shall have hold downs consisting of 2.00" minimum polypropylene dowels spaced a maximum of 40.00" apart. These dowels shall extend through the covers and will assist in keeping the covers rigid under fast filling conditions. A minimum of two (2) lifting dowels shall accommodate the necessary lifting hardware.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
OUTLETS There will be two (2) standard tank outlets: one (1) for the tank-to-pump suction line, which shall be sized to provide adequate water flow to the pump; and, one (1) for tank fill line, which shall be sized according to the NFPA minimum size chart for booster tanks. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank, and be capable of withstanding sustained fill rates of up to 1000 G.P.M. The addition of rear suction fittings, nurse valve fittings, dump valve fittings, and through-the-tank sleeves to accommodate rear discharge piping must be specified. All auxiliary outlets and inlets must meet all NFPA guidelines in effect at the time of manufacture. **CAPACITY CERTIFICATION** All water and foam tanks shall be tested and certified as to capacity on a calibrated and certified tilting scale. Each tank shall be weighed empty and full to provide precise fluid capacity. Each Poly-Tank® III is delivered with a Certificate of Capacity delineating the weight empty and full and the resultant capacity based on weight. Engineering estimates for capacity calculations shall not be permitted for capacity certification. **CENTER OF GRAVITY** A center of gravity calculation shall be determined for each tank and provided as requested in order to provide the apparatus manufacturer with the necessary data to design and certify the apparatus with respect to the NFPA requirements regarding rollover stability. This information may be used by the apparatus manufacturer to assist in the calculation of the apparatus's ability to meet the tilt table static rollover threshold or calculated Center of Gravity requirements per NFPA. A center of gravity and weight calculation for both empty and full conditions shall be required with each tank. **TANKNOLOGY™ TAG** A tag shall be installed on the apparatus in a convenient location and contain pertinent information including a QR code readable by commercially available smart phones. The information contained on the tag shall include the capacity of the water and foam (s), the maximum fill and pressure rates, the serial number of the tank, the date of manufacture, the tank manufacturer, and contact information. The QR code will allow the user to connect with the tank manufacturer for additional information and assistance.	**Yes**	**No**	

	Bidder Complies		Notes
WATER FILL TOWER AND COVER	**Yes**	**No**	
The tank shall have a combination vent and manual anti-surge fill tower. The fill tower shall be constructed of 0.50" PT3 polypropylene and shall be a minimum dimension of 10.00" x 10.00" outer perimeter. The fill tower shall be blue in color indicating that it is a water-only fill tower. The tower shall have a 0.25" thick removable polypropylene screen and a PT3 polypropylene hinged cover. The capacity of the tank shall be engraved on the top of the fill tower lid. The fill tower shall have an anti-surge provision. It shall design to prevent water splashing up through the top of the fill tower when the water tank is full, and the apparatus comes to an immediate stop. (NO EXCEPTION) **FILL TOWER LOCATION** The fill tower shall be located in the left front area of the tank. Inside the fill tower there shall be a combination vent/overflow pipe. The vent overflow shall be a minimum of schedule 40 polypropylene pipe with a minimum I.D. of 6.00" that is designed to run through the tank and shall be piped to discharge water behind the rear wheels as required in NFPA 1901 so as to not interfere with rear tire traction. **SUMP, 4.00"** There shall be one (1) sump standard per tank. The sump shall be constructed of a minimum of 0.50" PT3 polypropylene and be located in the left front quarter of the tank, unless specified otherwise. On all tanks that require a front suction, a 3.00" schedule 40 polypropylene pipe shall be installed that will incorporate a dip tube from the front of the tank to the sump location. All tanks shall have an anti-swirl plate located approximately 3.00” above the inside floor. **WATER TANK CLEAN-OUT PLUG** The tank shall have a 4.00" N.P.T. threaded outlet on the bottom for a cleanout/ drain plug per NFPA. The cleanout/ drain plug shall be installed in the bottom of the water tank using an 8-Bolt flange with a 4.00" N.P.T. threaded outlet to create easy access to the plug. (NO EXCPETION)			

Specifications	Bidder Complies		Notes
MOUNTING BLOCKS There will be four (4) mounting blocks, two (2) on each side for mounting equipment such as ladder brackets. A 1.00" mounting block shall cover the whole rear of tank for mounting work lights, folding steps, grab rails, accessories and emergency lighting. **HOSE BED** There shall be a hose bed area constructed of polypropylene on the top of the water tank consisting of two (2) side walls and one (1) front panel. The hose bed shall be welded to the outside perimeter of the tank cover and shall be approximately 9.00" tall by the length and width of the water tank. The hose bed shall be free from all projections, which may interfere with the unloading of hose. **HOSEBED FLOOR** The floor of the hose bed shall be grooved by the tank manufacturer to provide an integral planking designed to allow the loaded hose to drain and allow airflow for ventilation. **VINYL HOSEBED COVER** The apparatus shall be equipped with an 18 oz. vinyl Hosebed cover with a rear flap and a hook and bungee fastening system at front and sides. The rear flap shall be fastened with three (3) 2.00" side release plastic buckle assemblies. The vinyl material shall be treated for protection against UV rays and mildew. The vinyl cover shall be red in color. **REAR DUMP VALVE** One (1) NEWTON 10” Model 1050-34 Stainless Steel dump valve shall be installed. It shall be located at the rear center of the apparatus. One (1) manual operated lever control shall be used to open and close the dump valve, the lever shall be located on the top of the valve.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
DIRECT TANK FILL, LEFT HAND SIDE	**Yes**	**No**	
There shall be a one (1) 2.50" direct tank fill located on the left-rear of the apparatus. The valve shall be an Elkhart Unibody swing out valve. This valve shall be operated using a direct manual actuator handle. The manual actuator shall require only 90° travel and be quickly adjustable to one of eight positions. Valve inlet shall be a 2.50" female NST and feature a 30-degree droop with a wire screen inlet strainer and a polished chrome swivel. The inlet shall be able to be controlled from the rear of the apparatus while standing at ground level. One (1) 2.50" chrome plated plug shall be provided. The threads shall be NST and the plug shall be equipped rocker lugs and chain. **DIRECT TANK FILL, RIGHT HAND SIDE** There shall be a one (1) 2.50" direct tank fill located on the right-rear of the apparatus. The valve shall be an Elkhart Unibody swing out valve. This valve shall be operated using a direct manual actuator handle. The manual actuator shall require only 90° travel and be quickly adjustable to one of eight positions. Valve inlet shall be a 2.50" female NST and feature a 30-degree droop with a wire screen inlet strainer and a polished chrome swivel. The inlet shall be able to be controlled from the rear of the apparatus while standing at ground level. One (1) 2.50" chrome plated plug shall be provided. The threads shall be NST and the plug shall be equipped rocker lugs and chain. **SUBFRAME** The sub frame shall be constructed from structural steel channel and plate, welded together and bolted to the chassis frame. The main support shall be a 0.3125” thick steel plate under the tank floor with 2.50” angle steel around the perimeter of the tank. Two (2) sub frame long sills constructed of 3.00” X 7.00” steel tubing with 0.1875” walls shall run the full length of the sub-frame and be mounted to truck frame using 0.1875” angle clips and a minimum of ten (10) grade 8 bolts. The tank sub frame and attachments shall be in strict compliance with UPF poly-tanks engineering specifications.			

Specifications	Bidder Complies		Notes
MOUNTING	**Yes**	**No**	
The tank shall rest on the sub-frame as to not allow for more than 530 square inches of unsupported area under the tank floor. In cases where overall height of the tank exceeds 40 inches the sub-frame shall be designed to allow for not more than 400 square inches of unsupported area. The tank shall be supported to prevent itself from shifting during vehicle operation. A non-corrosive protective liner shall be installed in between the tank and the Sub-frame. The tank shall be mounted to sub frame with three (3) stainless steel gussets per UPF specifications. The tank and sub frame must be installed by a UPF Authorized installer (NO EXCEPTIONS). **BODY CONSTRUCTION** The body shall be fabricated of steel tubing, angle, smooth aluminum sheet and aluminum treadplate. The tubing shall be designed as structural-framing members with the smooth aluminum and treadplate fabricated to form compartments, floors and fender panels The side compartments shall be modular in design and shall be capable of being replaced if damaged. Each shall be supported by the steel frame and attached to the sub frame with grade 8 bolts. The compartments shall have a minimum of one (1) set of louvers stamped into the rear wall to provide the proper airflow inside the compartment and to prevent water from dripping into the compartment. These louvers shall be formed into the metal and not added to the compartment as a separate plate. The side compartments shall be constructed of formed 1/8" aluminum.			

Specifications	Bidder Complies		Notes
COMPARTMENT FLOORS	**Yes**	**No**	
The side compartment floors shall be constructed of 3/16" smooth aluminum. The side compartment floors shall have a sweep out design for easy cleaning. **BODY WIDTH** The width of the apparatus body from the outside face of the left compartments to the outside face of the right compartments shall be 96.00" wide. **FENDER PANELS** The side fender panels above the rear wheels shall be constructed of 0.125" bright aluminum diamond plate. The rear wheel wells shall be angled cut with an integral fenderette for a streamlined appearance. The compartments and fenders, together forming the body, shall remain unpainted. All seams on the frame side of the body shall be welded or caulked to prevent moisture from entering the compartments. **LEFT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, L-1** One (1) compartment shall be supplied on the left-hand side of the truck in front of the rear wheels. The compartment shall be equipped with low double hinged doors. Compartment dimensions shall be approx. 60.00” wide by 26.00” deep by 27.00” high. **COMPARTMENT LIGHT(S)** One (1) surface mount LED light(s) shall be installed in the compartment. The light(s) shall have a clear lens and shall a minimum effective output of 810 lumens. The lights shall function independently of other compartments by an automatic "On-Off" switch located on each compartment door.			

Specifications	Bidder Complies		Notes
RIGHT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, R-1 One (1) compartment shall be supplied on the right-hand side of the truck in front of the rear wheels. The compartment shall be equipped with low double hinged doors. Compartment dimensions shall be approx. 60.00” wide by 26.00” deep by 27.00” high. **COMPARTMENT LIGHT(S)** One (1) surface mount LED light(s) shall be installed in the compartment. The light(s) shall have a clear lens and shall a minimum effective output of 810 lumens. The lights shall function independently of other compartments by an automatic "On-Off" switch located on each compartment door. **LOWER COMPARTMENT DOORS, DOUBLE** Double door compartments shall have two (2) vertically hinged doors, with no center posts closing to the center of each front compartment. The compartment doors shall be lap style and shall be constructed of .125" aluminum diamond plate. A heavy duty automotive extruded rubber molding shall be installed around the door perimeter. Each door shall be attached to the compartment with a full-length piano style continuous hinge. The door handle shall be a 6.00" stainless steel D-Ring. **LOWER COMPARTMENT DOORS, SINGLE** Single door compartments shall have one (1) vertically hinged door closing towards the rear of the apparatus. The door on the compartments shall be constructed of .125" aluminum treadplate a gas shock to hold it in the open position. A heavy duty automotive extruded rubber molding shall be installed around the door perimeter to ensure a weather proof seal. The door shall be attached to the compartment with a full-length piano style continuous hinge. The door handle shall be 6.00" stainless steel D-Ring.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
TOOL TRAY- RH SIDE There shall be room to store a storage tray for tools above compartments. **ADAPTER AND FITTING BOX** There shall be a compartment to store adapters and fittings in front of tool tray on each side of truck above compartments, with a slide out tray. This box shall be sized to fit in existing space forward of tool tray and hard suction tray. **HARD SUCTION STORAGE- LH SIDE** There shall be a hard-suction storage tray located under the left-hand side of the "T" portion of the tank. The hard-suction hose storage shall be accessed from the ground at the rear of the unit. In order to provide a comfortable and safe level of access to the hoses, there shall be no exception allowed to this feature. Two (2) troughs shall be provided in the storage area for the hose to slide on and be held in position when stored. Appropriate stops shall be provided. The suction storage shall have capacity for two (2) 10' sections of hard suction hose. **SUCTION HOSE SOURCE** New suction hose shall be provided by the manufacturer and shall be detailed later in this specification. **REAR TAILBOARD** A rear beavertail tailboard shall be provided and installed at the rear of the apparatus. The tailboard shall consist of two (2) separate stepping/ standing surfaces made of aluminum grip-strut material. The top step shall be 7.00" deep and the bottom shall be 9.50" deep. The rear tailboard shall be full width of the tanker body between the side compartments. The outside edges of the rear tailboard shall be trimmed with bright diamond plate aluminum. The tailboard shall meet recommended requirements for non-slip surfaces. This area is to be used as a step but is not designed to carry personnel and should never be used to transport firemen.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
STEPS	**Yes**	**No**	
All steps shall have a surface area of at least 35 square inches and shall be able to withstand a load of at least 500 pounds.			
REAR FOLDING STEPS			
Three (3) large, heavy duty chrome folding steps shall be furnished and located, at the rear of the apparatus. The exact number of steps provided may vary depending upon body configuration and options.			
FRONT OF BODY FOLDING STEPS- RIGHT			
Four (4) large, heavy duty chrome folding steps shall be furnished and located, at the right-hand front of the body. The exact number of steps provided may vary depending upon body configuration and options.			
EXTERIOR GRAB RAILS			
Each grab rail shall be non-slip, 1.25” diameter extruded polished aluminum grab rails with rubber inserts designed to provide maximum gripping ability, strength, and durability. All railing escutcheons and brackets shall be chrome plated and shall be bolted to the body with stainless steel bolts.			
The rails shall comply with NFPA 1901.			
HANDRAILS - REAR STEP			
Two (2) extruded aluminum non-slip handrails, approximately 30.00" in length, shall be provided and vertically mounted on the rear of the apparatus, one (1) on each side of the body.			
HANDRAIL, RH FRONT			
One (1) extruded aluminum non-slip handrail shall be provided and horizontally mounted on the front, upper, right hand side of the body.			

Specifications	Bidder Complies		Notes
12 VOLT ELECTRICAL SECTION	**Yes**	**No**	
NFPA 1901 CERTIFIED 12 VOLT ELECTRICAL SYSTEM The 12-volt apparatus body electrical system shall be provided and shall be in compliance with NFPA 1901 testing and certification procedures as follows: **NFPA MINIMUM ELECTRICAL LOAD DEFINITION** The NFPA 1901 defined minimum electrical load shall consist of the total amperage required to simultaneously operate the following in a stationary mode: 1. Propulsion engine and transmission. 2. The clearance and marker lights. 3. Communication equipment. 5-amp default. 4. Illumination of all walking surfaces, the ground at all egress points, control and instrumentation panels and 50% of total compartment lighting. 5. Minimum warning lights required for "blocking right of way" mode. 6. The current to simultaneously operate and fire pump and all specified electrical devices. 7. Anything defined by the Purchaser, in the advertised specifications, to be critical to the mission of the apparatus. **RESERVE CAPACITY TEST** The first electrical test to be performed will be the Reserve Capacity Test. All items listed in NFPA Minimum Load Definition shall be activated with the engine shut off. After 10 minutes of operation, the items 1-7 shall be deactivated. After deactivation, the battery system shall have ample reserve to start the engine. **ALTERNATOR PERFORMANCE TEST AT IDLE** The second electrical test to be performed shall be Alternator Performance Test at Full Load. All electrical loads shall be activated with the engine running up to the governed rpm for two hours. During the test, the system voltage shall not drop below 11.7 volts or have excessive battery discharge for more than 120 seconds. Any loads not defined in the NFPA Minimum Electrical Load may be load managed to pass test. **TEST CONDITIONS** All electrical testing shall be performed with the engine compartment at approximately 200 degrees.			

Specifications	Bidder Complies		Notes
12 VOLT ELECTRICAL SYSTEM	**Yes**	**No**	
The truck shall have a 12-Volt electrical system. All wiring will be run in convoluted high temperature plastic loom. Wiring shall be color and function coded and will be of adequate size to handle the assigned load. All solenoids, relays, and terminal blocks will be located in an easily accessible area. All circuits provided shall have properly rated low voltage over current protective devices. 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. All under side terminal junctions shall be fully enclosed in sealed plastic weather proof boxes. Electromagnetic interference suppression shall be provided as required to satisfy the radiation limits specified in SAE J551/1. **CLASS1 ES-KEY SYSTEM** The electrical system shall utilize Class1 Inc. **ES-Key** technology where applicable. The apparatus shall be equipped with a Class 1 ES-Key Management System for controlling electrical system devices. This management system shall be capable of performing load management functions, system switching, monitoring and reporting, and be fully programmable for a standardized electrical system utilizing the ES-Key Professional software program.			

Specifications	Bidder Complies		Notes
SUPERNODE II	**Yes**	**No**	
The apparatus shall be equipped with a Class1 ES-Key system with a Supernode II high density input output node. The Supernode II shall have (24) inputs, (24) outputs, a Universal System Manager, a data logger, and programmable special utilities. The Supernode II shall have an integrated USB port to allow for direct connection to the ES-Key system without additional interface devices. **LOAD MANAGER** The Supernode II shall have an integrated Load Manager. The Load Manager Sequencer shall assure that loads are applied and removed gradually, thus eliminating the possibility of inducing failures in the vehicle's equipment. **LOW VOLTAGE MONITOR** A voltage monitor shall be built into the ES-Key electrical system. It shall activate a warning when the alternator output voltage falls below any desired voltage (usually 11.5 volts). **1TOUCH SWITCH PANEL, 8 POSITION** The apparatus shall be equipped with an eight (8) position 1Touch switch panel module for enhanced device activation. Individual switches shall be backlit with multiple colored and textured switch caps and printable labels. Switch panels shall be sealed to IP67 and have dual LED indicators. **SWITCH PANEL LOCATION** The switch panel shall be located on the center console. **CHASSIS GROUND LIGHTS** LED ground lights with outward facing angle brackets shall be installed one (1) under each chassis door.			

Specifications	Bidder Complies		Notes
FRONT OF BODY GROUND LIGHTS	**Yes**	**No**	
Two (2) LED ground lights with outward facing angle brackets shall be installed under the front of the body. One (1) light shall be located on the left-hand side and one (1) light located on the right-hand side of the apparatus.			
REAR STEP GROUND LIGHTS			
Two (2) LED ground lights with outward facing angle brackets shall be installed under the rear step of the apparatus, one (1) each side.			
GROUND LIGHT SWITCHING			
The cab and body ground lights shall activate by engaging the parking brake.			
HAZARD LIGHT			
A Whelen model 0SR00FCR flashing red LED light, located in the driving compartment, shall be illuminated automatically whenever any compartment door is ajar.			
The hazard light shall be marked with a sign that reads “Do Not Move Apparatus When Light Is On”.			
The warning light shall be interlocked to the parking brake and shall only alert the driver when the parking brake is released. The light shall also be used to signal that other ancillary equipment such as racks light towers etc. are not in their “ready for transport” position.			
LICENSE PLATE LIGHT			
A license plate bracket with LED light shall be provided and installed on the rear of the body. It shall be wired to come on with the headlights.			
REAR ROAD LIGHTING			
Two (2) sets of 4.00” LED stop, turn and back-up lights shall be provided, one (1) set on each side of the rear of the truck.			

Specifications	Bidder Complies		Notes
MIDSHIP TURN SIGNAL There shall be a mid-ship turn signal mounted on each side of the apparatus. **MARKER LIGHTS** LED marker lights shall be installed on the vehicle in conformance to the Department of Transportation requirements. The side and rear of the body will be provided with reflectors. All marker lights shall be incorporated into the headlight circuit of the cab/chassis **UPPER REAR SCENE LIGHTS** One (1) pair of Whelen model 90SC0ENZR LED scene lights shall be installed, one (1) each side on the upper rear of the apparatus body. The light(s) shall be installed within a Cast Aluminum Bezel. **UPPER RIGHT SCENE LIGHTS** One (1) pair of Whelen model 90SC0ENZR LED scene lights shall be installed, one (1) each side on the upper right-hand side of the apparatus body. The light(s) shall be installed within a Cast Aluminum Bezel. **UPPER LEFT SCENE LIGHTS** One (1) pair of Whelen model 90SC0ENZR LED scene lights shall be installed, one (1) each side on the upper left-hand side of the apparatus body. The light(s) shall be installed within a Cast Aluminum Bezel. **SCENE LIGHT ACTIVATION** The scene lights shall be activated by a switch located in the cab. Each side shall be activated separately. **REAR SCENE LIGHTS - ADDITIONAL ACTIVATION** In addition to the cab mounted switch for the rear scene lights, the rear scene lights shall illuminate when the transmission is placed in reverse gear.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
NFPA AUDIBLE AND LIGHTING WARNING PACKAGE The following warning light package shall include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1901-2009. The lighting as specified shall meet the requirements for both "Clearing Right of Way" and "Blocking Right of Way" which includes disabling all white warning lights when the apparatus is in "Blocking Right of Way" mode. **WARNING LIGHT FLASH PATTERN** All of the perimeter warning lights shall be set to the default NFPA flash pattern as provided by the warning light manufacturer. **WARNING PACKAGE ACTUATION CONTROLS** The entire warning light package shall be actuated with a single warning light switch located on the cab switch panel. The wiring for the warning light package shall engage all of the lights required for "Clearing Right of Way" mode when the vehicle parking brake is not engaged. An automatic control system shall be provided to switch the warning lights to the "Blocking Right of Way" mode when the vehicle parking brake is engaged. **LIGHTBAR** One (1) WHELEN model JE2NFPA 56.00” LED lightbar shall be supplied and mounted. The lightbar shall have clear lenses and contain the following modules: Four (4) RED LIN6 LED modules, two (2) on each corner Four (4) RED CON3 LED modules, across the front Two (2) WHITE CON3 LED modules, on the front The forward-facing white lights shall be automatically disabled for the "Blocking Right of Way" mode. **LIGHT BAR SWITCH** The lightbar shall be controlled through the master warning switch.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
UPPER REAR WARNING LIGHTS	**Yes**	**No**	
One (1) pair of Whelen model 90RR5FRR Super LED warning lights shall be installed, one (1) each side on the upper rear of the apparatus body. The lights shall be red in color with red lens. The light(s) shall be installed within a Cast Aluminum Bezel. **UPPER LEFTSIDE WARNING LIGHTS** One (1) pair of Whelen model 90RR5FRR Super LED warning lights with shall be installed, one (1) each side on the upper left side of the apparatus body. The lights shall be red in color with red lens. The light(s) shall be installed within a Cast Aluminum Bezel. **UPPER RIGHT-SIDE WARNING LIGHTS** One (1) pair of Whelen model 90RR5FRR Super LED warning lights shall be installed, one (1) each side on the upper right side of the apparatus body. The lights shall be red in color with red lens. The light(s) shall be installed within a Cast Aluminum Bezel. **LOWER FRONT WARNING LIGHTS** One (1) pair of Whelen model 60R02FRR Super LED warning lights shall be installed, one (1) each side on the front of the chassis cab. The lights shall be red in color with red lens. The light(s) shall be supplied and installed with a chrome bezel. **INTERSECTION WARNING LIGHTS** One (1) pair of Whelen model 60R02FRR Super LED warning lights shall be installed, one (1) each side of the chassis bumper. The lights shall be red in color with red lens. The light(s) shall be supplied and installed with a chrome bezel.			

Specifications	Bidder Complies		Notes
LOWER MID-BODY WARNING LIGHTS	**Yes**	**No**	
One (1) pair of Whelen model 60R02FRR Super LED warning lights shall be installed, one (1) each side of the apparatus, mid-body. The lights shall be red in color with red lens. The light(s) shall be supplied and installed with a chrome bezel. **LOWER REAR WARNING LIGHTS** One (1) pair of Whelen model 60R02FRR Super LED warning lights shall be installed, one (1) each side on the lower rear of the apparatus body. The lights shall be red in color with red lens. The light(s) shall be supplied and installed with a chrome bezel. **REAR BEACONS** Two (2) Whelen model L31 LED beacons shall be provided and installed at the upper rear corners of the apparatus. The beacon on the left-hand side shall be red in color with a red lens. The beacon on the right-hand side shall be red in color with a red lens. **BEACON LIGHT MOUNTING** The rear beacons shall be mounted on a smooth aluminum bracket and attached to the apparatus body, one (1) on each side. **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.			

Specifications	Bidder Complies		Notes
ELECTRONIC SIREN SPEAKER One (1) Federal Signal model ES100 Dynamax 100-watt speaker shall be flush mounted as far forward and as low as possible on the front of the vehicle. A polished model ESFMT with ”Electric F” grille shall be provided on the outside of the speaker to prevent road debris from entering the speaker. The speaker shall produce a minimum sound output of 120 dB at 10 feet to meet current NFPA 1901 requirements. The speaker shall be located on the right-hand side of the bumper. **PAINT, STRIPING, AND LETTERING SECTION** **PAINT PROCESS** The wetside tank shall be painted with a PPG Delfleet Evolution Paint System. All products and technicians shall be certified by PPG every two (2) years. The wetside tank shall be totally removed from the chassis during the painting process to ensure the entire unit is covered. All seams shall be caulked both inside and along the exterior edges with a urethane automotive sealant to prevent moisture from entering. The water tank and all parts shall be thoroughly washed with a grease cutting solvent prior to any sanding. After the wetside tank has been sanded, the wetside tank shall be washed again with a grease cutting solvent to remove any contaminants on the surface. **TANK PAINT COLOR** The tank shall be painted to match the chassis. The tank’s paint color shall be "cross referenced" from the chassis paint and shall be painted to match the main chassis color as close as possible. **PRIMING** Two (2) medium wet coats of adhesion promoter for plastics shall be applied to all surfaces to be painted. All surfaces to be painted shall be primed with Primer Filler. Two (2) applications of primer shall be applied. The first application shall be four (4) coats and the second application shall be three (3) coats. A final application of sealer shall be applied using Primer Filler.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
COMPARTMENT INTERIORS The side compartment interiors shall be unpainted and in their natural finish. **WHEEL RIMS** The chassis wheels shall be as furnished by the chassis OEM. No additional finishes shall be provided by apparatus manufacturer. **LETTERING** Reflective lettering shall be applied to the cab doors at the direction of the Purchaser. Photos or drawings of the lettering and striping layout shall be provided by the Purchaser prior to construction. **REFLECTIVE STRIPE** There shall be a reflective Scotchlite band located on the apparatus cab and body. The band shall be per the Purchaser's size, design and color specifications. The reflective band shall be in compliance with current NFPA requirements. Photos or drawings of the layout shall be provided by the Purchaser prior to construction. **CHEVRON STRIPING** At least 50% of the rear of the unit shall be covered with Red and Fluorescent Yellow-Green alternating 6.00" stripe in an inverted Chevron pattern. A 0.50" Gold reflective stripe shall outline the sides of the wetside tank. **SUCTION HOSE** Two (2) 6.00" X 10' section(s) of KOCHEK, PVC type hard, suction hose shall be provided on the apparatus. The hose(s) shall be light weight type with Pyrolite, Long Handle Female X Rocker Lug Male, NST threads. The hose shall be black in color.	**Yes**	**No**	

Specifications	Bidder Complies		Notes
LED TELESCOPIC BOTTOM RAISE FLOODLIGHTS	**Yes**	**No**	
Two (2) Akron SceneStar LED model ELSS-SLDC telescopic lights 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 4" offset. Wiring shall extend from the pole bottom with a 4' retractile cord. The lamp head shall have eight (8) ultra-bright white LEDs. It shall operate at 12 volts DC, draw 13 amps, and generate 14,000 lumens. The lamp head shall direct 50 percent of the light onto the action area while providing 50 percent to illuminate the working area. The light head shall tilt up and down with two heavy duty handles and shall be mounted with a swivel assembly. The lamp head shall incorporate heat-dissipating fins and be no more than 5.6" deep by 4 1/4" high by 14" wide. The lamp head and mounting arm shall be powder coated white. The floodlight shall be for fire service use. An on/off switch with weatherproof boot shall be provided on the light head. Choose mounting location for pole lights.			

Specifications	Bidder Complies		Notes
FRONT BUMPER MONITOR	**Yes**	**No**	
One (1) Akron Model 3462 Forestry Monitor shall be installed. The remote monitor shall be located on the front bumper of the apparatus. The 300gpm rated monitor is to be an all-electric single waterway monitor constructed of lightweight Pyrolite. The monitor shall have a fully enclosed 12-volt motor and gears with a manual override for both horizontal and vertical rotation and may be operated simultaneously. The vertical travel shall be from 45-degrees below to 90- degrees above horizontal with adjustable stops at -20 degrees and +45 degrees. The horizontal rotation shall be 320-degrees with adjustable stops at +-90-degrees. The monitor shall be Red in color. One (1) 2.00" front bumper discharge piping shall be piped to the front bumper area. Flexible 2.00" Class1 high pressure hose shall be provided from the pump to the monitor with low point drains where necessary. The monitor shall be an all-electric single waterway monitor constructed of lightweight Pyrolite, with a 2.00" electric valve. The monitor shall be controlled by a joystick located in the cab. The joystick shall provide up, down, right, left, fog, and stream control of the monitor. The joystick shall have a trigger switch to control the electric discharge valve. **MONITOR NOZZLE** An electric adjustable nozzle shall be supplied. It shall be adjustable at the following GPM's: 30, 60, 95, and 125. **QUICK CONNECT** A 2.00" NPT quick disconnect shall be installed for quick removal of the monitor from the truck.			

Section 4: Additional Specifications

Specifications	Bidder Complies		Notes
NOZZLE A 400ft 1¾-inch hose with two 250-gallon per minute nozzles **SUPPLY LINE HOSE** 1000ft of 3-inch supply line hose	**Yes**	**No**	

Appendix A: Exceptions

If the proposal took any exceptions or alternatives to the specifications, terms, or conditions contained in the RFP document, please identify all exceptions or alternatives here. Please add additional lines if necessary.

Reference should be made in each case to the relevant provision listed in the RFP document to which the exception applied, and to the extent possible, please submit proposed wording for the exception or alternative.

Exceptions not identified and submitted below may not be considered at a later date.

Page # / Section Name	Exception or Alternate Description	Rationale	Proposed

Page # / Section Name	Exception or Alternate Description	Rationale	Proposed

Appendix B: Statement of Experience

Use this form to list up to 5 of your most recent fire apparatus sales. Apparatus similar to the one requested in this solicitation is preferred.

Apparatus Buyer Name; _____

Type of apparatus supplied: _____

Contract Amount: Original $_____ ***At Completion $*** _____

Briefly explain any variance: _____

_____

_____

Order Date; _____ ***Date Delivered:*** _____

Contact Person: _____

Contact Phone #: _____ ***Contact Email:*** _____

Apparatus Buyer Name; _____

Type of apparatus supplied: _____

Contract Amount: Original $_____ ***At Completion $*** _____

Briefly explain any variance: _____

_____

_____

Order Date; _____ ***Date Delivered:*** _____

Contact Person: _____

Contact Phone #: _____ ***Contact Email:*** _____

Apparatus Buyer Name; _____

Type of apparatus supplied: _____

*Contract Amount: Original $*_____ *At Completion $* _____

Briefly explain any variance: _____

_____

_____

Order Date; _____ *Date Delivered:* _____

Contact Person: _____

Contact Phone #: _____ *Contact Email:* _____

Apparatus Buyer Name; _____

Type of apparatus supplied: _____

*Contract Amount: Original $*_____ *At Completion $* _____

Briefly explain any variance: _____

_____

_____

Order Date; _____ *Date Delivered:* _____

Contact Person: _____

Contact Phone #: _____ *Contact Email:* _____

Apparatus Buyer Name; _____

Type of apparatus supplied: _____

*Contract Amount: Original $*_____ *At Completion $* _____

Briefly explain any variance: _____

_____

_____

Order Date; _____ *Date Delivered:* _____

Contact Person: _____

Contact Phone #: _____ *Contact Email:* _____