

Easton Fire Department Specifications for a Pumper

The Easton Fire Department is requesting proposals for a 2019 model year Fire Pumper.

1. It is the intent of these specifications to cover the furnishing and delivery of a completed fire apparatus. The specifications contained within this document are the options of the Town of Easton Fire Department and are to be incorporated into the construction of the manufacturers' model of apparatus.
 - a. Bids shall only be considered from companies that have an established reputation in the field of fire apparatus construction and have been in business for a minimum of 15 years. Further, bidder shall maintain dedicated facilities for the repair and service of the apparatus within 60 miles of the Easton Fire Department, Easton CT 06612. Service personnel shall be factory trained and certified by the Emergency Vehicle Technicians Certification Commission (EVTCC). Evidence of such a facility shall be included in the bidders' proposal.
 - b. Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified and shall state the location of the factory where the apparatus is to be built. The bidder shall also show that the company is able to render prompt service and to furnish replacement parts.
 - c. Each bid shall be accompanied by a detailed set of "Contractor's Specifications" consisting of a detailed description of the apparatus and equipment proposed, and to which the apparatus furnished under contract shall conform. These specifications shall indicate size, type, model and make of all component parts and equipment. The set of contractor's specifications must be submitted in bid order. Submission of the contractor's specifications in bid order is a requirement, not optional. Discrepancies found in the contractor's specifications will be considered noncompliance.
 - d. Any exceptions or variations in construction, performance, test, or items of equipment between the purchaser's specifications and the bidder's proposal, shall be detailed and submitted on a separate sheet along with the bidder's proposal, in bid sequence, and citing page and paragraph number. The bidder must explain in detail, and with full supporting data, how the proposed deviation meets or exceeds the specifications and why it is necessary. The purchaser reserves the right to determine which (if any) deviations are acceptable.
 - e. Proposals taking total exception to specifications shall not be acceptable.
 - f. A drawing of the proposed apparatus shall be provided for approval before construction begins. The sales representative shall also have a copy of the same drawing. The finalized and approved drawing shall become part of the contract documents. This drawing shall indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.

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- g. A "revised" approval drawing of the apparatus shall be prepared and submitted by the manufacturer to the purchaser showing any changes made to the previous drawing.
 - h. Any error, omission, or inconsistency that is identified by the bidder shall be listed as such in the exceptions, and a proposal to meet the intent of the specifications shall be listed.
 - i. The bid price shall be valid for a period of sixty (60) days from the date of bid opening.
 - j. The successful bidder will participate in a pre-construction conference with the Easton Fire Department. Conference shall be at the successful bidders local offices and shall be at a date and time mutually agreed to by both parties.
 - k. All Changes after the contract is executed or approved engineered drawings accepted shall be made with a written change order, which identifies the scope of the change, the cost of the change, and is authorized by the purchaser.
- 2. The Apparatus shall meet the current edition of NFPA 1901 – Standard for Automotive Fire Apparatus.
- 3. The apparatus shall conform to all Federal Motor Carrier Safety Carrier Associations Regulations, and CT commercial vehicle standards.
- 4. Vehicle shall be delivered with a Current Federal Annual Inspection certificate.
- 5. Quality and workmanship
 - a. The design of the apparatus shall embody the latest approved automotive engineering practices. The workmanship shall be of the highest quality in its respective field. Special consideration shall be given to the following points:
 - i. Accessibility of the various units which require periodic maintenance, ease of operation (including both pumping and driving), and symmetrical proportions.
 - ii. Construction shall be rugged and ample safety factors shall be provided to carry the loads specified and to meet both on and off road requirements and speed conditions as set forth under "Performance Tests and Requirements"
 - iii. Welding shall not be employed in the assembly of the apparatus in a manner that shall prevent the ready removal of any component part for service or repair.
 - iv. All major components must be built and assembled in the continental United States (engine, cab, chassis, and body).
- 6. Warranties
 - a. The following warranties and time frames shall be considered as the minimum acceptable to the Town Of Easton:
 - i. Chassis Frame rails – lifetime parts and labor
 - ii. Engine and Transmission – 5 years parts and labor

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- iii. Front and rear axles – 5 years parts and labor
- iv. Fire pump – 5 years parts and labor
- v. Structural 10 years on the cab and body
- vi. Corrosion perforation – 10 years on the cab and body
- vii. Paint – 10 years on the cab and body (NON PRORATED)
- b. The apparatus shall incorporate a minimum 5 year bumper to bumper warranty.
- c. Any warranty deductibles from component manufacturers shall be the responsibility of the apparatus manufacturer during the warranty term.
- d. Any Warranties from component manufactures shall be the responsibility of the apparatus manufacture to coordinate during the warranty term.
- e. Commercial General Liability Insurance:
 - i. The successful bidder shall, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence	\$1,000,000
Products/Completed Operations Aggregate	\$1,000,000
Personal and Advertising Injury	\$1,000,000
General Aggregate	\$5,000,000
 - ii. Coverage shall be written on a Commercial General Liability form. The policy shall be written on an occurrence form and shall include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy shall include Owner as an additional insured when required by written contract
- f. Commercial Automobile liability coverage
 - i. The successful bidder shall, during the performance of the contract keep in force at least the following minimum limits of commercial automobile liability insurance:
 - ii. Each Accident Combined Single Limit: \$1,000,000
 - iii. Coverage shall be written on a Commercial Automobile liability form.
- 7. A bid bond or certified check in the amount of ten Percent (10%) of the bid shall be furnished with the bidder's proposal. The bond will ensure that the bidder will enter into contract and submit a performance bond within 14 days' notice of award of contract. The successful bidder's bid bond will be returned or released after a contract is executed and an acceptable performance bond has been delivered. In case of failure to comply within the stated time, the bid bond will be forfeited as liquidated damages because of the default. The bid bonds or checks of all other bidders will be returned after the bids are opened and evaluated.
- 8. A performance bond in the amount of one hundred percent (100%) of the bid shall be furnished by the successful bidder within fourteen days (14) after receiving the official notice of award of contract. Failure of the contractor to complete delivery according to the contract and specifications will be cause to begin action for forfeiture of the

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performance bond. The bond shall also guarantee compliance and performance with the warranty provisions of the specifications. The bonds furnished by the successful bidder shall be from a surety company authorized to underwrite surety bonds in the State of Connecticut with a minimum A.M. best rating of A. The purchaser may review the financial condition of the surety and accept or reject any surety at its discretion. Sureties must submit bonds in a format that will be subject to the approval of the purchaser.

9. The Apparatus shall have a delivery date not more than 300 days after signing of contracts.
 - a. The manufacturer and purchaser shall agree upon a delivery date within 30 days of pre build conference.
 - b. Acceptance of the delivered apparatus and equipment will be made at completion of all required tests, inspections, and receipt of all specified equipment. Equipment items not delivered at the time of the tests, or construction not in conformance with the proposal, will be cause for the accepting authority to withhold payment until delivery is complete and acceptable.
 - c. The finished apparatus will be inspected upon delivery for compliance with specifications, changes orders, and previously authorized exceptions. Deviations will not be tolerated and will be cause for rejection of apparatus unless they were originally listed in the bidder's proposal or previously approved.
 - d. Failure to meet the delivery date as agreed upon shall result in a monetary penalty of \$1000.00 per day, beginning the day after the declared delivery date. The penalty will be deducted from the final payment.
 - e. If after 30 days, the apparatus is not brought up to compliance, the bidder may be considered in default of the contract, and the procedures to institute the provisions of the performance bond may be started.
 - f. The purchaser has the right to waive this penalty if done in writing prior to the delivery date.
10. Neither the completed apparatus nor any of its components shall interfere with fire communications nor shall fire communications be able to interfere with the apparatus systems. Easton Fire Department operates on low band frequency of 33.56 MHz as well as on UHF 453.0875 MHz and UHF 458.0875 MHz. **Any and all interference shall be the sole responsibility of the apparatus manufacturer financially and with regards to all materials required, to correct.**
11. Emergency lighting package shall be by Whelen Manufacturing.
12. A Federal Q mechanical siren shall be installed in the front bumper of the apparatus on the officer's side.
 - a. The siren shall have a brake.
 - b. The siren shall be capable of being operated from a foot pedal on the officer's side and through the horn ring on the steering wheel.
13. Apparatus overall height shall not exceed 10 feet 3 inches

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14. Apparatus overall length shall not exceed 31 feet 0 inches
15. Apparatus shall have a minimum Gross Vehicle Weight Rating of 53,800 pounds.
16. Apparatus wheel base shall be kept as short as possible for best turning radius
17. Apparatus must comply with all Federal and State laws with regards to axle loading.
18. NO independent front suspensions or air ride suspensions shall be bid.
19. On spot brand tire chains shall be installed on the apparatus.
20. Apparatus lighting (headlights, running lights, clearance lights, etc....) shall be of LED type.
21. There shall be perimeter lighting provided on the apparatus
 - a. The lighting shall be capable of providing illumination on ground areas within 30" of the edge of the apparatus in areas designed for personnel to climb onto the apparatus or descend from the apparatus to the ground level.
 - b. The lights shall be activated by the parking brake control and transmission reverse activation. There shall be two lights in addition to the normal body perimeter lights installed centered under compartments R1 and L1
22. All buttons, switches, gauges etc.... shall be properly labeled as to their function
23. Drive tires shall be of open shoulder type.
24. The following tilt-cabs, chassis and engine combinations have been extensively researched and pre-approved for purchase:
 - a. Eone cyclone II w/Cummins engine
 - b. Pierce Saber w/Cummins engine
 - c. Pierce Arrow w/Cummins engine
 - d. Sutphen Monarch w/Cummins engine
 - e. Seagrave Marauder II w/Cummins engine
 - f. Spartan Metrostar MFD w/Cummins engine
25. The cab shall be of raised roof design.
26. The apparatus shall have a two tone cab white over red. The rest of the apparatus shall be red in color except for the roll up doors which will be satin aluminum in color.
27. Apparatus seating capacity shall be for six personnel. The two rear facing crew seats will be deleted and replaced with storage compartment. See #28
 - a. Apparatus seating for the driver and officer shall be air ride, have adjustability forward and rear and adjustable lumbar support.
 - b. The two crew seating shall be forward facing
28. In cab storage consisting of two compartments shall be provided.
 - a. Two rear facing EMS compartments shall be provided in the crew cab one on the driver side outboard position and the other on the passenger side outboard. The compartments shall be a minimum of 22" wide x 42" high x 26" deep with ROM roll up doors. Satin Aluminum in finish. The clear door opening of the compartment shall be a minimum of 32" high x 15" wide.

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Compartments shall be illuminated using led lighting, white in color, and manufactured by ROM. The lights shall be controlled by an automatic door switch.

29. Mirrors shall be power adjustable and heated with controls convenient to the driver.
30. Cab shall be heated and air conditioned.
31. Wipers shall contain an intermittent feature
32. Turn signal switch shall be of self-cancelling type.
33. Steering column shall be of fully adjustable type – tilt, telescopic etc...
34. A Minimum of 2 12 volt USB type charging ports and 2 12 volt power outlets shall be provided in the cab. Locations to be determined by EFD.
35. Fuel tank capacity shall be minimum of 65 gallons.
36. Two painted steel tow eyes shall be installed under the bumper and attached to the front frame members. The tow eyes shall be designed and positioned to allow up to a 6,000 pound straight horizontal pull in line with the centerline of the vehicle. The tow eyes shall not be used for lifting of the apparatus. Tow eyes are to be painted chassis color.
37. Two separate 12 circuit 12 volt fuse blocks shall be provided in the cab and located in such a manner as to provide ease of access. These fuse blocks shall be used to power additional mounted equipment (i.e... Flashlight chargers, thermal camera chargers etc...)
 - a. One fuse block shall have constant battery power and the other shall only have power when the apparatus master battery switch is powered on.
38. Four 12 volt Fire Research Spectra Max Q28 LED lights shall be supplied and installed.
 - a. Two shall be installed on the front “brow” of the apparatus, one either side
 - b. Two shall be of pull up type and mounted in the front of the body. Sensors shall be provided to indicate the light is in the “up” position.
39. A Go Light shall be installed on the roof of the apparatus
 - a. The GoLight, model 20204, shall be remote control type with controls on the officer side and driver side of the apparatus and shall be mounted on a pedestal behind the light bar.
40. The engine shall be a turbo charged Cummins X 12 (2018) minimum 450 hp
41. The engine shall have an engine brake installed by the engine manufacturer and have an on /off switch as well as a switch capable of selecting low, medium, or high braking ability.
42. The apparatus shall have a 430 amp Neihoff alternator
43. The air compressor for the apparatus air system shall be not less than 15.80 cubic feet per minute output at 1,250 RPM.
44. A heated air dryer and moisture ejector shall be provided
45. The Transmission shall be an Allison 4,000 Emergency Vehicle Series automatic with Allison touch pad shift selector internally illuminated.
 - a. The transmission shall be equipped with a power take off (PTO) to allow for operation of a generator.

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46. A transmission cooler shall be provided and installed.
47. The apparatus shall be able to obtain a speed of 30 mph and sustain that speed up an 8% grade for approximately 6 tenths of a mile (Refer to general information item #4).
48. The front axle shall be a Meritor MFS-22H series equipped with Meritor EX+ air disc brakes.
 - a. Front wheel bearings shall be lubricated with oil and level capable of being inspected through a clear inspection window.
49. The front suspension shall be tapered leaf spring type with a capacity rating of 22,800 pounds.
50. The rear axle shall be a Meritor RS-35-185 with drum brakes and automatic slack adjusters. It shall also be equipped with automatic traction control.
51. The rear suspension shall be properly designed and engineered for the intended use of the apparatus.
52. The apparatus shall have a four channel anti-lock braking system.
53. The apparatus shall have electronic stability control.
54. The apparatus shall have automatic traction control.
 - a. A momentary rocker switch labeled "mud/snow" shall be provided and located within easy reach of the driver.
55. The Apparatus shall be able to obtain a top speed as defined in NFPA 1901
56. The Pump shall be a 1500 GPM single stage mid mount, split shaft type - either a Waterous CSU or Hale Qmax – with 6 inch intakes on both sides of apparatus. All necessary mountings, pump drives, shafts, and related equipment for NFPA required pump shift control will be included.
57. Two sacrificial zinc anodes shall be installed on the pump to aid in the prevention of galvanic corrosion within the pump and associated plumbing. One shall be installed on the suction side of the pump and the other on the discharge side of the pump.
58. Pump controls shall be on the driver's side of the apparatus.
59. Master Intake Valves shall be provided for and installed on all intakes larger than 2.5 inches.
 - a. Air bleeder valves shall be installed and controlled from the pump panel.
 - b. Valves shall be installed behind the pump panel.
60. Auxiliary 2.5 inch suctions on both sides of apparatus.
 - a. Control for the side auxiliary inlet(s) shall be located at the inlet valve.
61. A relief valve shall be installed on the suction side of the pump preset at 125 psi.
 - a. Outlet shall terminate below the frame-rails with a 2.5" National Standard hose thread adapter and shall have a "do not cap" warning tag.
 - b. Control shall be located behind an access door at the right (passenger's) side pump panel.
62. An Electronic pump governor shall be provided and installed.

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- a. Pump governor shall be a Fire Research Incontrol 400 series w/knob and monitoring display kit.
- 63. A Trident Air Primer Shall be provided and installed
 - a. The unit shall be designed for fire pumps of 1,250 GPM or more.
- 64. Water tank shall be a UPF poly Tank with a capacity of 1000 gallons.
- 65. A TankVision Pro 300 tank gauge by Fire Research shall be provided and installed on the driver's side pump panel.
- 66. Two TankVision Maxvision Tank gauges by Fire Research shall be provided and installed one each on the driver side and passenger side of the cab.
- 67. Tank to pump line shall be a minimum of 4 inch diameter.
- 68. All discharge valves shall be Akron Brass 8000 series valves. Valves shall be heavy duty style with stainless steel ball and a simple two seat design. No lubrication or regular maintenance shall be required on the valves.
 - a. Valves shall have a ten year warranty.
- 69. The two 1.75 inch preconnects shall operate with a push pull tee handle and have the ability to lock in place to prevent valve creep under any pressure..
 - a. All other discharge valves shall be electronically controlled with an indicator to show position throughout their travel.
- 70. All discharge piping shall be one size larger than the stated discharge size.
 - a. All inlet and discharge plumbing shall be plumbed with schedule 10 stainless steel pipe or synthetic rubber hose reinforced with high-tensile polyester braid. Small diameter secondary plumbing such as drain lines shall be stainless steel, brass or hose. Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping shall be equipped with Victaulic couplings. Plumbing manifold bodies shall be ductile cast iron or stainless steel. All lines shall drain through a master drain valve or shall be equipped with individual drain valves. All individual drain lines for discharges shall be extended with a hose to drain below the chassis frame. All water carrying gauge lines shall be of flexible polypropylene tubing.
 - b. Discharges will be plumbed in a manner so as to reduce the use of 90 degree elbows keeping friction loss to a minimum.
 - c. Plumbing components and ancillary brass fittings used in the construction of the water plumbing system shall be warranted for a period of **ten years** . This covers structural failures caused by defective design or workmanship, or perforation caused by corrosion, provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original purchaser for a period of ten years from the date of delivery. A copy of the warranty shall be submitted with the bid.
 - d. Plumbing shall be properly supported where needed to reduce movement.

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71. The pump vacuum and pressure gauges shall be silicone filled and manufactured by Class 1. Gauges shall be a minimum of 4.5 inches in diameter and installed adjacent to each other on the pump panel.
72. Individual pump discharge pressure gauges shall be interlube filled and manufactured by Class 1. The gauges shall be a minimum of 3 inches in diameter and installed as close to the outlet control as possible.
 - a. Gauges and discharge controls shall be labeled and color coded to correspond with the discharge tag.
73. A supplementary heat exchange cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the apparatus engine and furnished with a control installed at the operators' panel. A water-to-coolant heat exchanger shall be used.
74. A recirculating line, from the pump to the water tank, shall be furnished with a control installed at the pump operator's control panel.
75. ALL water discharges 2.5 inch or less shall terminate with National Standard Thread.
76. The pump panel configuration shall be arranged and installed in an organized manner that shall provide user-friendly operation. Pump Panel layout drawings showing the placement of all controls, gauges, intakes and discharges must be provided and are subject to approval by the Easton Fire Department prior to beginning of construction.
 - a. Valve placement and controls shall be engineered to allow valves to operate easily and smoothly.
77. Simple access to the plumbing shall be provided for complete plumbing service and valve maintenance. Access to valves shall not require removal of operator panels or pump panels. This access shall allow for fast, easy valve or pump rebuilding, making for reduced out of service times
78. All discharge outlets shall be labeled and color coded
79. Two 2.5 inch discharges shall be provided on the officers side and driver side pump panels and have caps provided.
80. Four pre-connected hand lines located above the pump panel sized to hold the following hose loads:
 - a. 200 feet Double stack - 1.75 inch double jacket hose
 - b. 200 feet Double stack - 1.75 inch double jacket hose
 - c. 200 feet Double stack – 2.5 inch double jacket hose
 - d. 200 feet Double stack – 2.5 inch double jacket hose
 - e. Pre-connect outlets to be equipped with a national Standard hose thread 90-degree swivel located in the hose bed so that hose may be removed from either side of apparatus.
 - f. Preconnected hose loads, at their base, shall be no higher than 66 inches off the ground and shall be easily repackable.

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- g. Pre-connect layout will be determined at time of pre-construction meeting by Easton Fire Department personnel.
- h. A space will be provided behind the pre-connects, between the electric cord reel and the deluge gun, to assist in the repacking of the pre-connected hand lines.
 - i. This space shall be approximately 18 inches in width and 30 inches in length the depth shall not exceed 22 inches.
- 81. Hose bed shall be capable of holding 2000 feet of Angus 5 inch LDH supply line.
 - a. Hose bed cover and pre connect covers shall be from D & S Cover using "shock cord" system.
 - i. **D&S Custom Covers, Inc.**
3055 Kingwood Rd.
Rockwood, PA 15557
- 82. A Large diameter discharge shall be located on the passenger side pump panel and be plumbed using 4inch piping. It shall terminate in 5 inch Stortz and have a cap provided
 - a. The valve shall be 4 inch and of electric opening and closing type.
- 83. A preconnected front bumper discharge shall be provided and plumbed using 2 inch piping.
 - a. A tray shall be provided on/in the front bumper to accommodate 200 feet of 1.75 inch double jacketed hose. This tray shall not interfere with the cab tilting
 - b. Bumper extension shall not exceed 18 inches.
- 84. A deluge gun shall be provide and plumbed to the top of the apparatus on the drivers' side. The plumbing shall allow for a minimum flow 1250 gallons per minute with no more than 20 pounds per square inch (PSI) of friction loss with a tip pressure of 80 PSI.
 - a. Deluge gun shall be an Akron Apollo Hi-Riser, model 3431, deck mounted with stacking tips.
- 85. A bleeder valve shall be provided for each outlet 1.5" or larger. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders shall be located at the bottom of the pump panel. They shall be properly labeled identifying the discharge they are plumbed into. The water discharged by the bleeders shall be routed below the chassis frame rails.
- 86. An air horn control switch shall be provided at the pump operator's control panel. This switch shall be red and properly labeled and put within easy reach of the operator.
- 87. PTO Driven Harrison 8 KW Hydraulic Generator shall be provide and installed in the front of the hose bed on the officers side.
 - a. The PTO shall be able to be turned on while the apparatus is running and the pump is in gear.
 - b. An electrical distribution panel shall be located in the L1 compartment.
 - i. The panel shall be wired to evenly distribute the load across the feed legs.

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- c. A FROG-D by Fire Research shall be provided and installed to monitor the output of the generator. It shall also be capable of monitoring the generator unit hydraulic oil temperature. Location shall be determined at pre-construction conference.
- 88. An electric rewind Hannay cord reel with 200 feet of yellow 10/3 awg weather resistant SOOW cord shall be provided and installed on the officers' side of the apparatus. It shall be wired to the distribution panel and a 20 amp breaker installed. A female L5-15, 15 amp, 120 volt, twist lock connector body shall be installed on the end of the cord.
 - a. A button type switch shall be installed on both sides of the apparatus to control the cord reel rewind function.
 - b. A captive roller assembly is to be provided to aid in the payout and loading of the reel. A ball stop shall be provided to prevent the cord end from being wound on the reel.
 - c. A portable junction block, Circle-D, Model PF-51 shall be supplied. There shall be one 120 vac, 15 amp #5-20 duplex receptacle and three 120 vac, 15 amp, twist lock #L5-15 receptacles, and a locator/indicator light provided on the outlet box. The junction box construction shall be weatherproof and have flip-up covers lined with soft neoprene rubber at each outlet opening. The junction block cord shall have a male L5-15, 15 amp, 120 volt, twist lock connector body to allow the block to be hooked to the cord reel.
- 89. Wired to the power distribution panel shall be four receptacles that are a 120 volt 15 amp three wire twist-lock type, with weather resisting covers, one located around the area of the rear wheel openings on both sides of the body, the others located one each on the front corners of the apparatus front bumper.
- 90. Two tripod lights, Fire Research Spectra Series K20 120 Volt LED, shall be provided and installed.
 - a. The units shall be short tripod type and have quick release mounting. Units shall have an internal cord and a L5-15 cord end with protective boot. They shall be located at the rear corners of the apparatus body.
 - i. A receptacle that is 120 volt 15 amp three wire twist-lock type, with weather resisting cover shall be provided near the base of each tripod light and wired to the power distribution panel.
- 91. The Apparatus Body shall have a minimum storage capacity of 200 Cubic feet.
 - a. There shall be three compartments on each side of the apparatus and one to the rear.
 - b. Compartments shall be a minimum of 26 inches in depth except where needed to accommodate the water tank and then a minimum of 12 inches shall be acceptable.
 - c. For purposes of design compartments shall be labeled as follows:

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- i. "L1" Shall be full height and ahead of the rear wheels on the left side of the apparatus and have a clear door opening of 61.75 inches in height and 41 inches in width. Compartment size approximately 40 Cubic Feet.
 - ii. "L2" shall be located directly over the rear wheels on the left side of the apparatus and have clear door opening of 30 inches in height and 57 inches in width. Compartment size approximately 26 Cubic Feet
 - iii. "L3" shall be located to rear of the rear wheels on the left side of the apparatus and have a clear door opening of 61.75 inches in height and 47.25 inches in width. Compartment size approximately 44 Cubic Feet
 - iv. "R1" shall be located ahead of the rear wheels on the right side of the apparatus and have a clear door opening of 44.25 inches in height and 42 inches in width. Compartment size approximately 30 Cubic Feet
 - v. "R2" shall be located directly over the rear wheels on the right side of the apparatus and have a clear door opening of 11 inches in height and 57 inches in width. This compartment door **shall not be a roll up type** but that of the manufactures standard type. Compartment size approximately 10 Cubic Feet
 - vi. "R3" shall be located to the rear of the rear wheels on the right side of the apparatus and have a clear door opening of 44.25 inches in height and 47.25 inches in width. Compartment size approximately 32 Cubic Feet
 - vii. "B1" shall be located to rear of body with a clear door opening of 46 inches in height and 40 inches in width. Compartment size approximately 28 Cubic Feet.
 - d. All compartment floors shall be of sweep out type.
 - e. All side compartments shall contain two adjustable shelving units with the exception of compartment R2.
 - f. Two pull out boards and four pull out trays shall be allowed for and location(s) is to be determined at the pre build conference by The Easton Fire Department.
 - g. Compartments shall be properly vented.
 - h. All compartments shall be illuminated using led lighting, white in color, and manufactured by ROM. The lights shall be controlled by an automatic door switch.
 - i. Compartment doors shall be of roll up type and manufactured by ROM and be satin aluminum in color.
92. A storage compartment for four Fire Hooks Unlimited National "D" handle pike poles in six foot length shall be on the rear of the apparatus on the officers' side.
- a. Storage area shall be covered with a stainless steel door with a chrome plated durable latch. A means to secure the pike poles in the storage area shall be provided for and installed.
93. Ladders shall be on the passenger side of the apparatus.

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- a. Ladders shall be lowered using a hydraulic electric actuator system and have storage for two folding ladders and two pike poles.
 - b. Ladders supplied by the apparatus builder:
 - i. One 28 foot Duo Safety single fly ground ladder.
 - ii. One 14 foot Duo Safety roof ladder.
 - iii. One ten foot Duo Safety folding ladder.
94. Hard sleeve shall be mounted above the compartments on the driver side in trays.
- a. Two ten foot lengths of Six inch diameter Kochek PVC suction hose with National Standard Thread (both male and female) with long handles on the female "lugs" shall be provided
95. Storage for two Ansul Model A-20E dry chemical extinguishers shall be provided for in the areas around the rear wheel openings. One on each side of apparatus.
96. Storage for two 2.5 Gallon pressurized water extinguishers shall be provided for, one each side of apparatus around area of the rear wheel openings.
97. Two Zico folding wheel chocks shall be installed under the body of the apparatus on the driver side just in front of the rear wheels.
98. Seven Smart Dock SCBA mounts by LifeGuard Technologies, a division of IMMI, shall be supplied and installed as follows:
- a. One for the officers seating, one each in the crew seating, and the other four shipped loose.
99. The exhaust pipe shall be brought out from the apparatus on the passenger side ahead of the rear tire. An adapter shall be provided on the tail pipe, allowing for it to be hooked up to a Magne Grip Exhaust removal system hose. Exhaust adapter shall be flush with side of apparatus body and the pins located at the 9, 12, and 3 o'clock positions.
100. One air inlet with male coupling shall be provided. It shall allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet shall be located in the driver side cab step area. A check valve shall be provided to prevent reverse flow of air. The inlet shall discharge into the "wet" tank of the brake system. A mating female coupling shall also be provided with the loose equipment.
101. Lettering and stripping shall be identical to Easton E-3 with the exception E-3 being replaced with E-4. There will be no body stripe on the new apparatus. Location of stripping and cab lettering to be determined at pre construction conference. Bidders shall schedule appointment to view E-3.
102. A Kochek Jumbo Siamese clappered hose appliance, with 5 inch Stortz inlets and 5inch Stortz outlet, shall be supplied and mounted to the rear of the apparatus. Location to be determined at pre-build conference.
103. A tool mounting allowance of \$20,000.00 shall be included in apparatus price. Tool mounts shall be installed by the dealer at their facility. Locations to be determined at a meeting between the manufacturers' dealer and Easton Fire Department personnel at The Easton Fire Department.

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104. Three radio antenna mounts shall be provided and installed by the apparatus manufacture and the wiring brought back to the area under the officers seat. The Antennas are as follows:

- a. One 33.56 MHz radio
- b. One 453.0875 MHz repeater
- c. One 154.040 MHz radio
- d. All antenna mounting equipment and locations shall be coordinated with NorcomCT

**i. 7 Great Hill Road
Naugatuck, CT 06770
Phone 1-800-223-9008
Fax 203-753-1739**

105. All existing radio, equipment, Knox box, thermal camera and tablet mounts shall be removed from the existing Easton E-4 and reinstalled on the new apparatus by NorcomCT. NorcomCT will be responsible for installing a microphone and speakers in a radio compartment on the pump panel. This price shall be included in the apparatus price.

- a. Bidders shall contact NorcomCT to obtain the price for this work.
- b. A compartment for radio equipment shall be provided in the area of the pump panel. Compartment shall be a minimum of 14 inches in height and 9 inches in width. Depth shall be a minimum of 6 inches. Compartment shall be covered with a stainless steel door and shall be weather tight. A latch shall be provided. Location to be determined at pre-construction conference.
- c. A conduit for communications wiring shall be supplied by the apparatus manufacturer from the cab interior to the radio compartment.
- d. All radio and intercom installation work shall be done at the apparatus dealers facilities. This work shall be done prior to delivery of the apparatus.
- e. Location of equipment to be installed will be determined at a meeting between the manufacturer, Norcom and Easton Fire Department personnel at The Easton Fire Department.
- f. Installation shall be completed in no more than work week.

106. The bidder shall provide one factory inspection trip for 3 EFD members and 1 sales representative. The inspection trip shall be scheduled at a time mutually agreed upon between the manufacturer's representative and the customer. All costs such as travel, lodging and meals shall be the responsibility of the bidder.

107. A five position David Clark intercom system with radio interface shall be provided and installed.

- a. The Driver, Officer and Pump Panel shall have radio interface capability.
- b. Two crew cab positions shall have intercom only.

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Easton Fire Department Specifications for a Pumper

- c. One Single Ear Headset (Driver), three double ear headsets (officer and crew) and a radio direct headset (for a Motorola APX 4000 series portable radio) shall be included. All headsets shall be behind the head style.
 - d. All necessary cables and connectors including the Radio Interface Cable shall be provided.
 - e. Headset restraint/quick-release hangers shall be provided. Mounting location shall be determined by Easton Fire Department.
108. A Kusssmaul 1200, Model 091-187-12-Remote battery charger, with bar graph display indicating the state of charge shall be provided and installed.
- a. A Kusssmaul Super Auto Eject Model #091-55-20-120, 20 amp 120 volt shore power assembly, yellow in color, shall be provided and installed. The shore power assembly shall be located on the driver side of the cab in an area to the rear of the drivers' door.
 - b. A 120 Volt duplex receptacle shall be installed and wired to the shore power assembly for charging of various cordless batteries. This outlet shall be located in the compartment behind the driver's seat.
109. There shall be a rear facing back up camera and in cab display
110. Two Grover stutter tone air horns shall be provided and located in the front bumper. The horn system shall be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve shall be installed in-line to prevent the loss of air in the air brake system
- a. Two lanyard rope pull controls shall be provided, one within reach of the driver and one within reach of the officer.
111. A Whelen, Model: 295SLSA1, electronic siren with noise canceling microphone shall be provided and installed.
- a. Siren speaker shall be a Whelen model SA315CCB black nylon composite, 100-watt, with through bumper mounting brackets and chrome plated grille. The speaker shall be connected to the siren amplifier. The speaker shall be recessed in the front bumper on the driver's side
112. There shall be four 12 volt Streamlight, Fire Vulcan, Model #44451, lights provided and mounted in locations to be determined at final inspection.
113. A Blitz Force portable monitor and mounting bracket, model XXLG-32, shall be provided and installed. Location to be determined at final inspection.
114. Loose equipment, required by NFPA 1901, other than specified as to be provided by bidder will be provided by the Easton Fire Department. Certain items of loose equipment will be mounted by the bidder. The cost of mounting these items will come from the tool mounting allowance referenced in item 87.

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Easton Fire Department Specifications for a Pumper

Easton Fire Department Specifications for a Pumper

General Information:

1. Delivery:

- a. Apparatus, to insure proper break in of all components while still under warranty, **shall be delivered under its own power** - rail or truck freight shall not be acceptable. A qualified delivery engineer representing the contractor shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in the proper operation, care and maintenance of the equipment delivered.

2. Manuals:

- a. The manufacturer shall supply at time of delivery, two complete operation and maintenance manuals covering the completed apparatus as delivered.
 - i. One copy shall be printed and the other in electronic PDF format.
 - ii. Operation manuals shall include instruction booklets describing function, control and service procedures from all manufactures.
 - iii. A separate pump manual shall be provided.
- b. The manufacturer shall supply at time of delivery two parts manuals for the vehicle as built.
 - i. One copy shall be printed and the other in electronic PDF format.
- c. The manufacture shall supply at time of delivery two as built service and wiring manuals
 - i. One copy shall be printed the other in electronic PDF format.

3. Certifications:

- a. The pump shall be tested, approved, and certified by a third party at the manufacturer's expense. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the manufacturer's record of pump construction details shall be forwarded to the Easton Fire Department.
- b. The generator shall be tested, approved, and certified by a third party at the manufacturer's expense. The test results shall be provided to the Easton Fire Department at the time of delivery.
- c. The pump and generator testing shall be performed after all construction of the apparatus is completed.
- d. A certified scale weight certificate shall be provided at time of delivery showing the apparatus lightweight (front axle, rear axle, and total weight). It shall also have weight with a full load of water (front axle, rear axle, and total weight)

4. Performance Test and Requirements:

- a. A road test shall be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The

Easton Fire Department Specifications for a Pumper

transmission drive shaft or shafts, and rear axles shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus.

- b. A road test shall be conducted, with the full weight of water and four personnel, up an 8% grade for approximately 6 tenths of a mile.
 - i. From a stopped position at the beginning of the grade the apparatus shall be driven up the grade a distance of approximately 6 tenths of a mile and be able to attain a minimum speed of 30 mph in approximately 1000 feet and sustain such speed for the rest of the 6 tenth of a mile distance. The apparatus shall not loose speed or power in the highest gear achieved after the first 1000 feet.
 - ii. This Test shall be conducted on Sport Hill Road in the Town of Easton, CT. The test will start at the intersection of Glovers Lane and finish at Morning Glory Drive.
- c. In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the bidder within 30 days of the date of the first trial. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the bidder of such changes, shall also 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 the permission of the bidder shall not constitute acceptance.