City of Watertown | Request for Action

Watertown City Council

January 13th, 2026

Agenda Item: Engine 11 Pump and Body Purchase

Request for Action: Motion to Approve the Purchase of the Pump and Body Modules for 2026 Engine 11

Department: Tom Hanson, Fire Chief

Background:
On May 28th, 2024, Council provided authorization to enter into a purchase agreement to purchase a Sutphen Monarch Fire Engine Chassis to replace our current Engine 11 in 2026. At that time, the intent of the staff and council was to procure the Fire Engine Chassis to save an approximate cost of $100,000 before 2027 engine emissions requirements were in place. Although the federal emission requirements have been relaxed, engine manufacturers are still moving forward with the updated engine packages, set to debut in 2026. The chassis was delivered in early 2025 and the cost savings were recognized at that time.

The current Engine 11 is a 2003 CustomFIRE Engine and has served the community well for 23 years. This apparatus is well maintained, has a Stainless-Steel Body, and remains in sound condition. Staff's intent with this apparatus is to list this unit for sale and sell it directly to another fire department. Fire Department staff has received 3 inquiries about this engine already.

Currently at CustomFIRE, our new chassis is scheduled to be outfitted as a fire truck within the coming months. This includes adding the 1500-gpm side-mount pump, 750-gallon water tank, body compartments, necessary emergency equipment, and lighting. In addition to current safety features found on the chassis, this vehicle will have a light tower and additional storage not found on our current engine. Much like the last unit, the intended life cycle of this engine is upwards of 20 years.

Staff has utilized the Sourcewell pricing model to procure this apparatus. Sourcewell is a government-created service cooperative that helps public agencies save time and money by providing pre-negotiated, competitively solicited contracts for products and services, essentially combining their buying power for better deals without the need for individual bidding processes – like the State Contract.

The cost to complete this acquistion is $720,833.89. Upon execution of the contract, CustomFIRE is offering a 4% pre-pay discount on any unpaid balance within 10 days. This amount equates to $28,833.36, bringing the net cost to $692,000.53. Chief Hanson consulted Admin Services Director Sommerfeld about the pre-pay discount for additional information. It is our opinion that the 4% savings is a fair return due to the short window of time to invest the money while this apparatus is being built.

Budget Impact:
Staff has budgeted $1,200,000 for the Engine 11 replacement in 2026. The total price of the chassis was $525,000.00 and was paid upon its delivery in 2025. The balance of the project cost is $720,833.89 for the pump and body modules. The total cost of this project is $1,248,833.89 ($1,217,000.53 with 4% pre-pay discount). Although over budget, there will be offsetting costs from the sale of our current Engine 11 that should put purchase within or under budget.

Funding Source:
Fire Capital Fund FC007 Engine - E11 (2003)

Recommendation:
Staff recommends the execution of purchase agreement for the pump and body modules.

Motion Type:
Simple majority vote of members present.

Requested Action/Motion:
“I move to approve the purchase of the pump and body modules from CustomFIRE apparatus for the 2026 replacement of Engine 11, utilizing the 4% pre-pay discount”
-or-
“I move to approve the purchase of the pump and body modules from CustomFIRE apparatus for the 2026 replacement of Engine 11, without the 4% pre-pay discount”

Attachments:
Chassis Photo
Engine Purchase Contract
Engine Spec


ENGINE 11
Feb 21, 2025, 1:45 PM

Custom Fire Apparatus Inc.
509 68th Ave
Osceola, WI 54020

800.443.8851

MOTOR VEHICLE PURCHASE CONTRACT

Fire Apparatus to be Built on 2025 Monarch Chassis

THIS AGREEMENT, made by and between CUSTOM FIRE APPARATUS, INC. of Osceola, Wisconsin, Sourcewell–MN Contract #113021-CSM, Party of the First Part, and: The CITY OF WATERTOWN and its FIRE DEPARTMENT of Watertown, Minnesota, Party of the Second Part, Sourcewell Member #111659, hereinafter called the BUYER.

WITNESSETH, That CUSTOM FIRE APPARATUS, INC. Agrees to sell, upon the conditions which are below written, the apparatus and equipment herein before described, all of which are to be in accordance with the specifications and warrantees submitted by CUSTOM FIRE APPARATUS, INC. and which are made a part of this agreement and Contract.

"One (1) new Sourcewell MPCU 2027 Pumper Apparatus Body to be built on the previously purchased 2025 Monarch Chassis Per Quote #10047-0005."

The BUYER agrees to purchase and pay for this completed apparatus as aforesaid, the Sum of: **Seven Hundred Twenty Thousand Eight Hundred Thirty-Three and 89/100 Dollars. ($720,833.89)**

PAYMENT TERMS: Payment is due on Day of Completion Acceptance at the Osceola, Wisc. factory, estimated to be within 280 Working Days or Sooner.

Buyer may pre-pay the contract within 10 Calendar Days of contract execution and receive a flat 4% discount on undue amount paid.

GUARANTY: The BUYER hereby guarantees that the funds will be ready and available for transfer in the form of legal tender, a negotiable check or direct bank wire transfer on or prior to the day of chassis delivery. And it is further mutually agreed that no misunderstanding, verbal or written, regarding equipment or otherwise, shall enjoin CUSTOM FIRE APPARATUS, INC. unless in this contract.

TERMINATION: After the execution of this Agreement, Purchaser shall have no right to terminate the Agreement. Custom Fire Apparatus, Inc. may, in its absolute and sole discretion, accept Purchaser's request to terminate the Agreement. In the event Custom Fire Apparatus, Inc accepts Purchaser's request to terminate the Agreement, Custom Fire Apparatus, Inc may charge a cancellation fee. The following charge schedule based on costs incurred may be applied at Custom Fire Apparatus, Inc.'s sole discretion:

(a) 10% after order is accepted by Custom Fire Apparatus, Inc;

(b) 30% of the Purchase Price after production has commenced. The cancellation fee may increase accordingly as costs are incurred as the order progresses through engineering and into manufacturing.

Custom Fire Apparatus Inc.
509 68th Ave
Osceola, WI 54020

800.443.8851

GUARANTY: The BUYER hereby guarantees that the funds will be ready and available for transfer in the form of legal tender, a negotiable check or direct bank wire transfer on or prior to the date due. And it is further mutually agreed that no misunderstanding, verbal or written, regarding equipment or otherwise, shall enjoin CUSTOM FIRE APPARATUS, INC. unless in this contract.

LIABILITY: Physical damage to the truck or chassis will be the responsibility of CUSTOM FIRE APPARATUS, INC. on a primary basis, regardless of what other insurance is available, as long as the vehicle is in the care, custody and control of same. Any componentry furnished by the BUYER, including the truck chassis, will be insured for its purchase price, by and when in possession of CUSTOM FIRE APPARATUS, INC. Upon arrival of delivery engineer with the apparatus, or upon delivery and acceptance of the same at the factory in Osceola, Wisconsin, Party of the Second Part (BUYER) does agree to provide all insurance to hold both parties harmless and free from any loss.

WITNESS our hands and official seal this _____ day of December 2025.

CUSTOM FIRE APPARATUS, INC.
(Party of the First Part)

By: _____

JAMES M. KIRVIDA

PRESIDENT OF THE CORPORATION

CITY OF WATERTOWN FIRE DEPARTMENT
(Party of the Second Part)

By: _____

_____

_____

Watertown Fire Department Custom Pumper Apparatus

As Per Sourcewell MPCU Contract 2025-12-10

Watertown, Minnesota

The following Proposal Specifications are for the piece of apparatus as follows:

Fire Truck, triple pumper, 1500 gallon per minute, hose body, booster tank, and all other appurtenances in accordance with the following:

GENERAL REQUIREMENTS

It is the intent of these specifications to cover the furnishing and delivering to the purchaser, complete apparatus equipped as specified. Minor details of construction and materials where not otherwise specified are left to the discretion of Custom Fire Apparatus, Inc. (CustomFIRE) who shall be solely responsible for the design and construction of all features.

The apparatus being furnished under these specifications shall conform to the requirements specific to pumper fire apparatus NFPA Booklet 1901 version current at time of contract. Any test equipment required, or expense incurred for the Certification Tests shall be borne by CustomFIRE.

RELIABILITY OF CONTRACTOR: Please refer to the company literature and newsletters as evidence that we can design, engineer, and construct the apparatus specified. The location of the factory where the apparatus is to be manufactured and tested is in Osceola, Wisconsin.

DESIGN: The design of the equipment shall be in accordance with the best engineering practices. The equipment design and accessory installation shall permit accessibility for use, maintenance, and service. All components and assemblies shall be free of hazardous protrusions, sharp edges, cracks or other elements which might cause injury to personnel or equipment. NOTE: Where "nibbled" or non-continuous cutting methods are used to machine the body material, all edges shall be reworked/machine smoothed for injury prevention and appearance reasons.

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

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

Cover plates which must be removed for component adjustment or part removal will be equipped with disconnect fastenings or hinged panels.

Drains, filler plugs, grease fittings, hydraulic lines, bleeders and check points for all components will located so that they are readily accessible and do not require special tools for proper servicing. Design practices shall minimize the number of tools required for maintenance.

All components shall be designed and protected so that heavy rain or other adverse weather conditions will not interfere with normal servicing or operation.

All specified stainless steel shall be type 304, 2-B where used for exterior painted panels and #4-brushed where used for pump panel overlays and unpainted compartment and body panels. All specified smooth surface aluminum, where used for painted or machined swirl natural finish, shall be 5052-H32 alloy of the specified thickness. All 4-way aluminum treadplate shall be "polished" finish with NFPA approved pattern on walking and step surfaces, type 3003 of specified thickness. All specified bolted fasteners shall be coated stainless steel "low profile" button socket head cap screws. All nut fasteners to be Ny-Lok or approved equal, designed to prevent loosening, No substitute will be acceptable to stainless steel where specified.

NOTE: Lighter gauges of specified materials will not be substituted - all basic requirements will be complied with.

Aluminum will not be substituted for any specified stainless fabrications.

CustomFIRE is prepared, if so requested by the Purchaser, to present evidence of our design experience/capabilities and manufacturing ability to carry out the terms of the contract.

FULLY ENGINEERED APPARATUS BODY and PUMP MODULE DESIGN

The entire apparatus design is "fully engineered", meaning that ALL Compartmented Body and Pump Module fabrications have been computer 3-D modeled, “on-screen” assembled, and each individual part can be traced to a precision engineered drawing, including but not limited to: compartment corners, wheel well housings, compartment door jambs, compartment floors and roofs, compartment dividers/bulkheads, interior compartment wire covers, compartment shelves/shelf brackets/shelf adjustable tracks, inner and outer door panels (hinged doors), door bundle brackets (roll-up), roll-out trays/drawers/tool boards, hose bed dividers, pump house sides/front/back panels, pump operator's panel layout, pump gauge and instrument panel layout, etc.

In order to assure the precise fit of any and all replacement Body and Pump Module fabrications, all assembly fastener holes, lighting fixture holes, pump controls/gauges/instruments/outlet fitting/inlet fitting holes, door handle/latch holes, and accessory equipment/trim mounting holes will be included in the design engineering.

As Per Sourcewell MPCU Contract 2025-12-10

QUALITY AND WORKMANSHIP

The design of the apparatus will embody the latest approved automotive engineering practices. The workmanship will be of the highest quality in its respective field. Special consideration will be given to the following points: Accessibility of the various units which require periodic maintenance, ease of operation (including both pumping and driving) and symmetrical proportions. Construction will be rugged and ample safety factors will 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".

Custom Fire Apparatus, Inc. utilizes premium "concealed-all-bolted" construction methods allowing future removal and repair of damaged apparatus body components. Welding will not be employed in the assembly of the apparatus in a manner that will prevent the ready removal of any component part for service or repair. The minimal steel welding utilized will follow American Welding Society D1.1-96 recommendations for structural steel welding. Any aluminum welding will be done to American Welding Society and ANSI D1.2-96 requirements for structural welding of aluminum. Flux core arc welding will use alloy rods, type 7000, American Welding Society standards A5.20-E70T1. An independent American Welding Society certified welding inspector will monitor weld quality.

APPARATUS SIZE - CAPACITY - SEATING

Total overall length of apparatus is not to exceed 390.00"., highest point of apparatus is not to exceed 124 inches, chassis wheelbase is not to not exceed 200.00 inches, and GVWR is to be at least 45,000 pounds.

The total overall width of apparatus is not to exceed 101 inches; this dimension is not to include the primary construction of the apparatus body and chassis cab. Any peripherals that are 'removable' are not to be incorporated into this measurement. Items that are considered 'removable' are: Rub Rails, Fenderettes, Mirrors, Lights, Handrails, Etc.

RESPONSIBILITY OF PURCHASER: It is the responsibility of the purchaser to specify the details of the apparatus, its required performance, the maximum number of fire fighters to ride on the apparatus, and any hose ground ladders, or equipment it will be required to carry which exceed the minimum requirements of this standard.

A total of 5 (4 with SCBA's) seating positions are to be provided, "Fully Enclosed", with approved seat belts. Two seating positions are to be located inside forward chassis cab and 3 inside crew cab/area.

The GAWR, and GCWR or GVWR of the chassis is to be adequate to carry the fully equipped apparatus including full water and other tanks, the specified hose load, unequipped personnel weight (The unequipped personnel weight is to be calculated at 250 pound. per person times the maximum number of persons to ride the apparatus as specified.), ground ladders, and a miscellaneous equipment allowance of 2500 pounds. (2000 pounds. for apparatus with less than 250 cu. ft. of compartment space). It is the responsibility of the purchaser to provide the contractor with the weight of equipment to be carried if it is in excess of the allowance of 2500 pound.

Watertown Fire Department Custom Pumper Apparatus

As Per Sourcewell MPCU Contract 2025-12-10

PROPOSAL PRINT/DRAWING

Custom Fire Apparatus' proposal is being submitted with a complete detailed print of the apparatus as you may, or may not, have specified. The print is to a scale of 1 inch = 15 inches, and is of the exact apparatus being proposed, not a stock print of a unit resembling your design. All dimensions are subject to a +/- .125 inch (metal thickness) tolerance. The provided print has complete views of the driver side with chassis cab, passenger side with chassis cab, and the rear of body. The print also includes all of the following depicted items:

CHASSIS: exact replication of model of custom-built chassis cab with: roof line, interior seating arrangement, window arrangement, rear view mirrors, air conditioning condenser, non-emergency head/turn/marker lighting, front grille, air horns, bumper with extension, 120-volt shore power receptacle, air system keep-fill receptacle, emergency lighting fixtures, hand rails, and horizontal exhaust system with underbody outlet.

APPARATUS BODY: the apparatus body sub-frame, underbody tow eyes, water tank profile with baffles and suction sump, underbody folding wheel chocks, all exterior 4-way treadplate pattern areas, body access steps, hand rails, interior compartment shelving, emergency and non-emergency lighting fixtures, ladders and pike poles and storage area(s), hard suction hose and storage area(s), side and rear compartmentation showing dimensions and D-ring door hardware, / roll-up door slats/bundles/bar type handle/latches, and hose bed arrangement with dividers and grating material. / dividers, grating material, and hose bed covers.

PUMP ENCLOSURE and PUMP SYSTEM: pump enclosure/compartment, fire pump profile, fire pump transmission profile, tank-to-pump piping, pre-connect hose beds with hose guides, side pump panel removable sections, pump access door(s), pump control and instrument panel layout with: gauges, instruments, pump controls, discharge outlets with closures, suction inlets with closures, and deluge discharge riser with monitor/device.

ADDITIONAL OPTIONAL FEATURES: other optional features, as specified, are also included on the proposal drawing, this includes; front bumper extension accessories/treadplate gravel shield/pre-connect hose bed, interior chassis cab EMS storage compartments, interior body compartment roll-out trays, drop-down ladder rack, rewind air/hydraulic/cord reels, SCBA bottle storage compartments/racks, cascade air storage bottles with fill station, generator installation, permanent quartz lighting, hand operated 120-Volt floodlighting, 120-volt exterior body receptacles, extendible light tower, and other detailed accessories and features so as to provide a "picture" of the proposed apparatus.

COMPLIANCE: We trust, that the Quality and accuracy of our Proposal Drawing will be a major consideration, for your determining the most "responsible" proposal.

ACCEPTANCE TESTS AND REQUIREMENTS
Acceptance tests on behalf of the purchaser shall be prescribed and conducted prior to delivery or within 10 days after delivery, in the presence of such person or persons as the purchaser may designate in the requirements for delivery.

As Per Sourcewell MPCU Contract 2025-12-10

ALTITUDE REQUIREMENTS: The apparatus shall be designed to meet the specified rating at 2000 feet altitude above sea level.

ROADABILTY: The apparatus, when fully equipped and loaded per "Carrying Capacity", shall be capable of the following performance on dry/level/paved roads in good condition: From a standing start the vehicle shall attain a true speed of 35 MPH within 25 seconds. The vehicle shall attain a minimum top speed of 50 MPH. The apparatus shall be able to maintain a speed of at least 20 MPH on any grade up to and including 6%.

ROAD TESTS: Specified acceleration tests shall consist of two runs in opposite directions over the same route. From a standing start, through the gears, the vehicle shall attain a true speed of 35 mph within 25 seconds in the case of pumpers, and a true speed of 55 mph within 60 seconds.

The service brakes shall bring the fully laden apparatus to a complete stop from an initial speed of 20 MPH in a distance not exceeding 35 ft., on a substantially hard level surface road free from loose material, oil, or grease.

Manufacturer's pump test and independent third party pump certification tests shall be conducted in accordance with requirements of NFPA #1901. A Certificate of Testing shall be furnished to the Purchaser, both for the CFA Preliminary Tests and the third party Certification Tests.

Responsibility for the apparatus and equipment shall remain with Custom Fire Apparatus, Inc. until acceptance by the purchaser.

At the time of delivery, a hard copy of each of the following will be provided:

1. Engine manufacturer's certified brake horsepower curve showing the maximum no-load governed speed.

2. Manufacturer's record of pumper construction details, per NFPA 1901.

3. Manufacturer's Run-In Certification with preliminary test results.

4. Pump Manufacturer's Certification of Hydrostatic Tests.

5. Pump Manufacturer's Certification of Pump Test Results.

6. The Certification of Inspection/Test of Fire Department Pumper by an Independent Third Party per NFPA 1901 standards.

7. Weight documents from certified scales showing actual loading on the sides of front axle, sides of rear axle(s), and overall (four total) vehicle (with the water tank full but without personnel, equipment, and hose) shall be

supplied with the completed vehicle to determine compliance with NFPA section 10-1. Weights shall verify side-to-side loading, to be in compliance with NFPA section 4.12.2.3.3

8. At least two copies of the complete operation and maintenance manual covering the completed apparatus as delivered including the pump, emergency lighting and siren, generator, or other furnished accessories.

9. Wiring diagrams of 12-volt electrical systems, installed by apparatus body manufacturer (prime contractor). Diagrams must be "vehicle specific", describing all 12-volt electrical functions as furnished on this **and only this** apparatus.

10. A finalized drawing of apparatus as completed.

11. A "Delivery Manual", consisting of a 3-ring notebook type binder with reference tabs for each section, shall be furnished to include the following items: invoice copy(ies), proof of insurance, Manufacturer's Statement of Origin, acceptance forms, certifications, specifications, individual component manufacturer instructions and parts manuals, warranty forms for body, warranty forms for all major components, warranty instructions and format to be used for compliance with warranty obligations, routine service forms/publications, technical publications or training guide for major components, and apparatus body print "as built".

12. Paint numbers of all color coatings.

13. Certifications of water tank capacity.

14. Written load analysis of 12-volt electrical system as installed by CustomFIRE.

A test data plate shall be provided at the pump operator's position which gives the rated discharges and pressures together with the speed of the engine as is determined by the manufacturer's test for this particular unit. Plate shall also include delivery date, pump serial number(s), original Customer, and the CFA serial number.

A permanent plate will be affixed in the driver's compartment specifying the quantity and type of fluids used in the vehicle:

All nameplates and instruction plates shall be metal or plastic with the information permanently engraved, stamped, or etched thereon. Metal nameplates to be installed with plated screws. All nameplates to be mounted in a conspicuous place.

FAILURE TO MEET TESTS: In the event that the apparatus fails to meet the test requirements on first trials, a second trial may be made at the option of CustomFIRE within 30 days of the date of the first trials. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to make such changes as the Chief of the Fire Department and/or the purchaser may consider necessary to conform

to any clause of the specifications within thirty days after notice is given may also be cause for rejection of the apparatus.

CONSTRUCTION METHODS AND MATERIALS

CustomFIRE will be providing the tried and true "brake-formed" fabricated construction methods,, without the use of extrusions or other configuration limiting non precision construction methods. We will not mix body materials such as stainless-steel sheet metal over aluminum "space-frame" extrusions.

Our apparatus body will be easily repairable, since it does not include the practice of stitch-welding, seam-welding, or plug-welding mating body panels and fabrications. Likewise, our apparatus body construction methods do not rely on metal fusion, adhesives, encapsulating welded extrusions, or non-removable fasteners, as a method of permanent assembly.

NOTE: THERE WILL BE NO PROPRIETARY EXTRUSIONS USED IN THE CONSTRUCTION OF THE PROPOSED APPARATUS BODY, THUS ALLOWING FOR APPARATUS BODY REPAIRS AND MODIFICATIONS BY ANY QUALIFIED FABRICATOR AND/OR AUTO BODY COLLISON REPAIR CENTER.

AWARD OF CONTRACT

Custom Fire Apparatus, Inc. utilizes premium "concealed-all-bolted" construction methods allowing future removal and repair of damaged apparatus body components. This is "universally" considered to be a superior method of manufacturing, as compared to weld-together permanently assembled apparatus bodies.

Custom Fire Apparatus, Inc. is a USA Corporation that is 100% held, by its founder, a United States citizen who is "actively" operating the manufacturing business. Custom Fire Apparatus, Inc. is a Wisconsin Corporation, with Articles filed in December of 1978, and is still owned by the same "active" President, operating with the same Corporate Name.

Prior to the award an authorized representative of Custom Fire Apparatus, Inc. will be available meet with purchasing officials (at Purchaser's location) to personally discuss all facets of the Proposal specifications to insure a complete and satisfactory understanding of the bid proposal.

STAINLESS STEEL DEMONSTRATED EXPERIENCE

More than 45 years ago, Custom Fire Apparatus "pioneered" the use of stainless steel, to construct fire apparatus bodies, and can demonstrate where many of these apparatuses are still in active service, and multiple units hav had their stainless body "retro-fitted" onto new replacement chassis.

As Per Sourcewell MPCU Contract 2025-12-10

REQUIREMENTS OF THE APPARATUS MANUFACTURER

Custom Fire Apparatus, Inc. is a USA Corporation that is 100% held, by its founder, who is"actively" operating the manufacturing business, located within the United States of America.

YEARS IN BUSINESS

Custom Fire Apparatus, Inc. is a Wisconsin Corporation, with Articles filed in December of 1978, and is still owned by the same "active" President, operating with the same Corporate Name. Also active in the management of Custom Fire Apparatus, Inc. is a 4th Generation "fire truck family" member, who is a degreed Mechanical Engineer, with over 25 years of fire apparatus design experience.

CONSTRUCTION MATERIALS

More than 42 years ago, Custom Fire Apparatus "pioneered" the use of stainless steel, to construct fire apparatus bodies, and can demonstrate where these apparatuses are still in active service. Aluminum materials have been used for the same period of time.

INSPECTION TRIPS

The Truck Committee members will be advised as to the date of the following phases of construction: Pre-Construction (prior to bending of metal), Pre-Paint (final design/equipment layout), and Pre-Delivery. All Truck Committee members are welcome to travel to the factory during these, and any other stages of construction, at the purchaser's expense.

All changes to original proposal specifications, as approved by the Truck Committee during any factory visit, will be noted on a "revised specification", provided by Custom Fire and distributed to the designated head of Truck Committee, within five working days after any Conference(s).

CONTRACT ADMINISTRATOR

Upon execution of the Sales Contract, an on-staff Contract Administrator shall be assigned whose purpose is to be the single-point contact to the Purchaser's designated Apparatus Committee Representative(s). Communications will be established between the Contract Administrator and the Purchaser's Representative(s), in the form of Phone Numbers, Mailing Addresses and Email addresses.

BALANCE PAYMENT TERMS

Final payment terms for completed apparatus is 100% of Purchase Price is due on the day of delivery. Apparatus shall not leave care, custody and control of Custom Fire Apparatus, Inc. or designated Sales Representative without full payment of the same.

As Per Sourcewell MPCU Contract 2025-12-10

Final delivery price shall not include any Local, State, or Federal taxes. Custom Fire Apparatus, Inc. shall not be liable for any State or Federally mandated tax or program after the sale of this apparatus.

POST CONTRACT SURCHARGES

Due to supply chain volatility, surcharges may be added after contract and will be disclosed and passed on to buyer at cost. Surcharges shall not be deemed suitable reason for contract termination by either party."

DELIVERY CONSTRUCTION PERIOD

The maximum period for construction of complete apparatus shall not exceed two hundred eighty (280) working days and shall include the time required for delivery of the chassis to our factory. CustomFIRE will not be held liable for delay of delivery caused by accidents, strikes, floods, or other events not subject to our control. You may also refer to the Bid Proposal Form for the number of working days for completed delivery of the apparatus, from date of bid acceptance and any further information.

FACTORY DELIVERY OF FIRE APPARATUS

The completed Fire Apparatus is to be delivered to the purchaser, at the Factory of the Manufacture. The purchaser is to provide drive-way transportation of the Fire Apparatus.

FACTORY OPERATIONAL PRESENTATION, PROVIDED BY SALESPERSON

The Sales Representative will provide one (1) day of Factory On-Site Operational Training and Orientation.

GENERAL WARRANTY

The new fire apparatus manufactured per these specifications shall be warranted for a period of ONE (1) year from the date of delivery, except for chassis and other components noted herein.

Under this warranty, CustomFire agrees to furnish any parts to replace those that have failed due to defective material or workmanship where there is no indication of abuse, neglect, unusual or other than normal service providing that such parts are, at the option of CustomFire, made available for inspection upon request, returned to the Osceola, Wisconsin factory or other location designated by CustomFire with transportation prepaid within 30 days after the date of failure or within ONE (1) year from the date of delivery of the apparatus to the original purchaser, whichever occurs first, and inspection indicates the failure was attributed to defective material or workmanship. Accessories/components warranted by their original manufacturer may be subject to reinstallation charges under the terms of their respective warranties, especially if such warranties exceed the above 1-year warranty terms.

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

This warranty will not apply to any fire apparatus which has been repaired or altered outside the Osceola, WI factory or designated (approved) facility in any way, which, in CustomFIRE's opinion might affect its stability or reliability. Each warranty claim needing repair or service at the designated facility must receive preauthorization by CustomFire prior to performance of any work.

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

Refer to the "BOOSTER TANK" section for specific warranties on the provided Booster Tank.

This warranty is in lieu of all other warranties, expressed or implied, all other representations to the original purchaser, and all other obligations or liabilities, including liabilities for incidental or consequential damage on CustomFIRE's part. Without limiting the foregoing, any express or implied warranties of merchantability or fitness for a particular purpose or warranties arising by Customer usage or by operation of law with regard to any products delivered pursuant hereto are expressly disclaimed. CustomFire neither assumes nor authorizes any person to assume for CustomFire, any liability in connection with the sales of CustomFIRE's apparatus unless made in writing by CustomFire.

As Per Sourcewell MPCU Contract 2025-12-10

25-YEAR WARRANTY ON STAINLESS STEEL BODY FABRICATIONS

CUSTOM FIRE APPARATUS, INC. shall warrant to the original purchaser only that the stainless-steel body components as fabricated by and assembled by CUSTOM FIRE APPARATUS, INC., under normal use and with reasonable maintenance, are structurally sound and shall remain so, for a period of 25-YEARS. Furthermore, all stainless-steel fabrications shall remain free from corrosion perforation, for the same 25 YEARS.

In the event that the body is "remounted" to another chassis that is different from the chassis of origination, this warranty shall be void.

This warranty does not apply to the following items which are covered by a separate warranty: paint finish, hardware, moldings, and other purchased or non-stainless steel accessories which are attached to this body.

Surface tarnishing or discoloration on any exposed body surface is not covered under this warranty. Body Damage that occurs when normal wear and tear to hinges, latches, or other fasteners results in damage to doors or body panels is not covered. It is the responsibility of the purchaser to maintain fit and alignment of doors and latches. This warranty terminates upon transfer of possession or ownership from the original purchaser.

NOTE: This 25-year warranty requires that the body be equipped with the purchased option of CustomFIRE's tubular stainless steel body sub-frame.

CUSTOM FIRE APPARATUS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THE STAINLESS-STEEL BODY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED.

CUSTOM FIRE APPARATUS, INC. shall replace, without charge, repair at the factory, or make a fair allowance for any defect in material or workmanship demonstrated to the satisfaction to have existed at the time of delivery or not due to misuse, negligence, or accident. If CUSTOM FIRE APPARATUS, INC. elects to repair the body, the extent of such repair shall be determined solely by CustomFire, and shall be performed solely at the Osceola, Wisconsin factory, or at an OEM approved facility. The expense of any transportation to or from such repair facility shall be borne by the purchaser and is not an item covered under this warranty.

CUSTOM FIRE APPARATUS, INC. shall not be liable for consequential damages and under no circumstances shall its liability exceed the price for a replacement body. The remedies set forth herein are exclusive and in substitution for all other remedies to which the purchaser would otherwise be entitled.

CUSTOM FIRE APPARATUS, INC. shall be given a reasonable opportunity to investigate all claims. The purchaser must commence any action arising out of, based upon or relating to agreement or the breach thereof, within twelve months from the date the cause of the action occurred.

As Per Sourcewell MPCU Contract 2025-12-10

"Original Vehicle" requires that each of the following apparatus components match the As Delivered state of the vehicle and refers to the state of the apparatus at time of delivery including Original Apparatus Chassis, Original Apparatus Pump and Associated Plumbing, Original Apparatus Body Components and Enhancements, Original Apparatus Electrical Systems, and Original Water Tank.

CORROSION PERFORATION WARRANTY - 25 YEARS

In addition to the Paint Warranty as specified, the Stainless Steel apparatus body is to be warranted against corrosion perforation for a period of twenty five (25) years.

NOX-RUST NON-HARDENING UNDERCOATING

After final body reassembly, under body areas shall be spray coated with Nox-Rust or equal rustproofing undercoating material. Vehicle shall be Prep-Sol "solvent washed" after undercoating, to remove all overspray residues.

WARRANTY - ELECTRICAL SYSTEM - 12 VOLT DC, 2-YEARS CFA CONTENT

The Apparatus 12-volt. DC Electrical System (exclusive of chassis) shall be covered, by Custom Fire Apparatus, Inc. under normal use with normal service and maintenance, for a period of two (2) years, of which one (1) is for Parts and Labor. This warranty covers: Power Distribution System (PDC), Looms and Harnesses, Multi-Pin Connectors, and Workmanship as provided by Custom Fire Apparatus, Inc.

NOTE: Individual emergency and non-emergency electrical devices, light fixtures, audible equipment, intercoms, and motors will be covered by the prevailing manufacturer's new component warranty; superseding the above Custom Fire Warranty.

10-YEAR APPARATUS PAINT WARRANTY

The TEN (10) year paint performance guarantee will cover the areas of the vehicle as are originally finished by the apparatus body builder with the specified product for a period of TEN (10) years beginning the day the vehicle is delivered to the purchaser.

The areas as outlined on the Guarantee Certificate, will be covered for the following paint failures:

GUARANTEE INCLUSIONS:

FULL APPARATUS BODY, EXCLUDING EXTERIOR WHEELWELL PANELS

* Peeling or delaminating of the topcoat and/or other layers of paint.

* Cracking or checking

* Loss of gloss caused by cracking, checking, or hazing.

* Any paint failure caused by defective finishes which are covered by this guarantee.

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

The warranty on the chassis paint is limited to the warranty of the chassis manufacturer thereof and adjustments for the same are to be made directly with the chassis manufacturer by the Purchaser. Where painted shutter style doors are provided, the warranty is limited to that which is provided by the manufacturer thereof. Graphics are excluded from refinishing under warranty.

LIFETIME SUB-FRAME WARRANTY - STAINLESS STEEL

The specified tubular stainless steel apparatus body sub-frame is to be warranted for the vehicle's lifetime, against cracks, corrosion and rubber isolator deterioration.

LIFETIME WARRANTY - WATER TANK

The water tank, and its installed accessories, shall be covered by a "Lifetime" Warranty, against cracks, corrosion, or other failures caused by the tanks design and normal use of the same. The warranty shall be between the tank manufacturer, and the customer.

TANK CRADLE STRUCTURE WARRANTY

The tank cradle is to have a lifetime warranty, covering both structural and corrosion, as provided by body builder.

LIFETIME WARRANTY - FOAM CONCENTRATE TANK

The foam concentrate reservoir/tank, and installed accessories, shall be covered by a "Lifetime" Warranty, against cracks, corrosion, or other failures caused by the tanks design and normal use of the same. The warranty shall be between the foam concentrate tank manufacturer, and the Customer.

WATEROUS 7-YEAR PUMP PARTS

The specified Waterous fire pump and Waterous fire pump (only) accessories shall carry a Waterous seven (7) year warranty covering defective parts only (not labor). NOTE: This warranty's terms and conditions shall be handled directly between the Customer and the Waterous Company.

A printed Fluid Data Field label is to be furnished, installed inside the chassis and visible from exterior ground level. Data Field is to provide the following information, **as is applicable** to the particular apparatus:

1. Engine Oil
2. Engine Coolant
3. Chassis Transmission Fluid
4. Pump Transmission Lubrication Fluid
5. Pump Primer Fluid
6. Drive Axle Lubrication Fluid
7. Air Conditioning Refrigerant
8. Air Conditioning lubrication oil
9. Power Steering Fluid
10. CAFS System Lubricant
11. Transfer Case Fluid
12. Front Tire Cold Pressure
13. Cab Tilt Mechanism Fluid
14. Transfer Case Fluid (chassis)
15. Equipment Rack Fluid
16. Generator System Lubricant
17. Chassis Manufacturer
18. OEM Production Number
19. Paint Number
20. Year Built
21. Date Shipped
22. Vehicle Identification Number (VIN)
23. Rear Tire Cold Pressure

Fluid Data label is to be permanently encased in a chrome full surround bezel.

WARNING LABEL: VEHICLE WEIGHT, HEIGHT, LENGTH, AND SEATING CAPACITY

A single label, with printed data field, is to be installed in the cab, in direct view of the seated Driver, to denote the following:

As Per Sourcewell MPCU Contract 2025-12-10

VEHICLE WEIGHT
To indicate, in pounds and tons, the vehicle's total "as delivered" weight (with water and/or foam load, if so equipped), and the maximum for seated occupants (250 pounds allowance for each person).

VEHICLE HEIGHT AND LENGTH
In feet-and-inches; the overall height of the vehicle (to the highest permanent point-except antennas), and overall length of vehicle (bumper to tailboard).

SEATING/OCCUPANCY
The exact number of passengers to be carried in the chassis cab and/or crew cab.

NOTE: The dimensions and weight are to be "as manufactured", and the customer must revise the data plate, if they so change the height (by permanent loading and accessory equipment/device installations), and the weight by adding loose equipment, products, and supplies.

WARNING Label is to be permanently encased in a chrome full surround bezel.

SEAT BELT WARNING LABELS

One or more permanent labels to be installed in the cab visible to each seating position, to read: **WARNING: Occupants must be seated and belted while apparatus in in motion**. Labels are to be permanently encased in a chrome full surround bezel.

HELMET WARNING LABEL

One or more permanent labels to be installed in the cab visible to each seating position, to read: **WARNING: Occupants MUST NOT wear helmets while seated**.

Labels are to be permanently encased in a chrome full surround bezel.

AIR SYSTEM PRESSURE PROTECTION VALVE

In addition to the chassis furnished PPV, the apparatus body builder shall furnish an additional PPV to prevent the passage of air pressure, to installed accessories, such as: Air Horns, PTO or Pump Shift, Air Actuators, and other air operated accessories, whenever system air pressure is below 80.

CUSTOM CHASSIS FRONT BUMPER EXTENSION

The specified front bumper is to be extended forward of the chassis cab, using chassis frame rail extension brackets, as are furnished by the custom chassis manufacturer (OEM).

LENGTH OF BUMPER EXTENSION, AHEAD OF GRILLE

The front bumper is to be extended 24-inches ahead of the front grille, with specified gravel shield extending from bumper flange to within 1" of the front grille.

BUMPER EXTENSION HOSE WELL

The hose well, recessed into the bumper extension is to be furnished by the Custom chassis manufacturer, as described in chassis specifications.

FRONT BUMPER PRECONNECT DISCHARGE(S)

See the PUMP MODULE segment of specifications for description of bumper discharge(s), outlet size(s) and outlet location(s).

HIGH IDLE

See CHASSIS segment of specifications, for description of: High Idle feature to be furnished.

AIR INTAKE EMBER SEPARATOR

See CHASSIS segment of specifications, for description of: Air Intake Ember Separator to be furnished.

UREA FILL, AS PROVIDED BY CHASSIS OEM

The chassis furnished Urea Fill Station, is not to be modified by body Builder.

UREA RESERVOIR TO BE FILLED UPON DELIVERY

The chassis furnished Urea Reservoir is to be "topped-off" (filled) upon the vehicle's delivery to the purchaser.

FUEL FILL CUBBY WITH VENTED FILL PIPE

Please refer to apparatus body specifications for description and location of Fuel Fill Port and Piping to fuel tank.

REMOVABLE PANEL ACCESS TO FUEL TANK

See APPARATUS BODY segment of specifications, for description and location of provided Fuel Tank Access Panel.

TIRE VALVE CORE EXTENSIONS

Two (2) each "rigid" metal valve core threaded extensions shall be furnished, installed on the inside dual rear tires of the vehicle's rear axle. Inside dual wheels shall be positioned so that the valve core extensions protrude through the outside dual wheels, located directly across from the outside dual wheel's valve core.

CHASSIS WHEEL FINISH:

Please refer to chassis specifications for chassis front and rear wheel finish and/or wheel trim. All wheels are to remain on the vehicle, and in the original OEM "factory" finish.

TIRE PRESSURE WARNING DEVICE, LED CAPS FOR 6 TIRES

There shall be a VECSAFE LED, tire alert pressure management system furnished that shall monitor each tire’s pressure. A chrome plated brass sensor shall be furnished on the valve stem of each tire for a total of six (6) tires. The sensor shall activate an integral battery-operated LED when the pressure of a tire drops 8 PSI, from the nominal pressure when the cap was installed. Removing the cap from the sensor shall indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED shall immediately start blinking.

DRIVELINE JOINTS, 1710 SPICER

The lower level driveline joints, ahead of and behind the fire pump transmission shall be minimum Spicer 1710 series or equivalent. Driveline to be dynamically balanced and equipped with Glide Coat or equivalent spline joints.

MUD FLAPS

Driver's side and passenger's side front fender and rear body wheel well mud flaps shall be furnished, made of fabric reinforced neoprene rubber, bolted to the front fender liner and rear wheel well bulkheads using stainless steel strap brackets and bolts. Mud flaps shall extend approximately 10" below running board level.

DRIVER SIDE FORWARD FACING CABINET

A forward-facing cabinet to be furnished in rear cab interior, on driver side.

Dimensions of cabinet shall be at least 22" wide x 63" high x 18" deep.

Cabinet shall be constructed of smooth natural finished aluminum and equipped with neeting to match previous trucks and 3 ea. adjustable shelves.

OFFICER SIDE FORWARD FACING CABINET

A forward-facing cabinet to be furnished in rear cab interior, on officer side.

Dimensions of cabinet shall be at least 22" wide x 63" high x 18" deep.

Cabinet shall be constructed of smooth natural finished aluminum and equipped with netting to match previous trucks and 3 ea. adjustable shelves.

PAINT EXTEROR CABINET JOB COLOR OF CHASSIS CAB INTERIOR

In lieu of the natural aluminum finish as previously specified, the exterior of the one (1) cabinet(s) shall be painted with Zolatone #20-72 Silver Gray Textured finish.

LED STRIP LIGHTING

The above specified interior cabinet lighting shall be LED "strip" lighting, one strip (1) on each side of doorway (two strips total). Light strips shall activate with opening of the door.

NFPA REQUIRED TESTING OF APPARATUS NOISE LEVELS

The completed apparatus shall be "Noise Level Tested" to be in compliance with NFPA standards in effect on the day of purchase, Noise level testing shall be of the particular apparatus, not of a similar series or model, and shall be accomplished just prior to delivery to the customer.

As Per Sourcewell MPCU Contract 2025-12-10

GOVERNOR TEST, FRAME RAIL PROTECTION & ATTACHMENT STANDARDS:

SPEED GOVERNOR TEST
Engine limiting speed governor is to be tested, upon arrival at the Body Builder's factory for compliance with the maximum no-load engine operating speed, as determined on appropriate engine power curve sheet.

SUSPENSION AND FRAME CORROSION PROTECTION
Rear axle suspension brackets left and right sides, front and rear, are to be caulked with silicone sealant preventing build-up of road salts and moisture that may cause future corrosion of bracket-to-frame-rail attachment points.

FRAME RAIL MOUNTING PROCEDURE
All chassis frame rail mounted brackets, supports, pump flanges, and apparatus body sub-frame components are to be bolted to the frame rail sides. No holes are to be drilled in the frame flanges, only the web may be drilled. No welding will be allowed to the chassis frame, web, or flanges, ahead of the rear most spring shackles. Frame flange sandwich clamping devices (such as U-bolts) are not to be used.

CHASSIS WEIGHTS AND MEASUREMENTS

The apparatus manufacturer is to perform the following described weight recordings and suspension deflection tests, on the bare chassis, and provide resulting information to the Purchaser:

Load Distribution NFPA 1901, 4.13.3.3: The fire apparatus, when loaded to its estimated in-service weights, shall have a side-to-side tire load variation of no more than 7-percent of the total tire load for that axle. In order to provide baseline information for the completed apparatus' demonstration of compliance with this NFPA requirement, the following tests and measurements are to be performed:

BARE CHASSIS SIDE-TO-SIDE WEIGHT RECORDINGS
Individual weights of the bare chassis, at 4-points, are to be taken as follows:

Driver side front tire only weight
Passenger side front tire only weight,
Driver side only rear tires weight
Passenger side only rear tires weight.

These weights are to demonstrate the bare chassis side-to-side weight disparities, prior to installation of permanent apparatus components.

BARE AND VARYING LOAD CHASSIS SUSPENSION DEFLECTION TEST
Measurements are to be taken, from top of chassis frame rails-to-ground, above front axle and rear axle(s) driver side and passenger side (4-points), under the following conditions:

Bare chassis, prior to installation of permanent apparatus components.
With 4,000 pounds of imposed weight, at projected apparatus load centerline.
With 8,000 pounds of imposed weight, at projected apparatus load centerline.
With 12,000 pounds of imposed weight, at projected apparatus load centerline.

These bare and weighted measurements are to demonstrate the actual amount of suspension deflection, front and rear/side-to-side, with simulated apparatus payloads.

NOTE; THE ABOVE WEIGHTS AND DEFLECTION RESULTS, ARE TO BE NOTED WITHIN THE COMPLETED VEHICLE DELIVERY DOCUMENTS.

NFPA RELATED FIRE SERVICE STANDARDS:

GROUND CLEARANCE STANDARDS
Axle housings are to clear the road surface by at least 8" and an angle of departure of at least 8 degrees is to be maintained at rearmost protrusion (bumper/tailboard) of the vehicle when fully loaded.

VISIBLE WARNING DEVICE AND PLACARDS
The specified "Hazard" Indicator Light is to be mounted inside chassis cab so as to be prominently visible to the driver.

CAB TILT CONTROLLED AT PASSENGER (OFFICER) SIDE

The hydraulic powered cab tilt device is to be operated from the passenger (Officer) side of vehicle, so as to allow full view of the chassis cab as it is being raised and lowered.

CAB TILT CONTROL CONSOLE, PLUG-IN COUPLER INBOARD PUMP ACCESS DOOR

The push-button cab tilt control console, including cable, is to be shipped loose with the vehicle. The quick-disconnect coupler plug-in is to be a bulkhead fitting, and is to be located inboard the optionally specified passenger side pump inspection door.

TIER-4 COMPLIANT DPF/DEF EXHAUST SYSTEM

The original equipment chassis engine DPF/DEF (diesel particulate filter/diesel exhaust fluid) exhaust system, upstream and downstream of the passenger side outlet, shall remain unaltered (not modified) to remain in compliance with exhaust emission standards in effect at time of contract.

DEFLECTOR
Fabricated stainless steel heat deflector plates are to be provided, where necessary, to protect body manufacturer installed components from excessive radiant heat.

GATED COOLANT LINES: AUXILIARY HEATER(S)

Engine cooling system chassis cab heater return-to-engine line shall be separated and equipped with a gate valve and .625" i.d. neoprene rubber heater hose extending to specified auxiliary heater(s). An additional gate valve is to be furnished on the auxiliary heater(s)-to-engine return line. Valves shall allow complete shut-off of the chassis cab and remote auxiliary heating system(s) that are downstream of the chassis cab heater. Valves shall prevent hot water circulation during warm weather periods and to allow shutdown should a hose or heater core leak develop.

COOLANT "BOOST" PUMP

The specified pump compartment heater core is to be piped to the engine coolant system, installation to include: 12-volt in-line Groco "free-flow" centrifugal cast bronze bodied coolant "boost" pump, parallel run of high grade coolant hoses with stainless steel screw type hose clamps.

Installation of coolant pump is to provide increased rate of coolant flow to assure maximum available chassis cab and auxiliary heater core temperatures during extreme winter conditions.

Coolant Pump is to be activated and deactivated by the optionally specified "auxiliary" heater fan switch.

RADIATOR FAN ENGAGEMENT; WITH PUMP SHIFT AND OVERRIDE SWITCH

The chassis diesel engine cooling fan's clutch shall be "engaged" when the fire pump shift to "PUMP" position occurs. Cooling fan shall return to normal operations after "ROAD" is re-selected with pump shift control.

An override switch shall be installed at the chassis dash to disable this feature during cold weather operation. This feature is limited to engines with electronically/pneumatically controlled cooling fans."

WHEEL CHOCKS (Required by NFPA)

Refer to Wheel Chocks in the NFPA Equipment Section of these specifications.

WHEEL CHOCK STORAGE

See APPARATUS BODY segment of specifications, for description of: Wheel Chock Storage to be provided.

MANUALS, CERTIFICATIONS, AND DIAGRAMS, IN ENGLISH LANGUAGE

At the time of delivery, one (1) USB Flash Drive(s) of: each of the following manuals will be provided.

1. Engine manufacturer's certified brake horsepower curve showing the maximum no-load governed speed.

2. Manufacturer's record of pumper construction details, per NFPA 1901.

3. Manufacturer's Run-In Certification with preliminary test results.

4. Pump Manufacturer's Certification of Hydrostatic Tests.

5. Pump Manufacturer's Certification of Pump Test Results.

6. The Certification of Inspection/Test of Fire Department Pumper by an Independent Third Party per NFPA 1901 standards.

7. Weight documents shall be supplied with the completed vehicle to determine compliance with NFPA section 10-1. Weights shall be for each tire or dual set of tires, so as to verify side-to-side loading, to be in compliance with NFPA section 4.12.2.3.3.

8. The complete operation and maintenance manual covering the completed apparatus as delivered including the pump, emergency lighting and siren, generator, or other furnished accessories.

9. A finalized drawing of apparatus as completed.

10. A "Delivery Manual", consisting of a 3-ring notebook type binder with reference tabs for each section, shall be furnished to include the following items: invoice copy(ies), proof of insurance, Manufacturer's Statement of Origin, acceptance forms, certifications, specifications, individual component manufacturer instructions and parts manuals, warranty forms for body, warranty forms for all major components, warranty instructions and format to be used for compliance with warranty obligations, routine service forms/publications, technical publications or training guide for major components, and apparatus body print "as built".

11. Paint numbers of all color coatings.

12. Certifications of tank(s) capacity.

13. Written load analysis of 12-volt electrical system as installed by body builder.

A test data plate shall be provided at the pump operator's position which gives the rated discharges and pressures together with the speed of the engine as is determined by the manufacturer's test for this particular unit. Plate shall also include delivery date, pump serial number(s), original Customer, and the apparatus manufacturer's serial number.

FIRE PUMP SYSTEM

PUMP AND PUMP TRANSMISSION

PUMP

A 1500 gallon per minute, Waterous model CSUC22-1500, Class A, single-stage centrifugal iron body - rear drive fire truck pump is to be furnished, mounted "mid-ship" of the vehicle immediately ahead of the compartments and water tank. The pump transmission gear ratio must allow the pump to deliver the percentage of rated capacity at discharge pressures indicated below, while the drive engine is running in its peak performance range/RPM:

100 percent of rated capacity at 150 pounds net pressure
100 percent of rated capacity at 165 pounds net pressure
70 percent of rated capacity at 200 pounds net pressure
50 percent of rated capacity at 250 pounds net pressure

PUMP TRANSMISSION

Pump transmission to be Waterous C-22, "chain-drive" style to provide smooth quiet transmission of power. Transmission "drop" shall be of proper dimension to allow for optimum driveline angles.

Extra heavy duty 2.35" x 46" involute spline pump driveline to be furnished for high torque engine applications.

SEPARABLE IMPELLER SHAFT

A separable impeller shaft will be furnished to allow removal of the pump transmission, separate from the pump body, while the pump body remains undisturbed on the apparatus

ADDITIONAL FEATURES

Additional pump features will include: dual-suction bronze replaceable impeller and impeller seal rings, stainless steel impeller shaft, grease lubricated front and oil lubricated rear roller bearings, and horizontally split main pump body, and all moving parts which come into contact with water are to be bronze or stainless steel.

IMPELLER HUBS

Flame plated impeller hubs shall be furnished along with labyrinth style seal rings.

MANUFACTURER HYDRO TEST
The pump is to be performance tested by Waterous, at the above pressures and capacities, and also 10 minutes hydrostatically at a pressure of 600 PSI. Certification by Waterous is to be provided in delivery manual.

OEM PERFORMANCE TEST
Apparatus Manufacturer's pump performance test is to be performed after construction. Factory certification to be provided in delivery manual.

PUMP TEST DATA PLATE, SINGLE-STAGE PUMPS
The pump operator's panel will be provided with a metal plate listing the rated flow performance demonstrated together with the RPM of the engine at said pressures and deliveries, and mounted in clear view of the pump operator's panel. Test plate shall also indicate pump serial number, engine governed speed, and pump to engine gear ratio.

PUMP INSTRUCTION MANUALS
Two (2), Waterous Operator's Manuals, both in digital format, are to be provided upon delivery of the apparatus. Manuals to be pump model and serial number specific, to include but not be limited to operation procedures, maintenance (lubrication), and illustrated parts break-downs.

PUMP SEALS
"Mechanical" pump seal assemblies to be furnished, with the specified full-body centrifugal pump, self-adjusting type, maintenance free.

PUMP DRAIN MANIFOLD
Waterous manifold drain valve, with bronze body and stainless plunger shall be furnished mounted on pump transmission and operated by a push-pull cable with chrome plated T-handle control on pump panel. Drain valve shall be piped with high pressure nylon tubing, to low points of pump suction and discharge cavities to allow simultaneous draining through a single drain valve.

FLAME PLATED IMPELLER HUBS
Flame plated impeller hubs shall be furnished, on specified midship style pump, along with labyrinth style seal rings.

COMPRESSED AIR AUTO PRIMING SYSTEM, "OIL-LESS", CHASSIS PROVIDED AIR

A Trident Model #31.011.3 automatic air operated priming system shall be installed. The unit shall be of all brass and stainless steel construction and designed for fire pumps of 1,250 GPM (4,690 LPM) or

more. Due to corrosion exposure no aluminum or vanes shall be used in the primer design. The primer shall be three-barrel design with ¾" NPT connection to the fire pump.

The primer shall be mounted above the pump impeller so that the priming line will automatically drain back to the pump. The primer shall also automatically drain when the panel control actuator is not in operation. The inlet side of the primer shall include a brass 'wye' type strainer with removable stainless steel fine mesh strainer to prevent entry of debris into the primer body.

Performance, Safety, and NFPA Compliance

The priming system shall be capable to a vertical lift to 22" of mercury and shall be fully compliant to applicable NFPA standards for vertical lift. The system shall create vacuum by using air from the chassis air brake system through a three-barrel multi-stage internal "venturi nozzles" within the primer body. The noise level during operation of the primer shall not exceed 75 Db.

Air Flow Requirements

The primer shall require a minimum of 13.2 cubic foot per minute air compressor and shall be capable of meeting drafting requirements at high idle engine speed. The air supply shall be from a chassis supplied 'protected' air storage tank with a pressure protection valve. The air supply line shall have a pressure protection valve set between 70 to 80 PSI.

Automatic Primer Control with Vacuum Gauge Panel

The 12 -Volt primer control shall be an "automatic" type, with a pump panel three-way switch to operate an air solenoid valve. The air valve shall direct air pressure from the air brake system to the primer. To prevent freezing, no water shall enter the primer valve control.

The automatic priming switch shall have three positions as follows:

- **"Prime" –** the lower position shall be a momentary "push to prime". The "Prime" position also allows the operator to "ramp" test the primer without the fire pump being engaged.
- **"Off"** -- center position
- **"Auto-Prime"** – in the upper position, a "green" LED pilot light shall be illuminated when the switch is the auto-prime position. The "Auto-Prime" operates automatically when the pump

pressure drops below 20 PSI. The primer shuts “off” automatically when the pump pressure is re-established and exceeds 20 PSI.

Power Requirements

To reduce the electrical power requirements on the fire apparatus the priming system shall be air powered. The system shall not require annual tear-down and maintenance, an electric motor, lubrication, belt drive, or clutch assembly. The maximum current draw shall not exceed 0.5amps during operation.

AIR PRIMING SYSTEM, PUMP + THREE (3) GATED SUCTION PRE-PRIMES

Along with the Fire Pump cavity priming system, three (3) additional Push-to-Prime Air Valve Control Consoles are to be furnished and installed on the pump operator's control panel. These additional Push-to-Prime air valves are to be plumbed to following specified gated master suctions, upstream of the suction gate valves, so as to allow for "pre-prime" of respective gated suction inlet with its gate valve closed.

PRE-PRIME OF PASSENGER AND DRIVER SIDE MASTER AND REAR GATED SUCTIONS

In addition to the priming of the fire pump cavity, the above specified Air Prime System is to facilitate "Pre-Priming" of the Passenger Side Master Gated Suction and the Driver Side Master Gated Suction and the Rear Gated Suction.

STAINLESS STEEL TUBULAR PUMP SUCTION INLET AUXILIARY PIPING

Suction manifolds, where not part of and integral with the pump manufacturer's pump intake castings, shall be fabricated of **"tubular"** stainless steel ONLY, schedule 10 or schedule 40 wall thickness, type 304L.

NOTE: Due to the poor flow characteristics, a suction manifold fabricated of square or rectangular tubing with flat-mount weld spuds and/or riser pipes for auxiliary suction taps, is not an acceptable substitute to a tubular manifold.

All suction manifolds and fittings, and suction valves, tubing's, and hose line assemblies shall be pressure tested after installation.

PUMP FITTINGS AND "ROUND TUBULAR" 304L S/S DISCHARGE MANIFOLD

The above specified fire pump shall be furnished with high-tensile closed grain cast iron "bolt-on" left and/or right side discharge fittings (upstream of discharge valves only) and cast iron "bolt-on" left side, right side, and/or

front/rear large diameter suction intake adapters, as furnished and flow/pressure tested by the fire pump manufacturer.

A type 304L stainless steel **"round tubular"** discharge manifold shall be furnished, flange bolted or Victaulic clamped to and easily removable from, the fire pump's large diameter discharge outlet taps.

NOTE: Due to the likelihood of high pressure deformation (regardless of wall thickness), manifolds fabricated of square or rectangular tubing's, are not acceptable

The tubular manifolds main waterway shall be commensurate in diameter to feed the quantity and size of auxiliary discharge line "branches". So as to provide unsurpassed flow characteristics, all auxiliary branch reducers shall be concentric bell reducers, and all couplings and risers shall be "coped" to conform to the radius of the larger size feed waterway. Flat-mount weld spuds and non-coped risers welded to rectangular fabrications and end plates are not acceptable.

All stainless steel welding shall be TIG, to assure proper penetration and conformity with original tubing and weld fitting outside diameters. All elbows shall be smooth sweep weld fittings.

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See following specifications describing the number/size/locations of outlet gate valves to be furnished.

Heavy wall threaded pipe and pipe fittings shall be used, wherever possible, downstream of the specified side outlet and top deluge discharge valves.

All flexible discharge lines and bleeder lines, downstream of respective valves, shall be reinforced high pressure hose assemblies with stainless steel or brass end fittings.

Pressure gauge tubing lines shall be polypropylene with brass fittings.

All discharge manifolds and fittings, suction manifolds and fittings, discharge and suction valves, tubing's, and hose line assemblies shall be pressure tested before and after installation.

REAR SUCTION

HIGH-FLOW PUMP INTAKE ADAPTER

The mid-ship mounted fire pump is to include a rear suction cast iron intake adapter, with stainless steel 6" i.d. ASA flanged inlet, configured for use with the optionally specified rear suction butterfly valve and upstream rear suction inlet piping. Intake adapter is to be positioned to allow for the specified rear suction piping to be low profile, overhead the chassis frame rail.

6" NST REAR SUCTION, GATED 6", REMOTE ELECTRIC CONTROLLED

A rear gated pump suction intake to be furnished, inlet located passenger's side rear exterior of body, approximately 22" above rear tailboard. Rear suction shall include: 6" NST long handled chrome plated auto-pressure relief cap, 6" removable zinc strainer, 6" NST male inlet adapter, 5" i.d. intake pipe extending from rear inlet adapter to fire pump suction fitting (beneath water tank "T"), 5" Victaulic clamp coupler, 6" ASA flanged nipple, 6" Waterous Monarch butterfly style gate valve with "slow operating" 12-volt electric actuator and manual over-ride, remote valve control console with protected switch and position indicator lights, bronze bleeder and drain valves located where necessary, and appropriate fire pump intake fitting.

GATED REAR SUCTION INTAKE RELIEF VALVE

An Elkhart adjustable bronze rear suction intake relief valve shall be furnished installed on the rear suction piping (upstream of the rear suction valve) located inboard the exterior rear body panel. Intake relief valve to be of the pre-set adjustable bypass design, mounted so as to self-drain, and furnished with appropriate discharge piping to dump below the vehicle any excessive rear suction inlet water pressure.

3.5" WATEROUS SUCTION VALVE, HIGH-FLOW

A 3.5" full-flow Waterous tank-to-pump 1/4-turn valve to be furnished with chrome plated bronze ball, spring loaded seal assembly, and inlet hose connection. The gated suction line/piping from specified tank sump to the tank-to-pump valve shall be furnished with reusable screw-banded flexible "hump hose" connection and 4" i.d. stainless steel piping enclosed within the fire pump compartment. Tank-to-pump suction line design and size shall allow a flow rate of at least 700 GPM. (200 GPM in excess of NFPA minimum requirement).

NOTE: Plastic or PVC tubing is not an acceptable alternative to stainless steel piping.

TANK-TO-PUMP CHECK VALVE

Waterous bronze tank-to-pump suction check valve to be furnished, integral with fire pump main body casting, full-flow design to prevent obstruction of suction waterway (available on CS and CM series pumps only). Check valve shall prevent high capacity "back-flow" of water from the pump-to-tank, if the tank suction valve is inadvertently left open.

TANK-TO-PUMP CONTROL, "PULL TO CLOSE"

Specified tank-to-pump suction valve is to be remote controlled with lever style valve actuator and a manual push-pull style T-Handle twist-to-lock operator's panel control. Tank-to-pump suction valve control is to be "In-Open" and "Out-Closed".

TANK REFILL, 1.5" BALL VALVE

One (1), gated 1.5" tank fill discharge line, extending from pressure side of fire pump to water tank is to be furnished, with: female TIPT tank fill spud located in upper portion of water tank, high pressure wire reinforced 1.5" hose with stainless steel grooved Victaulic end couplings, 1.5" Akron 8000 series bronze 1/4-turn self-locking ball style discharge valve configured for manual valve control located on the pump operator's control panel, and a nameplate to read: "**TANK FILL**".

WATER TANK REFILL CONTROL, "PULL TO OPEN", SIDE CONTROL PANEL

Specified water tank refill discharge valve is to be remote controlled with lever style valve actuator and a manual push-pull style T-handle twist-to-lock (for throttling) operator's panel control. Tank refill valve control is to be "In-Closed" and "Out-Open".

TANK RECIRCULATING - PUMP COOLER

One (1), gated .375" pump recirculating/cooling line, from pressure side of fire pump to water tank top to be furnished with: .375" female TIPT spud located at top front of water tank, high pressure tubing, and .375" bronze body 1/4-turn ball style valve with chrome handle located on operator's control panel. Valve is to be identified as pump cooling line.

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PUMP MOUNTING, FULL-BODY MID-SHIP PUMP WITH SPLIT-SHAFT

The specified full body mid-ship pump system, with its integral split-shaft pump transmission, shall be independently mounted on a "pump house" sub-frame which itself is to be bolted to and easily removable from the chassis frame rails. The sub-frame shall consist of a two (2) each .25" Stainless Steel fabricated Z-irons which rest on the top flange of the chassis frame rails; and are sandwich bolted to the outboard chassis frame webs. This design shall provide for a “rigid” mount of the pump house, and perfect horizontal and vertical alignment with the apparatus body, running boards always remaining in alignment with apparatus body rub rails. The pump house is to be located no more than one (1) inch forward of apparatus body, and two (2) inches rearward of the chassis cab.

The fire pump shall be mounted to the pump house sub-frame with angular brackets that are solid mounted one side of pump, castering opposite side (as recommended by pump manufacturer), so as to prevent imposing of torque/twisting loads on the full body pump castings. Pump mount brackets are to be placed at the same relative angle as engine/transmission and the rear axle.

Pump mounting brackets and pump house sub-frame shall be primer painted and urethane painted to match pump or chassis frame rails.

DRIVELINE, SPICER 1710/1760 SERIES

Spicer 1710 series driveline components to be furnished to facilitate pump installation, components shall include: slip stub shafts, slip yokes, and cross and bearings to be compatible with pump end yokes and chassis driveline. Modified drivelines shall be high speed balanced.

PNEUMATIC PUMP SHIFT

Pump transmission's pneumatic power shift mechanism and the chassis furnished Pump Shift Console are to be plumbed to the chassis air system, downstream of the Pressure Protection System, using high pressure nylon tubing and brass fittings.

The OK to Pump indicator lights, inside the chassis cab and at the pump operator's control panel are to be furnished with circuit protection, wired to and activated by the vehicle transmission position and pump shift signals.

PUMP MANUAL SHIFT OVERRIDE

The pneumatic pump shift is to be furnished with a single mechanical MANUAL override control located on the driver's side of the vehicle. Pump pneumatic shift override control is to allow for manual shifting of the pneumatic air cylinder, allowing the pump to be shifted into "Pump" and "Road" positions manually.

PUMP PNEUMATIC SHIFT OVERRIDE, LOCATION

The pneumatic pump shift override control is to be located on the driver's side of the vehicle:_____.

LOCATION FOR PUMP SHIFT CONSOLE

The specified remote Pump Shift Console is to be located: on the driver's side switch panel, to the right of the steering wheel, above the engine tunnel facing outboard towards driver.

PUMP TEST. PRELIMINARY AND FINAL CERTIFICATION TESTING

After a "preliminary" apparatus factory performance test, the above specified pump test/certification is to be performed by apparatus manufacturer and "witnessed" by an independent third party as per NFPA 1901 pumping standards, with proper serialized certification provided upon apparatus delivery.

As Per Sourcewell MPCU Contract 2025-12-10

FIRE PUMP DATA PLATE

A metal engraved or stamped Pump Data Plate shall be furnished, installed on the operator's control panel, or on the driver side pump panel. Data plate shall be furnished by the fire pump manufacturer, and is to include information as to the pump's model designation, date of manufacture, capacity @ test pressure, serial number, and transmission ratio where appropriate, and maximum static and operational pressure.
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FIRE PUMP TEST DATA PLATE

An indelibly printed Pump Test Data Plate shall be furnished, installed on the operator's control panel, or on the driver side pump panel. Test Data plate printed with information collected during the final operational test, as run by the prime contractor. Pump Test Data shall include, but not be limited to: apparatus date of manufacture, apparatus model designation, apparatus manufacturer's serial number, apparatus manufacturer's production number, engine governed speed, fire pump brand, fire pump model, fire pump capacity, fire pump transmission ratio, and the fire pump performance and engine speed at full capacity (150-PSI), overload capacity (165-PSI), 2/3 capacity (200-PSI), and ½ capacity (250-PSI).

PRESSURE GOVERNOR AND MONITORING DISPLAY

Fire Research PumpBoss model PBA500-A00 pressure governor and monitoring display kit is to be provided and installed. The kit is to include a control module, pressure sensor, and cables. The control module case is to be waterproof and have dimensions not to exceed 7.25" high by 3-3/4" wide by 4.0" deep. Inputs for monitored information shall be from a J1939 data bus or independent sensors. Outputs for engine control shall be on the J1939 data bus or engine specific wiring.

FUNCTION INDICATORS
The following continuous displays shall be provided:
- CHECK ENGINE and STOP ENGINE warning LEDs
- Engine RPM; shown with four daylight bright LED digits more than .5" high
- Engine OIL PRESSURE; shown on an LED bar graph display in 10 PSI increments
- Engine TEMPERTURE; shown on an LED bar graph display in 10 degree increments
- BATTERY VOLTAGE; shown on an LED bar graph display in 0.5 -Volt increments
- PSI / RPM setting; shown on a dot matrix message display
- PSI and RPM mode LEDs
- THROTTLE READY LED.

MESSAGE DISPLAY
A 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.

The program shall store the accumulated operating hours for the pump and engine, previous incident hours, and current incident hours in a non-volatile memory.

Stored elapsed hours shall be displayed at the push of a button.

It shall monitor inputs and support audible and visual warning alarms for the following conditions:
- High Engine RPM
- High Transmission Temperature
- Low Battery Voltage (Engine Off)
- Low Battery Voltage (Engine Running)
- High Battery Voltage
- Low Engine Oil Pressure
- High Engine Coolant Temperature

CONTROL MODES

The governor shall operate in two control modes, pressure and RPM. No discharge pressure or engine RPM variation shall occur when switching between modes. A control knob that uses optical technology shall adjust pressure or RPM settings. It shall be 2" in diameter with no mechanical stops, a serrated grip, and have a red idle push button in the center.

THROTTLE INDICATOR

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.

PRESSURE CONTROL
In pressure mode the governor shall automatically regulate the discharge pressure at the level set by the operator.

ENGINE RPM CONTROL
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.

LOCATION
Location of the governor and monitoring display shall be at pump operator's panel.

As Per Sourcewell MPCU Contract 2025-12-10

ENGINE INSTRUMENTATION

The engine instrumentation is to be included in the specified fire pump pressure control system "engine governor". Instrumentation shall be integral with the Governor Control.

PUMP OVERHEAT PROTECTION

One (1), Waterous Overheat Protection Manager (OPM) model #82516-1B, thermal relief style valve to be furnished, installed on the two .5" tapped holes located near the center discharge area of the pump. The OPM consists of a valve that automatically opens when the water in the pump reaches 140 degrees and a warning light located on the pump operator's panel that is triggered by a thermal switch when the water in the pump reaches 180 degrees. The warning light acts as an additional protection device if the temperature inside the pump keeps rising although the valve is open. The OPM valve and switch are both mounted on the two (2) .5" tapped holes located near the center discharge area of the pump. Discharge shall be "to ground".

The warning light and test button shall be mounted to a heavy polished casting that is mounted to the pump operator's panel.

SELF BLEEDING SUCTION CAPS, NFPA PRESSURE RATED

The optionally specified "threaded" suction caps shall be the VLH Class-1, Trident or equivalent which incorporates a cross-machined thread design to automatically relief stored pressure in the line during un-capping.

SELF-BLEEDING DISCHARGE OUTLET CAPS, AND ELBOWS, NFPA PRESSURE RATED

Where specified, the rocker lug discharge caps and outlet elbow extensions are to be VLH, Class-1, Trident, or equivalent which incorporates a cross-machined thread design to automatically release stored pressure in the line during uncapping/unthreading.

BUMPER DISCHARGE

FRONT BUMPER 2" PRECONNECT DISCHARGES

One (1) front bumper 2" gated discharges to be furnished with: 1.5" NST male outlet x 2.0" inlet 90 degree discharge swivel, Auto-Drain hose line bleeder valve, 2" i.d. stainless steel pipe or wire reinforced hose with 2" stainless end fittings, 2.5" Waterous 1/4-turn discharge valve with chrome plated ball and spring loaded self-adjusting seal assembly (located inside pump compartment), and configuration for a manual valve control located on the pump operator's control panel.

BUMPER SWIVEL DISCHARGE OUTLET - BOTTOM OF HOSE WELL

The specified front bumper extension pre-connect discharge outlet(s) shall extend through the bottom floor of specified hose tray, to allow for left-to-right "swivel" hose deployment.

FIRE PUMP MODULE, MIDSHIP OF APPARATUS, INDEPENDENT OF THE BODY

PUMP ENCLOSURE, MID-SHIP S/S MODULAR - DRIVER SIDE CONTROLS

A pump compartment/module is to be furnished, located "mid-ship" of the vehicle, designed to accomodate driver side pump controls and instrumentation. The pump module is to be "fully enclosed", using fabricated sheet metal panels on top, sides, front, and rear. The modular style pump enclosure is to be approximately 82" side-to-side, located no more than 1” ahead of the apparatus body, and 2” rear of the chassis cab.

The entire pump compartment module is to be separate from the chassis cab, and apparatus body, rigidly mounted to the chassis frame rails, and designed to allow independent twisting "no-contact" movements of the cab, pump module and apparatus body. The pump module is to remain rigid to the chassis frame rails, and fire pump itself is to have a flex-mount system as approved by the fire pump manufacturer. The rigid module mount system is to prevent unnecessary movement of the pump compartment, and the resulting miss-alignment of running boards and body rubrails.

STAINLESS STEEL CONSTRUCTION

Pump compartment is to be of all-bolted construction, fully enclosed, constructed of type 304 brushed stainless steel. Due to the entire pump house module being constructed of scuff-resistant non-painted brushed stainless steel, neither polished stainless steel nor aluminum treadplate overlays are required for scuff protection.

BLEEDER VALVE AND DRAIN VALVE CONTROL PANELS

The specified passenger side outlet and inlet bleeder valve controls shall be located immediately above the running board, installed on a brushed stainless steel horizontal full width bolt-on riser panel. The specified driver side outlet and inlet bleeder valve controls, and master pump drain control shall be located immediately above the running board, installed on a brushed stainless steel horizontal full width bolt-on riser panel.

REMOVABLE ACCESS PANEL

Passenger side of pump module shall incorporate brushed stainless steel removable mid-section panel, removal of which allows for pump inspection, service, and maintenance.

The removable side panel shall be located above, and interlocking with the passenger side bleeder control panel. The panel shall be held in place by a minimum of four (4) chrome plated quick release trigger latches, and

removable side panel shall also be provided with two (2) chrome plated grab handles to aid in removal and re-installation of the panel.

Passenger side removable panel opening shall be full width of the pump compartment/module by at least 30" tall.

ACCOMMODATIONS FOR FORWARD SPEEDLAY HOSEBEDS

The forward portion of the pump module, extending ahead of the driver side controls, is to provide adequate space to accommodate any optionally specified single or multiple stacked pre-connect hose bed(s). The specified transverse Hosebed(s) to be 82" long (side-to-side).

OVERHEAD PUMP ENCLOSURE

The upper portion of the pump module is to accommodate any optionally specified recessed dunnage area, or accessory equipment installations. This area is to be above the pump controls and plumbing, inboard of the instrument panel, ahead of the apparatus body and water tank.

RUNNING BOARDS

Driver's and passenger's side pump panel running boards to be furnished, extending from rear of specified lower chassis cab steps to front side body compartment corners.

Running boards shall be at least 10" deep, bolted to and easily removable from the lower pump compartment module. Running boards shall be fabricated of tailboard matching material, provided with non-slip grip-pattern top step surface.

Running boards shall be "in-line" with the specified lower cab steps and body side rubrails.

SIDE PUMP INSPECTION DOOR

One (1) lift-up style horizontally hinged pump compartment interior access/inspection door shall be furnished on opposite side of control panel.

Door shall be equipped with top mounted polished stainless piano hinge, two (2) bottom trigger latches, and two (2) underside telescoping air cylinder props to hold in the open position.

REMOVABLE FRONT PANEL - PUMP ENCLOSURE

If installed on cab over chassis, a removable pump interior compartment access panel is to be furnished, on front vertical surface of pump compartment, approximately 52" wide x 30" high.

Removable panel shall hook at top and secure along sides and bottom with push button trigger latches.

SPEEDLAY HOSEBEDS

SPEEDLAYS

Three (3) Speedlay trays shall be provided within forward-most body compartments, positioned one above the other.

Speedlay openings shall be overlaid with polished stainless steel to provide smooth surface around hose.

Unless otherwise specified, discharge swivels shall be placed above hose, located within 6" of compartment back wall.

Trays constructed of 1/2" poly and sized to accommodate 200' of hose in two columns. 1-3/4" hose is considered 3-1/2" flat width. 2-1/2" hose is considered 4-1/2" flat width. A total of three (3) trays provided.

4-WAY HOSE ROLLER GUIDES, TWO (2) ASSEMBLIES PER HOSE CAVITY

Three (3) sets of chrome and polished stainless steel 4-way "encapsulated" hose roller assemblies are to be furnished outboard of the hose reel, providing roller guide for booster hose deployment. Each roller set shall consist of eight (8) chrome corner brackets, four (4) vertical, and four (4) horizontal 1-.25" diameter stainless steel roller tubes with end bearings. Width of encapsulated opening shall be the same as or greater than the width between hose reel discs.

TOP SPEEDLAY 2.5" VALVE, 2.5" NST OUTLET

One (1), top stacked speed-lay 2.5" gated discharge to be provided with: 2.5" NST male outlet x 2.5" inlet 90 degree bronze or stainless steel overhead discharge swivel, hose line bleeder valve, 2.5" i.d. stainless steel pipe or wire reinforced hose with 2.5" stainless end fittings, 2.5" Waterous 1/4-turn discharge valve with chrome plated ball and spring loaded self-adjusting seal assembly with lever valve handle (located inboard pump panel) configured for a manual valve control located at the pump operator's control panel.

MIDDLE (OR ADJACENT REARWARD) SPEEDLAY, 1.5" NST, 2.5" VALVE and PIPING

One (1), middle stacked (or adjacent rearward) speed-lay 2" gated discharge to be provided with: 1.5" NST male outlet x 2.5" inlet 90 degree bronze or stainless steel overhead discharge swivel, hose line bleeder valve, 2" i.d. stainless steel pipe or wire reinforced hose with 2" stainless end fittings, 2.5" Waterous 1/4-turn discharge valve

with chrome plated ball and spring loaded self-adjusting seal assembly (located inside pump compartment), and push-pull chrome "twist-to-lock" discharge control handle with recessed color coded nameplate located on the pump operator's control panel.

BOTTOM SPEEDLAY 2.5" VALVE, 1.5" NST OUTLET

One (1), bottom stacked speed-lay 2" gated discharge to be provided with: 1.5" NST male outlet x 2" inlet 90 degree bronze or stainless steel overhead discharge swivel, hose line bleeder valve, 2" i.d. stainless steel pipe or wire reinforced hose with 2" stainless end fittings, 2.5" Waterous 1/4-turn discharge valve with chrome plated ball and spring loaded self-adjusting seal assembly with lever valve handle (located inboard pump panel) configured for a manual valve control located at the pump operator's control panel.

SPARE SPEEDLAY CARTRIDGE

Three each, additional "spare" poly speedlay cartridges shall be provided, to match the above specified hose beds.

SPEEDLAY HOSE RESTRAINT, VINYL END FLAP

The open ends of the specified speedlay hose bed cavities shall be equipped with a single piece vinyl coated nylon "flap", equipped with two (2) reinforced bungie fasteners sewn to flap cover and bolted aluminum slide-extrusion with beaded bottom seam. Design shall allow for convenient removal for replacement. Vinyl end flaps shall be designed to secure (during travel) the packed hose and attached nozzle.

COMPARTMENTS BELOW SPEEDLAYS, ENCLOSED WITH HINGED DOOR

Two (2), lower level recessed "cubby" style compartments shall be furnished below speedlays. Enclosed compartments are to be constructed of brushed stainless steel, wiht wash out floor level.

Compartments shall be as wide as speedlays x 14" tall x 15" deep beyond pump panels.

Each compartment is to be provided with a pump panel matching brushed stainless steel hinged door with: forward vertical polished stainless steel piano hinge, door-stop chain, and one (1) chrome or stainless steel latch.

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PUMP PANELS RECESSED TO ACCOMMODATE INLET & OUTLET FITTINGS

The driver and passenger side exposed pump panel areas are to be "recessed" inboard of the compartmented body sides, of a depth to accommodate the pump discharge outlet and suction inlet fittings and closures, without exceeding the apparatus body or pump module running board widths.

PUMP MODULE RUNNING BOARDS, STAINLESS STEEL

Pump panel running boards are to be furnished, driver side and passenger side, extending from the front corners to the rear corners of the pump module.

Running boards are to be at least 10" deep, with 3" high double brake fabricated perimeter flanges, bolted to and easily removable from the bottom of pump module sides. Front and rear stainless steel underside running board support brackets are to be furnished, designed for a top surface load of at least 500-pounds.

Running boards are to be fabricated of 12-gauge type 304 #4-brushed finished stainless steel, provided with a laser cut-puncture fabricated non-slip NFPA approved grip-pattern on the entire top step/walk surface.

SIDE CONTROL PANEL

MIDSHIP PUMP DRIVER SIDE CONTROLS

The pump operator's control panel shall be located on driver's side "midship" of vehicle. So as to permit operation of the pump from one central location, all Electric and Manual style gated discharge valve controls, and Air or Manual style remote gated suction controls are to be mounted on this side facing pump operator's control panel.

Where specified, mechanical pump actuator rods, rotating and/or push-pull, are to be heavily cadmium or zinc plated solid cold roll steel, provided with adjustable threaded clevis joints or swivel ball joints and chrome plated brass handles or black phenolic control knobs. Where electric remote discharge controls are specified, they are to consist of individual consoles with rocker or push-button style switch and multiple position indicator lights.

The upper portion of the driver side pump control panel is to accommodate the specified "opening" instrument panel, the middle portion to accommodate the gate valve and major pump controls, and the bottom portion is to accommodate the inlet and outlet bleeder controls and (where specified) the gravity style master drain control.

SIDE MOUNT VALVE CONTROLS, ELECTRIC CONTROL CONSOLE(S)

Two Waterous Electric Discharge Valve Control Console(s) are to be located on the side-mount pump operator's panel.

DISCHARGE CONTROL NAME PLATES

The specified individual discharge control color coded identification name plate’s nomenclature is to, describe: the physical location of outlet, the size of hose to be attached, and the type of discharge. Where an outlet is Foam Capable, the name plate is to so describe.

As Per Sourcewell MPCU Contract 2025-12-10

DISCHARGE OUTLET NAME PLATES

Individual Discharge Outlet name plates are to be provided adjacent to the outlet or hose bed. Outlet name plates are to be of the same color as the discharge valve control name plate, pressure instrument name plate, and the bleeder valve control name plate.

SIDE MOUNT VALVE DISCHARGE CONTROLS

Eight (8) Innovative Controls brand chrome plated, side mount push-pull controls, with ergonomically designed chrome plated T-handles, and encapsulated UV-resistant printed color-coded (ILO engraved) verbiage labels shall be furnished.

DISCHARGE CONTROL NAME PLATES

The specified individual discharge control engraved color coded identification name plate's nomenclature shall, describe: the physical location of outlet, the size of hose to be attached, and the type of discharge. Where an outlet is Foam Capable, the name plate shall so describe.

DISCHARGE OUTLET NAME PLATES

Individual Discharge Outlet name plates are to be provided adjacent to the outlet or hose bed. Outlet name plates are to be of the same color as the discharge valve control name plate, pressure instrument/gauge name plate, and the bleeder valve control name plate.

THE SPECIFIED MANUAL PUSH-PULL DISCHARGE VALVE CONTROLS ARE FOR:

_1___ each, Passenger Side Discharges

__2__ each, Rear Discharges

____ each, Hose Bed Discharges

_1___ each, Driver Side Discharges

____ each, Deluge Discharge

____ each, Hose Reel Discharges

__1__ each, Bumper Discharge

__3__ each, Pre-Connect Discharges: Speed-Lays / Cross-Lays

____ each, Rear Pre-Connect Discharges

NOTE: See Water Tank Refill Discharge for Control Style

COLOR CODED DISCHARGE AND SUCTION NAME PLATES

The name plates, as provided for identification of the following devices, are to be permanently printed on a colored background with nomenclature as specified above, attached with permanent adhesive, NOTE: Name plates are not to be screwed or riveted in position.

Color matching name plates are to be provided for: Suction Inlet, Suction Control (when gated), Suction Bleeder, Discharge Outlet, Discharge Control, Discharge Pressure Instrument, and Discharge Bleeder Control.

PUMP SYSTEM ELECTRICAL

All pump compartment wiring for specified 12-volt electrical equipment is to be suitably protected inside heat resistant vinyl, forming one or more wiring harness(es).

All 12-volt switches, relays, terminals, connectors, and wiring to have a direct current rating of 125% of maximum current for which the current is protected. All wiring terminals to be closed barrel style, mechanically crimped, and insulated

PUMP MODE TRANSMISSION LOCK-UP

Vehicle electronic automatic transmission to be "signaled" by shifting of the fire pump into pump gear, so as to activate transmission "Lock-Up" mode (direct drive). An automatic transmission shift selector position detent or transparent removable shield is to be provided to prevent unintentional movement of the shift selector during pumping operations.

PUMP MODULE WIRING SCHEMATICS

Vehicle Specific wiring information is to be provided for this particular apparatus "as configured" upon completed delivery of the same. Information is to be in a drawing format, describing origination and termination connections and functions.

DEACTIVATE ENGINE COMPRESSION BRAKE - WITH PUMP SHIFT

Specified engine compression brake shall be automatically deactivated with the shifting of the pump transmission into "Pump Gear".

TILT OUT GAUGE PANEL

Gauge panel with bottom hinge and top quick release latches shall be provided above pump controls.

A light hood shall be provided.

Lighting shall be LED strip style.

PUMP MODULE EXTERIOR LIGHTING, ACTIVATION

Any optionally specified light fixtures and/or strips are to be 12-volt LED, activated with park brake unless otherwise noted.

PASSENGER SIDE PUMP PANEL LIGHTING

One (1) On Scene Solutions, model "Night Sticks" LED light strip is to be provided, with multiple 12-volt LED elements. Light strip is to be located: one (1) overhead the passenger (curb) side pump panel illuminating the suction inlets and discharge outlets.

FABRICATED STAINLESS STEEL LIGHT SHIELD

Passenger side fabricated stainless steel light shield is to be provided, designed to illuminate downward and inward, prevent outboard glare, and protect the specified light strip. Light shield is to be full width of the passenger (curb) side pump panel.

PAINT PUMP MODULE SINGLE JOB COLOR

The exterior surfaces (except control and gauge panels) of the fire pump compartment are to be painted single job color.

RECESSED OPEN CAVITY: MONITOR and FOLDING/TELESCOPING LIGHT TOWER

A recessed dunnage (open well) cavity is to be furnished, top of pump compartment ahead of hose body between pump compartment side panels. Dunnage cavity is to be of the appropriate size, at least 96" side-to-side x 50" front-to-rear x 18" deep, so as to accommodate the optionally specified lift-up/fold-down telescoping Light Tower and deluge monitor. Cavity to be equipped with stainless steel structural fabrications to support the light tower, and aluminum treadplate floor sections that are bolted in place and removable for repair access to pump and plumbing. At least two (2) floor drain ports are to be provided, with vinyl tubes extending to beneath the pump module.

OVERHEAD RISER PANELS, TO ACCOMMODATE EXTRA LARGE DUNNAGE AREA

Driver side and Passenger side longitudinal riser panels (upper pump module sides) are to be provided, creating a full body width (100") cavity for the optionally specified extra large dunnage area.

Outboard and inboard side riser panels are to be constructed of type 304 stainless steel, located immediately above the optionally specified pump panel access doors, spanning between and "flush" with the front and rear full height pump module corners. The top flange of the longitudinal panels and the module corners are to extend inboard a minimum dimension, forming a mating surface for the optionally specified dunnage cavity.

The outboard horizontal riser panels are to provide a vertical mounting surface for any optionally specified upper level side facing emergency lighting or scene lighting.

TRANSVERSE OPEN DUNNAGE CAVITY: EXPANDED BEYOND PUMP MODULE WIDTH

A recessed dunnage (open well) cavity is to be furnished, "transverse" overhead the mid ship fire pump system, in the uppermost portion of the stand-alone pump module. Dunnage cavity is to be of the maximum available front-to-rear length, depth (above pump panel door headers), and at least 72" side-to-side width. Dunnage cavity is to "extend" beyond the pump module's outboard side panels, an equal distance, designed to provide adequate floor space for the optionally specified cavity stored accessories. Cavity to be equipped with removable reinforced floor sections, and floor drain tubes extending to beneath the pump module. Removal of mounted accessories and floor sections is to allow top access to fire pump and its piping.

PUMP TEST DATA LABEL

The pump control panel is to be provided with a printed data field indicating the rated flow at 150, 200 and 250 test pressures, together with the RPM of the engine at those pressures and deliveries. Test Label is to be mounted in clear view of the pump operator's position, as per NFPA 1901 compliance.

Test label is to also indicate the following information:
Pump Make and Model
Pump Capacity
Apparatus Date of Manufacture
Apparatus Model Designation
Apparatus Serial Number
Apparatus Production Number
Engine Governed Speed
Pump Transmission Gear Ratio (to Engine)

Data field is to be permanently encased in a chrome full surround bezel.

GATED INLET WARNING LABEL(S)

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.

ENGINE COOLER/HEAT EXCHANGER CONTROL VALVE

Operation of the custom chassis supplied cooling system heat exchanger is to be controlled from the pump control panel and labeled to identify its operation. Discharge feed and suction return piping between the fire pump and heat exchanger are to be high pressure lines with copper fittings. The piping is to be installed so as to drain back (down) to the fire pump, without low points, when pump master drain is "open", in order to prevent freezing. Pressure line (from pump discharge) is to be gated, with the valve control located on the pump operator's control panel, with instructional nameplate.

INTAKE RELIEF VALVE, 2.5" BRONZE

An Elkhart bronze pump suction intake relief valve shall be furnished, installed inside pump compartment, flange bolted or threaded to suction cavity of the fire pump. Valve to be of the pre-set (to 125 PSI) adjustable bypass design, to dump below the vehicle excessive inlet water pressure. Relief valve to be accessible for future adjustment of bypass pressure.

INTAKE RELIEF VALVE, WITH DISCHARGE OUTLET HOSE

The specified fire pump suction manifold Intake Relief Valve's outlet is to terminate with a 2.5" i.d. flexible hose, outlet located at side of apparatus, away from the fire pump operator's location.

HEAT ENCLOSURE, STAINLESS STEEL

A removable heater casing is to be furnished, completely enclosing the underside of the fire pump compartment module. Heater casing side and end panels are to be fabricated entirely of type 304 brushed finish stainless steel, bolted to and easily removable from the bottom perimeter of the pump module. So as to allow maximum ground clearance, the heater casing shall of the minimum depth required to enclose the pump transmission, horizontal

engine exhaust system, and all pump accessories. Two (2) individual stainless steel slide-out bottom panels are to be furnished, criss-cross reinforced with drain holes and ¼-turn butterfly clamp latch, removal of which allows for inspection of and access to the fire pump and chassis components, NOTE: A center bottom slide-out panel brace shall be furnished, off-set to one side so as to not obstruct the pump transmission lubricating fluid drain.

HOT WATER TYPE HEATER, 30,000 BTU

A 30,000 BTU Badger R-255-0 or equivalent hot water type automotive heater to be furnished and installed inside the compartment, above the manifolds. Heater installation to include: gated engine coolant feed and return lines, dual 12-volt electric fans, and fan control located on operator's control panel.

PUMP HEATER HOSES AND CLAMPS

The hot water heater core feed and return lines shall be minimum .75" i.d. rubber construction.

Hose clamps are to be screw-to-tighten style, constructed of non-corrosive material.

ANODE, PUMP SUCTION MANIFOLD

One (1) sacrificial zinc anode shall be furnished in the water pump inlet manifold, to protect the pump from corrosion.

PUMP SUCTION INLETS

Following specified pump manifold inlets shall be equipped with zinc die cast screens so as to provide cathode protection for pump waterways.

All intakes shall be furnished with suitable closures capable of withstanding 500 PSI, threaded caps shall be chrome plated brass, rocker lug 3" and smaller, long handled larger than 3".

SUCTION INLET VALVE STANDARDS (WHERE OPTIONALLY SPECIFIED)

Following optionally specified 3" or larger gated intakes (except the tank-to-pump intake) shall include a remote controlled valve mechanism that shall not permit changing the position of the flow regulating element of the valve from full close to full open, or vice versa, in less than 3 seconds. Where air type actuators are employed, they shall include dual (2-each) adjustable needle valve restrictors, bench set/tested, so as to facilitate the slow

movement. Where manual gear or electric gear style actuators are employed, the crank or motor shall regulate movement speed.

SHORT SUCTION TUBE

The specified side pump suction inlet(s) shall be of minimum length to allow for exterior stacking of adapters or pre-connected hose.

INLET BLEEDER VALVES

Where specified, each gated intake shall be equipped with a bleeder valve located inside pump compartment (inside rear compartment-for rear suctions), upstream gate valve, with remote bleeder control in close proximity to the intake. The gated inlet bleeders shall consist of: .75" high pressure flexible hose assemblies extending between suction valve and bleeder valve, .75" cast bronze or stainless steel bleeder valve, exterior bleeder valve control handle, and an engraved or printed identification label. Bleeder controls for side gated inlets are to be located below the inlet, in a single row immediately above the running board/floor level. Bleeder controls for optionally specified rear inlets are to be located below the inlet, above the tailboard level. The bleeder valves shall be Innovative Control, “lift-handle” style equipped with chrome plated lever control handles, which are in the down position when closed.

HOSE THREADS

Where specified, all screw-on/off threads shall be NST (National Standard Threads), all "sexless" couplings shall be Storz.

PUMP DISCHARGE OUTLET CONTROLS AND ACTUATORS

All discharge valves shall have operating controls and actuators that allow the valve to be positioned incrementally from closed to full open, and locked in any selected position. Each valve control is to be adjacent to its respective pressure instrument.

Each of the specified 3" diameter or larger discharge valves are to have an operating mechanism which shall not permit changing the position of the flow regulating element of the valve from full close to full open, or vice versa, in less than 3 seconds.

DISCHARGE OUTLET BLEEDERS

Each of the following specified gated discharges shall be equipped with a "discharge outlet bleeder". The outlet bleeders shall consist of: .75" high pressure flexible hose assemblies extending between discharge valve and bleeder valve, .75" cast bronze or stainless steel bleeder valve mounted interior of pump compartment (inside rear compartment-for rear discharges) with pressure gauge port, exterior bleeder valve control handle, and color coded

(to match corresponding discharge outlet) engraved or printed identification label. Bleeder controls for side discharges are to be located below the outlet, in a single row immediately above the running board/floor level. Bleeder controls for optionally specified rear discharges are to be located below the outlet, above the tailboard level. The bleeder valves shall be Innovative Control, “lift-handle” style equipped with chrome plated lever control handles, which are in the down position when closed.

HOSE THREADS

Where specified, all screw-on/off threads shall be NST (National Standard Threads), all "sexless" couplings shall be Storz.

SUCTION INTAKE VALVE(S) -OPERATOR'S REMOTE PANEL CONTROLLER(S)

Three (3) each of the optionally specified 12-volt "electrically" actuated large diameter Butterfly or Jumbo Ball style "Suction" gate valves are to be controlled, using its respective pump operator's panel mounted Controller, with Valve Position Indicator.

WATEROUS ELECTRIC SUCTION VALVE CONTROL CONSOLE(S)

Three (3) Waterous Electric Suction Valve Control Console(s) are to be located on the pump operator's panel.

WATEROUS ELECTRIC VALVE "OPEN/CLOSE" CONTROLLERS ARE TO BE USED FOR:

__1__ each, Passenger Side Gated Master Suction

__1__ each, Rear Gated Suction

__1__ each, Driver Side Gated Master Suction

2-1/2" DISCHARGE VALVES ARE TO BE WATEROUS BRAND

All 2.5" discharges are to be equipped with Waterous brand, ball style, in-line valves. The valves shall be equipped with chromium-plated bronze ball and a "spring-loaded" seal assembly, no lubrication or regular maintenance shall be required on the Waterous valves.

3-1/2" DISCHARGE VALVES ARE TO BE WATEROUS BRAND

All 3.5" discharges are to be equipped with Waterous brand, ball style, in-line valves. The valves shall be equipped with chromium-plated bronze ball and a "spring-loaded" seal assembly, no lubrication or regular maintenance shall be required on the Waterous valves.

DISCHARGE VALVES - 12VDC ELECTRICALLY ACTUATED WATEROUS

All specified Waterous brand 3-1/2" discharge valves are to be "electrically actuated" equipped with respective operator's panel mounted valve controller. Valve controller is to have a spring-loaded Open-Close rocker switch, LED Open and Closed lights, and five (5) individual LED valve position indicator lights.

PASSENGER SIDE SUCTION(S)

6" GATED SUCTION, 6" NST CAPPED, REMOTE ELECTRIC CONTROLLED

A Passenger's side gated 6" pump suction intake to be furnished with: 6" NST male inlet adapter, 6" removable zinc strainer, 6" extension nipple (extending through pump panel), 6" ASA threaded flange, bronze bleeder valve located inboard pump panel with remote control handle, 6" Waterous Monarch butterfly style gate valve with "slow operating" 12-volt electric actuator and manual over-ride, remote valve control console with protected switch and position indicator lights, and appropriate interior pump compartment 6" ASA flanged pump intake fitting. Inlet shall have minimum extension outboard the pump panel to allow for pre-connected inlet appliance or hose.

SUCTION NST x STORZ REDUCING ADAPTER AND CAP

One (1) each 6" NST long handled swivel female by 5" Storz swivel lightweight "elbow" adapter, with 5" Storz cap and cable retainer.

SUCTION INTAKE RELIEF VALVE - INBOARD PASSENGER SIDE PUMP PANEL

One (1) Elkhart adjustable bronze suction intake relief valve(s) shall be furnished, enclosed inboard the passenger's side pump panel. Intake relief valve to be located upstream of the above specified butterfly style gate valve, "sandwiched" between gate valve and specified external inlet fitting. Intake relief valve shall be mounted so as to self-drain and dump excessive suction inlet pressure below the pump compartment.

OFFICER SIDE 2.5" GATED SUCTION, 2.5" NST PLUGGED, CONTROL AT INLET

A passenger's side gated 2.5" pump suction intake is to be furnished, with: 2.5" NST male chrome plated rocker lug plug type cap with chain, 2.5" NST chrome plated rocker lug swivel female with internal strainer, bronze bleeder valve (inboard pump panel) with exterior control, 2.5" full flow Akron 8000 series 1/4-turn ball style self-locking bronze suction valve (located inboard pump panel) with through-the-panel model TS control arm,

"OPEN" and "CLOSED" nameplates, and 2.5" i.d. stainless pipe or flanged casting between the valve and the pump intake manifold.

DRIVER'S SIDE SUCTION(S)

6" GATED SUCTION, 6" NST CAPPED, REMOTE ELECTRIC CONTROLLED

A Driver's side gated 6" pump suction intake to be furnished with: 6" NST male inlet adapter, 6" removable zinc strainer, 6" extension nipple (extending through pump panel), 6" ASA threaded flange, bronze bleeder valve located inboard pump panel with remote control handle, 6" Waterous Monarch butterfly style gate valve with "slow operating" 12-volt electric actuator and manual over-ride, remote valve control console with protected switch and position indicator lights, and appropriate interior pump compartment 6" ASA flanged pump intake fitting. Inlet shall have minimum extension outboard the pump panel to allow for pre-connected inlet appliance or hose.

SUCTION NST x STORZ REDUCING ADAPTER AND CAP

One (1) each 6" NST long handled swivel female by 5" Storz swivel lightweight "elbow" adapter, with 5" Storz cap and cable retainer.

SUCTION INTAKE RELIEF VALVE - INBOARD DRIVER SIDE PUMP PANEL

One (1) Elkhart adjustable bronze suction intake relief valve(s) shall be furnished, enclosed inboard the driver's side pump panel. Intake relief valve to be located upstream of the above specified butterfly style gate valve, "sandwiched" between gate valve and specified external inlet fitting. Intake relief valve shall be mounted so as to self-drain and dump excessive suction inlet pressure below the pump compartment.

DISCHARGE PIPING ANODE, 1 EACH

One (1) each, replaceable threaded or flange bolt-on zinc anode plug is to be furnished and installed in the discharge piping of the fire pump to assist in protecting the pump and piping from electrolysis.

PASSENGER SIDE DISCHARGE(S)

PASSENGER SIDE 2.5" DISCHARGE

One (1), passenger's side 2.5" gated discharge to be furnished with: 2.5" NST chrome plated brass rocker lug cap with chain, 2.5" NST male x 2.5" NST rocker lug swivel female 45 degree chrome plated brass elbow outlet extension, 2.5" NST male chrome plated brass outlet adapter, .75" bleeder valve and hose assembly, 2.5" i.d.

stainless steel pipe nipple, 2.5" Waterous 1/4-turn discharge valve with chrome plated ball and spring loaded self-adjusting seal assembly (located inside pump enclosure), and push-pull chrome "locking-style" discharge control located on the pump operator's control panel.

PASSENGER SIDE LARGE DIAMETER DISCHARGE

One (1), passenger's side 4" gated discharge to be furnished with: 2.5" NST chrome plated brass rocker lug cap with chain, 2.5" NST male x 5" Storz lightweight adapter, 5" Storz x 4" NST swivel female 30-degree elbow lightweight outlet adapter, 4" NST Male x 4" NPT Female adapter, 4" i.d. extension nipple (extending through pump panel), bronze bleeder valve located inboard pump panel with remote control knob adjacent to discharge outlet, 3.5" Waterous "ELECTRIC ACTUATOR OPERATED" 1/4-turn discharge valve with chrome plated ball and spring loaded self-adjusting seal assembly (located inside pump compartment), operator's panel mounted valve control console with spring loaded open/close and appropriate cast iron pump discharge fitting.

REAR DISCHARGE(S)

REAR PASSENGER SIDE 2.5" DISCHARGE

One (1), rear (passenger's side) 2.5" gated discharge to be provided with: 2.5" NST chrome plated brass rocker lug cap with chain, 2.5" NST male x 2.5" NST rocker lug swivel female 30-degree chrome plated brass elbow extension, 2.5" NST male chrome plated brass outlet adapter, .75" bleeder valve with exterior remote control, 2.5" i.d. stainless steel pipe or wire reinforced hose assembly with 2.5" stainless end fittings, 2.5" Waterous 1/4-turn discharge valve with chrome plated ball and spring loaded self-adjusting seal assembly (located inside pump compartment), and push-pull chrome "twist-to-lock" discharge control handle with recessed color coded nameplate located on the pump operator's control panel.

REAR DRIVER SIDE 2.5" DISCHARGE

One (1), rear (driver's side) 2.5" gated discharge to be furnished with: 2.5" NST chrome plated brass rocker lug cap with chain, 2.5" NST male x 2.5" NST rocker lug swivel female 30-degree chrome plated brass elbow extension, 2.5" NST male chrome plated brass outlet adapter, .75" bleeder valve with exterior remote control, 2.5" i.d. stainless steel pipe or wire reinforced hose assembly with 2.5" stainless end fittings, 2.5" Waterous 1/4-turn discharge valve with chrome plated ball and spring loaded self-adjusting seal assembly (located inside pump compartment), and push-pull chrome "twist-to-lock" discharge control handle with recessed color coded nameplate located on the pump operator's control panel.

DRIVER'S SIDE DISCHARGE(S)

DRIVER SIDE 2.5" DISCHARGE

One (1), driver's side 2.5" gated discharge to be furnished with: 2.5" NST chrome plated brass rocker lug cap with chain, 2.5" NST male x 2.5" NST rocker lug swivel female 45 degree chrome plated brass elbow outlet extension,

2.5" NST male chrome plated brass outlet adapter, .75" bleeder valve and hose assembly, 2.5" i.d. stainless steel pipe nipple, 2.5" Waterous 1/4-turn discharge valve with chrome plated ball and spring loaded self-adjusting seal assembly (located inside pump enclosure), and push-pull chrome "locking-style" discharge control handle located on the pump operator's control panel.

DELUGE DISCHARGE

DELUGE DISCHARGE LOCATION

The specified Deluge Discharge outlet shall be located above the “midship” fire pump module.

MONITOR SUPPORT BRACKET

A stainless steel fabricated monitor support bracket is to be furnished, located beneath the top of pump module, designed to prevent movement of the monitor/deluge device throughout the range of movement and flow capacity. Support is to be bolted in position and removable so as to allow for disassembly of the deluge discharge. In addition to the monitor support, the underside of surrounding deck plating is to be reinforced with channel steel brackets to support the weight of two (2) firefighters.

TOP DELUGE DISCHARGE - ELECTRIC OPERATED VALVE

One (1), top (above pump/body) gated deluge discharge to be furnished with: 3" riser outlet thread/flange, 3" i.d. stainless steel stationary riser pipe, .75" bronze "auto-drain" valve located immediately downstream of gate valve, 3.5" Waterous "ELECTRIC ACTUATOR OPERATED" 1/4-turn discharge valve with chrome plated ball and spring loaded self-adjusting seal assembly (located inside pump compartment), operator's panel mounted valve control console with spring loaded open/close toggle switch and "OPEN/MULTIPLE-TRANSITION/CLOSED" indicator light.

NOTE: The exterior deluge riser piping (and flange where provided) shall be covered, fully enclosed, with polished 4-way aluminum treadplate cylindrical shroud.

ELKHART COBRA EXM - REMOTE WIRELESS CONTROLLED MONITOR

One (1), Elkhart Cobra EXM deluge with electronically operated monitor to be furnished, mounted on specified deluge discharge outlet. Cobra EXM to be equipped with: SM-1250E 1250 GPM automatic nozzle and stream shaper, W.E.T. (Wireless Electronic Technology) transmission function for rotation and elevation, panel mounted vehicle-powered pump panel control, and pump operator's panel mounted bracket for hand-held remote W.E.T. radio transmitter control. The W.E.T. hand held remote radio transmitter shall be furnished, along with required batteries.

As Per Sourcewell MPCU Contract 2025-12-10

ELKHART EXTENDER, ELECTRIC ACTUATED - 18"

One (1), Elkhart 12-volt electric linear actuator operated "Extender" telescoping deluge riser mount to be furnished, with Victaulic inlet and side wall clamp kit. Extender to be installed on specified deluge riser piping, designed to vertically elevate the specified deluge monitor 18" above the retracted position. Flow capacity of the Extender shall be up to 1250 GPM.

TRANSVERSE SLEEVE FOR SINGLE LONG BOARD

A vertical transverse Single (1) Long Board storage "sleeve" compartment to be provided, located overhead the transverse cavity comparment, forward of pump operators panel. Sleeve compartment is to be fabricated of stainless steel, approximately 4" wide x 20" high x transverse width between driver and passenger side pump panels.

Hose bed cover material shall be red in color.

FOAM SYSTEM, DIRECT DISCHARGE

SINGLE AGENT FOAM SYSTEM

The following specified Direct Discharge Foam System shall be of the "single agent" type, with features and accessories as per the following:

PLACARDS, SINGLE AGENT FOAM SYSTEM

A foam system piping schematic placard, for "single agent" system, shall be furnished, located adjacent to the system's control console. A foam system rating placard shall also be furnished, for the particular model and brand, also located adjacent to the control console. Placards shall be provided by foam system manufacturer, chrome plated cast metal.

All foam capable discharge controls shall be identified, with colored engraved nameplates to read: **FOAM**

FOAMPRO 2001 SINGLE AGENT FOAM SYSTEM:

The apparatus shall be equipped with a "single agent" FoamPro 2001, electronic, fully automatic, variable speed, direct injection, discharge side foam proportioning system. The system shall be capable of handling Class A foam concentrates. The foam proportioning operation shall be based on direct measurement of water flows, and remain consistent within the specified flows and pressures. The system shall be equipped with a digital electronic control display, suitable for installation on the pump panel.

Incorporated within the control display shall be a micro-processor that receives the input from the flowmeter, while also monitoring foam concentrate pump output, comparing values to ensure that the operator preset proportional amount of foam concentrate is injected into the discharge side of the fire pump.

A paddle wheel type flowmeter shall be installed in the discharge line to the specified "foam capable" discharges.

The digital computer control display shall enable the pump operator to perform the following control and operation functions for the foam proportioning system:

1. Provide push-button control for foam proportioning rates from 0.1% to 9.9% in 0.1% increments.

2. Show current gallon per minute water flow rate.

3. Show total gallons of water discharged, during and after foam operations are completed.

4. Show total gallons of foam concentrate consumed.

5. Simulate flow rates for manual operation.

6. Perform set-up and diagnostic functions for the computer control microprocessor.

7. Flash a "low concentrate" warning when the foam concentrate tank(s) run low.

8. Flash a "no concentrate" warning and shut the foam concentrate off, preventing damage to the pump, should the foam tank go empty.

9. Foam Strainer, in suction line, removable

A 12-volt electric motor driven positive displacement foam concentrate pump, rated up to 2.6 GPM, with operating pressures up to 250 psi (maximum psi of 400) shall be installed in a suitable location near the apparatus pump hose.

A pump motor electric driver (mounted to the base of the pump) shall receive signals from the computer control display, and power the .5 horsepower electric motor directly coupled to the concentrate pump in a variable speed duty cycle to ensure that the correct proportion of concentrate preset by the pump operator is injected into the fire stream.

The motor driven foam pump system shall be mounted to a fabricated stainless steel platform, strategically located within the fire pump module, such that the pump is below the level of the foam cell.

MASTER FOAM MANIFOLD

A flanged bolt-on or victaulic grooved stainless steel pump discharge foam manifold is to be furnished, for use with the specified direct discharge injection foam system. Discharge manifold is to include a 4" i.d. stainless steel dual plate spring loaded check valve, fitting tap for foam injection line, fitting tap for flow sensor, bottom fitting tap for the remote manifold drain valve, and multiple taps for use with discharge valves designated as foam lines. Discharge foam manifold is to be of adequate size/capacity to handle flows not exceeding 1100 gallons per minute.

NOTE: Purchaser must designate which of the above specified Discharge Outlet Connections are to be Foam Capable, not to exceed 1100 gallons per minute total flow. NFPA Discharge Flow Rates are designated in Table 16.7.1.

FOAM MANIFOLD DRAIN

A .75" quarter-turn bronze drain valve, with chrome plated control handle and recessed name tag, is to be furnished, located on a side pump panel immediately above the running board/rubrail level. Manifold drain line is to extend from a bottom tap on the foam manifold, with positive "gravity-drain" to the panel mount drain valve, assuring complete drainage of the manifold downstream of its check valve and upstream of the foam capable discharge valves.

CLASS - "A" FOAM CAPABLE OUTLETS, 1100-GPM FOAM MANIFOLD CAPACITY

The following individual discharge outlets are to be Class A foam capable:

____ each, Passenger Side (select __ -2.5", __ -4") Discharge(s)

____ each, Rear (select __ -2.5", __ -4") Discharge(s)

____ each, Rear Pre-Connect (select __ -1.5", __- 2.5") Discharge(s)

____ each, Driver Side (select __ -2.5", __ -4") Discharge(s)

__3__ each, Pre-Connect (select _2_ -1.5", _1_ -2.5") Discharge(s): Speed-Lays / Cross-Lays

____ each, Hose Reel 1" Discharge

__1__ each, Bumper (select __ -2.5", __ -4") Discharge(s)

FOAM LEVEL GAUGE/INDICATOR

FOAM RESERVOIR, CLASS-A FOAM CONCENTRATE

Class-A foam cell to be furnished, located interior of specified non-metallic water tank, totally separate from baffled water cavities. Refer to Water Tank for full description and capacity of the Class-A foam cell.

FOAM LEVEL -TANKVISION, FOR CLASS-A FOAM

One (1), FRC, "TankVision" foam tank level indicator to be furnished with: weatherproof encapsulated high intensity LED light indicator, 30-ft sensor cable extension for foam tank level indicator, tank level sensing probe, and protected wiring loom. Foam tank level indicator to be mounted on pump control panel. Tank level sensing probe to be located in front of specified foam tank.

ON-BOARD 12-VOLT "POWERED" FOAMPRO REFILL SYSTEM

To increase safety of firefighter personnel, the apparatus shall be equipped with an electronic, automatic, concentrate refill system. System shall operate independently of the foam proportioner allowing simultaneous use. Refill operation shall not require apparatus or fire pump to be running. The system shall be capable of handling Class A foam concentrates, emulsifiers, gels and decontamination concentrates. The apparatus shall be plumbed from the externally accessed intake/flush ports to the concentrate cell, located internal of the specified water tank. External fill and flush connections to be quick-connect, cam-lock type. Internal piping to incorporate check valves to prevent backflow. Concentrate tank inlet shall be positioned to minimize agitation. The refill operation shall be based on direct measurement of concentrate level in tank. System must be capable of automatically stopping when cell is full and include a manual override feature. The system shall be equipped with an electronic control suitable for installation on the pump panel. Incorporated within the control shall be a microprocessor that receives input from the system while controlling foam concentrate pump output. An all bronze three-way valve shall be included to allow the operator to flush system after use. Valve control, intake and flush ports shall be located within corresponding panel plate.

The system shall enable the operator to perform the following control/operation functions and status indicators for the refill operation:

a) Provide push-button start/stop control of foam refill
b) Solid green light advises operator concentrate cell is full
c) Flashing green indicates system is running
d) Green light off, system off
e) Allow override of “full tank” condition
f) Provide a means to flush the pump and intake piping

As Per Sourcewell MPCU Contract 2025-12-10

System shall include a 12-volt electric motor driven, positive displacement concentrate pump. Pump shall deliver minimum flow of 10 gpm (37.8 L/min) @ 20 psi, with all types and brands of concentrates currently utilized in fire apparatus. Pump body to be of all bronze construction and other wetted components and piping to be constructed of non-corrosive materials. The system will draw a maximum of 38 amps @ 12 VDC. A pump/motor solenoid (mounted to the base of the pump) shall receive signals from the computer control display and power the .5 hp (0.4 Kw) electric motor directly coupled to the concentrate pump. The system shall receive readings when the concentrate tank is full and stop operation to prevent overfill.
Components of the complete refill system shall include:

g) Operator control and display with Weather-Pac connectors
h) Refill/flush quick-connect cam-lock fittings and cap
i) Check valves
j) Pump/motor assembly and solenoid
k) Strainer
l) Tank level switch
m) Three-way fill/flush valve
n) Stainless steel pick-up wand and 6 feet of reinforced suction hose, 1 in diameter to allow maximum flow
o) Panel placards

An installation and operation manual shall be provided, along with a one-year limited warranty by the manufacturer.

FOAM CAPABLE DISCHARGES: IDENTIFICATION

All of the specified "Foam Capable" discharges shall have red graphical identification tags or their nametags and/or data plates marked: **FOAM**, in addition to the other discharge nomenclature.

PUMP OPERATOR'S INSTRUMENTS AND GAUGES

AIR HORN SWITCH - PUMP GAUGE PANEL, RED MOMENTARY ROCKER STYLE

A weatherproof momentary rocker style RED switch is to be furnished on the pump gauge panel, with a nametag to read: "AIR HORN." Switch is to activate the optionally specified high capacity DC air horn solenoid.

COLOR CODED DISCHARGE NAMEPLATES: NOMENCLATURE IN ENGLISH

Discharge name plates and/or control diagrams are to be permanently engraved into colored media or encapsulated color coded printing, as specified below, Name plate colors are to match the designated color of the individual outlets and pressure instruments.

Suction name plates are to be of the same single color, contrasting to the discharge colors

The name plate's nomenclature is to identify: physical location, size of hose to be attached, and type of discharge. Example: REAR PASSENGER SIDE 2.5" PRECONNNECT DISCHARGE

Color matching name plates are to be provided for: Discharge Outlet (or Hose bed Pre-Connect), Discharge Control, Discharge Pressure Instrument, and the Discharge Bleeder Control.

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Apparatus locations are to be identified as: FRONT (forward facing), PASSENGER SIDE (curb side facing), REAR (rearward facing), and DRIVER SIDE (street side facing).

On sides of apparatus, left-to-right locations are to be identified as FORWARD and REARWARD.

At rear of apparatus, locations are to be identified as INBOARD, OUTBOARD, OR CENTER.

NOTE: The terms LEFT and RIGHT are not to be utilized, unless specifically instructed to do so by customer.

MASTER GAUGES, VACUUM (INTAKE) AND PRESSURE (DISCHARGE)

NO-SHOK LIQUID FILLED GAUGES

Master pump intake and pump discharge pressure indicating devices shall be located within 8" of each other, edge to edge, with the intake (suction) pressure indicating device to the left of the pump discharge pressure indicating device.

A 4" diameter NoShok compound style pressure gauge to be furnished, registering 0 x 600 psi, **"enhanced"** black numerals on white background. Gauge needle shall have a "bright orange" tip for improved visibility. Gauge to be piped to discharge volute of fire pump, equipped with a black permanently engraved identification nameplate installed below the gauge, to read: "PUMP DISCHARGE."

A 4" diameter NoShok compound style pressure gauge to be furnished, registering -30 x 400 psi, **"enhanced"** black numerals on white background. Gauge needle shall have a "bright orange" tip for improved visibility. Gauge to be piped to suction volute of fire pump, equipped with a black permanently engraved identification nameplate installed below the gauge, to read: "PUMP SUCTION."

TEST GAUGE PANEL

A test plug assembly to be furnished, installed on specified gauge panel adjacent to respective pump suction and pump discharge gauge. Test plugs to be piped to pump suction cavity and discharge cavity using high pressure clear nylon tubing with brass fittings.

INDIVIDUAL DISCHARGE GAUGES, 2.5" DIAMETER

Ten (10), 2.5" diameter NoShok compound style discharge pressure gauges to be furnished, registering 0 x 400 psi, **"enhanced"** black numerals on white background. Gauge needle shall have a "bright orange" tip for improved visibility. Gauges to be located in a uniform manner no more than 6" from its respective discharge valve control.

Each gauge and respective discharge valve control to be equipped with color coded permanently engraved identification nameplate to describe numerical sequence, location, type and size of outlet.

All above specified pressure gauges to be analog style, liquid filled, vibration dampened, and capable of operations to -40 degrees F. Master gauges and individual discharge pressure gauges shall have a 7 year warranty.

The specified engine monitors, pump suction and discharge gauges, and individual gated discharge pressure gauges shall be installed on the specified gauge panel.

Pressure gauges to be piped to the individual discharge valves and pump suction and discharge volutes using high pressure clear nylon tubing with brass fittings.

CAST METAL PRESSURE GAUGE SURROUND BEZELS

The specified individual discharge pressure gauges shall be encased/surrounded by chrome or polished trim bezels. Color coded placards/name tags are to be recessed into the gauge trim bezels.

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NDIVIDUAL DISCHARGE PRESSURE GAUGES ARE TO BE ASSIGNED TO:

__2__ each, Passenger Side Discharges

__2__ each, Rear Discharges

__1__ each, Driver Side Discharges

__1__ each, Deluge Discharge

__1_ each, Bumper Discharge

__3__ each, Pre-Connect Discharges: Speed-Lays / Cross-Lays

CAST METAL PRESSURE GAUGE SURROUND BEZELS

The specified individual discharge pressure gauges shall be encased/surrounded by chrome or polished trim bezels. Color coded placards/name tags are to be recessed into the gauge trim bezels.

TANK LEVEL INDICATOR(S)

WATER LEVEL - TANK VISION

One (1), FRC, "Tankvision" WLA300-A00 water tank level indicator to be furnished with: weatherproof encapsulated high intensity LED light indicator, tank level sending unit, and protected wiring loom. Water tank level indicator to be mounted on pump control panel. Tank level sensing unit to be located front of specified water tank to properly sense water capacity.

TANK INDICATOR REMOTE LIGHT DRIVER, FRC SYSTEM

Fire Research TankVision model WLA290-A00 remote light driver is to be furnished and installed, for use with the Chassis Manufacturer supplied Light Strip(s).

The driver shall provide four (4) separate signal outputs to the optionally specified remote tank level lights. The driver is to signal.25, .5, .75, and full tank liquid levels. When power is applied the driver is to run a test and cycle each remote light on and off. When the tank is less than .25 full the driver is to "blink" the .25 level light.

The remote light driver is to receive input information over a single wire from the specified Fire Research tank level primary indicator, which is mounted on the pump operator's panel.

WHELEN PSTANK2 WATER TANK LEVEL STRIP-LITE SYSTEM

Two (2) Whelen Strip-Lite PSTANK2, water tank level status lights shall be furnished, with green/blue/amber/red colors. Lights to be signaled by the specified tank level driver, with information provided by the specified primary level indicator. Red .25-level lights to flash, other colors to be steady illumination when activated. Strip-Lites to be furnished, one on each exterior side of apparatus, as specified.

TANK INDICATOR REMOTE LIGHT DRIVER, FRC SYSTEM

Fire Research TankVision model WLA290-A00 remote light driver shall be furnished and installed. The driver shall provide four (4) separate signal outputs to the optionally specified remote tank level lights. The driver shall signal.25, .5, .75, and full tank liquid levels. When power is applied the driver shall run a test and cycle each remote light on and off. When the tank is less than .25 full the driver shall "blink" the .25 level light.

The remote light driver shall receive input information over a single wire from the specified Fire Research tank level primary indicator, which is mounted on the pump operator's panel.

4-COLOR TANK LEVEL LIGHT FIXTURE LOCATION

The above specified water tank level multiple color Light Strips are to be located: One (1) Driver uppemost Chassis Cab side, One (1) Passenger uppermost Chassis Cab side.

POLYPROPYLENE WATER TANK -- LIFETIME WARRANTED - 750 WATER/20 FOAM

The apparatus shall be equipped with a polypropylene thermoplastic water tank, with isolated foam cell. The water tank's capacity is to be 750 US gallons, and the foam cell's capacity is to be 20 US gallons.

The tank body and end bulkheads shall be constructed of .5" thick, polypropylene, nitrogen-welded and tested inside and out. Tank construction shall conform to NFPA standards.

The transverse and longitudinal .375" thick swash partitions shall be interlocked and welded to each other as well as to the walls of the tank. The partitions shall be designed and equipped with vent holes to permit air and liquid movement between compartments.

The .5" thick cover shall be recessed .375" from the top of the side walls. Hold down dowels shall extend through and be welded to both the covers and the transverse partitions, providing rigidity during fast fill operations. Drilled and tapped holes for lifting eyes shall be provided in the top area of the water tank.

The bottom of the tank shall be secured within the specified rubber lined "full perimeter cradle", design to be in accordance with the tank manufacturer's requirements.

The water fill tower shall be designed, sized and located as required by the needs of the tank. The .5" thick polypropylene fill and overflow tower shall be equipped with a hinged lid and a removable polypropylene screen.

An overflow tube shall be installed within the fill tower and internally piped with large diameter schedule 40 PVC pipe through the tank, exiting behind the vehicle's rear axle.

The water tank sump shall be a minimum of 10" x 10" x 3" deep and located on the bottom of the booster tank. There shall be a 4" i.d. schedule 40 polypropylene tank suction pipe from the entrance of the tank (adjacent to and inline with fire pump) to the tank sump. The tank drain and clean out shall be 3" NPT schedule 80 female flange with plug, located in the bottom of the tank sump.

FOAM CELL

One (1), 20-gallon foam cell shall be furnished as a component of specified water tank. The foam cavity shall include a fill stack with lift-up cover and latch assembly. The foam fill tower shall be surrounded by a metal fabrication, providing separation from the hose bed. The foam lid shall have a 2" diameter screw-on vent cap. Two (2) 1" TIPT female spuds shall be furnished in the exposed end wall of the foam reservoir/cell, for use with foam concentrate liquid line(s) of the specified foam system.

WARRANTY

The booster tank shall have a lifetime warranty as provided by the tank manufacturer.

FOAM TANK DESIGN STANDARDS

The non-corrosive foam tank is to meet (or in the case of multiple tanks, Tanks are to meet) applicable sections of NFPA standards.

The foam concentrate tank is to be provided with sufficient wash partitions so that the maximum dimension perpendicular to the plane of any partition shall not exceed 36 inches. The swash partition(s) are to extend from wall to wall and cover at least 75 percent of the area of the plane of the partition.

The foam concentrate tank is to be provided with a fill tower or expansion compartment having a minimum area of 12 square inches and having a volume of not less than 2 percent of the total tank volume. The fill tower opening is to be protected by a completely sealed air-tight cover. The cover is to be attached to the fill tower by mechanical means. The fill opening is to be designed to incorporate a .25 inch removable screen and shall be located so that foam concentrate from a five (5) gallon container can be dumped directly to the bottom of the tank to minimize aeration without the use of funnels or other special devices.

The foam tank fill tower is to be equipped with a pressure/vacuum vent that enables the tank to compensate for changes in pressure or vacuum when filling or withdrawing foam concentrate from the tank. The pressure/vacuum vent must not allow atmospheric air to enter the foam tank except during operation or to compensate for thermal fluctuations. The vent is to be protected to prevent foam concentrate from escaping or directly contacting the vent at any time. The vent is to be of sufficient size to prevent tank damage during filling or foam withdrawal.

A color coded label or visible permanent marking that reads "FOAM TANK FILL" is to be placed at or near any foam concentrate tank fills opening.

An additional label is to be placed at or near any foam concentrate tank fill opening that specifies the type of foam concentrate the system is designed to use. Any restrictions on the types of foam concentrate that can be used with the system are also be stated, and a warning message that reads "WARNING: DO NOT MIX BRANDS AND TYPES OF FOAM."

The foam concentrate tank outlet connection is to be designed and located to prevent aeration of the foam concentrate and shall allow withdrawal of 80 percent of the foam concentrate tank storage capacity under all operating conditions with the vehicle level.

FOAM RESERVOIR DRAIN

One (1) foam reservoir drain is to be furnished, each consisting of a 1/4-turn ball style bronze or stainless steel .75" i.d. valve, stainless steel piping, and threaded spud in reservoir. Reservoir drain is to be located in the pump module, and is to drain liquid concentrate to below the chassis frame.

POLY TANK MANUFACTURER

The specified water tank shall be manufactured by **United Plastics Fabrication (UPF)** or comparable tank manufacturer.

The tank warranty is to be provided by poly tank manufacturer, copy of the warranty must be included in the delivery documents.

POLY TANK DATA PLACARD

The Apparatus is to be provided with a poly tank data placard. The Data Placard is to include the following fields of information:

MAXIMUM FILL PRESSURE: PSI
MAXIMUM FILL RATE: GPM
DATE OF MANUFACTURE
TANK SERIAL NUMBER
TRUCK #
WATER CAPACITY: Gallons
FOAM CAPACITY: Gallons-A

WATER TANK SUPPORT STRUCTURE

The specified water tank is to be nested into a full perimeter mounting "picture frame" style support structure consisting of 2" x 2" x .25" thick 304 grade stainless steel angle. The front of tank is to be equipped with a full width .25" thick front base plate. All stainless cradles are to be wire-feed welded to the specified stainless steel apparatus body sub frame transverse tubings.

Structure is to be tank-specific, and shall provide support in the areas and locations specified by the tank manufacturer.

All mating areas between tank and structure are to be lined with 60 DURO rubber cushion material, .5" thick on horizontal and front surfaces and .25" thick on sides and back vertical surfaces.

Structure is to be mounted to chassis frame rail side walls by hardened carriage bolts. The use of threaded rod plates or U-bolts will not be considered adequate.

TANK CRADLE STRUCTURE WARRANTY

The tank cradle is to have a **lifetime warranty**, both structurally and corrosion-free, as provided by body builder.

L-SHAPE TANK: FOR REDUCED HEIGHT HOSEBED

The specified tank is to be L-shaped, with forward portion of vessel higher than the rear portion, so as to allow for the apparatus body hose bed (located above rear portion of water tank) to be of maximum depth. The forward water tank section is not to extend above the apparatus body sides, and is to be covered with the specified material.

The tank bottom is to be T-shape, to allow for rear wheel clearance and maximum lower side compartment depth.

WATER TANK PASS-THROUGH(S) FOR DISCHARGE PIPING

The water tank shall have two (2) 4” i.d. pass-through PVC sleeve(s) extending horizontally through the length of the water tank, to allow passage through the tank of discharge piping. Sleeve(s) shall be in line with the exit location of the rear discharge(s).

RECTANGULAR SHAPE TANK

The specified tank is to be of a conventional rectangular shape, located beneath the main hose bed, rearward of the front body transverse cross-panel.

The tank bottom is to be T-shape, to allow for rear wheel clearance and maximum lower side compartment depth.

TANK NOTCHED FOR RECESSED TANK-TO-FIRE PUMP SUCTION PLUMBING

The front bottom of tank is to be "notched" to accommodate recessing of the tank-to-fire pump suction piping. The notched area is to accommodate the specified hump hose coupling, and allow for a forward most location of the water tank within the apparatus body cavity.

As Per Sourcewell MPCU Contract 2025-12-10

APPARATUS HOSE BODY AND THREE (3) SEGMENT COMPARTMENTATION

The Body is to be designed and configured as a fully compartmented Pumper Fire Apparatus, with forward segment enclosed side cabinets, middle segment rear wheel enclosures with overhead cabinet(s) where optionally specified, rearward segment side cabinets, and rear centerline cabinet ahead of rear tailboard. In addition to the cabinets (compartments) the Pumper Apparatus Body is to encapsulate the specified water and/or foam tank, with a large Main Hose Bed overhead.

COMPARTMENTED BODY CONSTRUCTION MATERIALS and FABRICATION:

FABRICATION MATERIALS
The apparatus body compartments shall be fabricated using a combination of 12-gauge thickness and 14-gauge thickness, type 304 smooth sheet ASTM A240 stainless steel, with #4-polish RA52 surface finish. All structural sheet metal fabrications shall be of 12-gauge material thickness, including, but not limited to: side and rear lower level compartment floors, wheelwell outer panels, rear body corners, and hose bed risers.

Other specified interior compartment shelving, trays, and shelving tracks shall be fabricated of smooth aluminum, of designated thickness, and shall have a machine sanded finish.

The specified 4-way treadplate apparatus body components shall be type 3003 "Brite" aluminum C-102 or equal pattern treadplate, NFPA approved no-slip diamond on step and walk surfaces.

PRECISION MACHINING AND FABRICATION
All individual apparatus body fabricated components are to be: computer designed for repeatable tolerances, precision computer control machined for superior cut edge quality, and computer control machine fabricated for assembled parts accuracy

FASTENERS:
All apparatus body screw type fasteners shall be stainless steel "low profile" button socket head cap screws with stainless steel hex "Ny-Lok" threaded nuts designed to prevent loosening. Size of fasteners, .25" minimum, and their spacing must provide for maximum structural integrity and no leakage in flanged areas between fasteners. Any necessary exterior exposed nut fasteners shall be polished stainless steel or chrome plated "acorn" covering fastener threads. **NOTE: Hex head, truss head, Phillips pan head, or other large profile style fasteners shall not be used for assembly of fabricated sheet metal components. Additionally, there are to be NO .187" fasteners of any style used for structural applications.**

CONSTRUCTION METHODS:

All individual fabricated body components are to be assembled with removable fasteners for ease of modifications and repairs. Exterior compartment and hose body fabrications must be free of all projections which might injure personnel or fire hose. NOTE: Where "nibbled" or other non-continuous non-smooth cutting methods are used to machine the body material, all edges must be reworked/filed for injury prevention and improved appearance.

As Per Sourcewell MPCU Contract 2025-12-10

The described construction methods are to ensure easy disassembly of the apparatus body in the event of damage or need for future modifications. Apparatus designs or construction methods which do not allow for disassembly and removal of major fabricated components are not to be considered "equal" to this construction method, NOTE: metal bar shapes, tubular structures and/or extrusions are not to be utilized in the construction of the apparatus body; metal fabrications with integral flanges are to provide the needed structural integrity.

Specified upper level side compartments shall have fabricated vertical door jambs located above wheel well enclosure, separating forward/upper level wheel well/rear compartment areas. Door jambs are to be bolted to sweep-out threshold portion of upper level compartment opening and to the underside of overhead compartment roof fabrication, easily removable so as to allow future modifications to door opening size.

For maximum cubic footage of compartments, the lower portion of the interior forward side compartments shall be recessed into within 4-inches of the chassis frame rail depth, both driver's side and passenger's side of the apparatus body. Recessed areas to be full width of interior compartment, at least 30" high, occupying entire underbody area beneath the outboard portion of the tank.

BODY FRONT AND REAR CORNERS:

The front & rear driver side and passenger side body corners are to be of a style as specified below. The body corners are to have full height vertical front, rear and side facing surfaces, and integral compartment door jambs.

SWEEP OUT COMPARTMENT FLOORS:

Driver's side, passenger's side, and rear compartments shall be equipped with "sweep/wash-out" floors, which are raised at least 1" above the compartment door opening threshold and exterior rub rail. All running board/tailboard level side compartment door thresholds shall extend outboard, below the compartment doors, with a minimum 3" flange-down (flush with body sides) and 1" return-in, providing structure for mounting of the specified rub rail material. Door thresholds shall be bolted to and removable from the interior raised compartment floors.

Upper level compartment floors, located above rear wheel well housings, are to be "sweep/wash-out" design, fabricated of body material matching smooth sheet material. Upper level compartment door bottom threshold shall be integral with the rear wheel well outer panel, positioned at least 1" below the interior compartment floor surface, and lined with mirror finish stainless steel for doorway protection.

FRONT COMPARTMENT CORNERS, SQUARE SHAPE

The driver side and passenger side front body corners are to have a 90-degree "square" shape. Each corner is to be a single piece fabrication, extending to compartment roof top, with integral inboard body mating flange (allowing for removal), and outboard vertical door jamb.

REMOVABLE INTERIOR COMPARTMENT CORNER ALUMINUM WIRE COVERS

The front and rear interior compartment shall have removable panels installed to cover body wiring.

Interior compartment corner wire covers are to be constructed of natural finish sheet aluminum.

CONSTRUCTION FEATURES:

Wheel well trim shall be furnished as specified below, bolted in position and easily replaceable, surrounding driver's side and passenger's side rear body "radius" wheel well cut-outs.

STAINLESS STEEL WHEEL WELL LINERS
A removable sheet stainless steel circular underside wheel well liner shall be furnished, driver and passenger side wheel well housings. Liners shall be bolted in position and easily removable to allow for underside access to the optional wheel well panel mounted accessories, such as: warning light fixtures, fuel fill piping, air bottle containers, etc.: Removal of liners shall also provide convenient access to the rear axle suspension components. Where the outboard edge of circular liners meets the vertical outboard wheel well panel, a replaceable hollow-core rubber gasket shall be provided.

ALUMINUM TREADPLATE ROOF OVERLAYS
Driver's and passenger's side compartment roof tops shall be lined/plated with designated material, flanged down on front, rear, and full length outboard side. Liners shall extend the full length and the full width of compartment roof tops. Flange mating corners of roof top liners shall have "TIG" welded closures. Where aluminum treadplate liners are specified, they shall be underside coated with a spray on rubberized "barrier" coating, prior to final bolt-on installation, NOTE: The treadplate liners are not to be considered a structural portion of the apparatus body, bottom sides of which are not to be visible from within the compartment's interior.

During assembly all areas where metal mates or abuts shall be properly caulked with G.E. or equal silicone body sealant to prevent moisture penetration.

Where compartment wall/bulkhead mounted vertical slotted adjustable shelf track assemblies are specified, the tracks are to be bolted in place or mechanically "engaged" to compartment wall/bulkhead, and easily removable. NOTE: Weld-on shelving tracks do not meet the intent of this requirement.

FILTERED COMPARTMENT VENTING

Back walls of all apparatus body side compartments, including: six (6) lower level (below top of chassis frame rails) 2-ahead of and 1-behind the wheel well housings, are to be equipped with vented pass-through openings to the body under side. Vented openings are to be covered with 3M water resistant mesh filter media and an interior

compartment metal grille. Grille is to be attached to the interior compartment wall with reusable stainless steel screw fasteners with nylon threaded inserts, allowing for removal and cleaning of the filter media from inside of each vented compartment. Inboard compartment back wall (outboard of tank), at each individual vent, is to be provided with rubber "flaps" installed to prevent water from entering compartment from underside of body. Vent openings, mesh filter media, and removable grille must allow for dust and moisture free ventilation of the compartment interiors, without reduction of the interior compartment depth.

RUBRAILS

Brushed Stainless Steel channel style rubrails shall be provided along bottom of full height compartments.

Rubrails are to be channel shaped with flanges intboard/flat surface outboard, spaced away from body with non-metallic shims, to allow for wash-out and absorption of minor impacts without damage to body flange.

Rubrails shall be bolted in position, easily replaceable.

POLISHED STAINLESS-STEEL FENDER CROWNS

Polished stainless steel fender crowns will be provided and removable from wheel well housings, with nylon spacers provided between mating flanges, to allow "wash-out" of mating areas.

The bolt-on fasteners are to be stainless steel, concealed from exterior view.

SLIDE-IN SUCTION HOSE and STRAINER COMPARTMENT - PASSENGER SIDE

A fully enclosed hard suction hose "sleeve compartment" shall be furnished, located between tank and body side.

Compartment shall accommodate 10 ft. section of 6" i.d. Fire Department hard suction hose.

Rear portion of suction hose sleeve compartment shall be enlarged for a pre-attached low-level strainer.

Rear door shall be overlapping style with D-ring dual direction rotary slam latch and Nader pin.

TUBULAR HANDRAILS, VERTICAL REAR INBOARD CORNERS

Apparatus body tubular railings are to be furnished, consisting of: 1-.25" o.d. extruded aluminum tubing, chrome plated double bolt type 3" stand-off end type and center rail brackets, and neoprene rubber surface mounting gaskets furnished between rail bracket and painted body surface.

Tubular railings at step areas are to be provided with an aggressive machined "knurled" non-slip exterior surface. Two (2) tubular railings are to be located: 1-passenger's side and 1-driver's side at vertical rear inboard compartment corners.

Two (2) tubular railings are to be located: 1-passenger's side and 1-driver's side at vertical rear inboard or outboard compartment corners. Handrails are to extend to the top of inboard rear body corners.

HORIZONTAL REAR HANDRAIL, BELOW HOSE BED

Tubular railing to be furnished, consisting of: 1-.25" o.d. extruded aluminum tubing, chrome plated double bolt type 3" stand-off end type and center rail brackets, and neoprene rubber surface mounting gaskets furnished between rail bracket and body surface. Rrailing is to be provided: horizontally full width of hosebody, on rear body vertical panel below hose bed gratings. Railing is to be as wide as is possible, without causing interference with optionally specified rear inlets/outlets or step assemblies.

PIKE POLE MOUNTING, WITH THE LADDER MOUNTINGS

The above specified two (2) pike pole(s) shall be mounted, in appropriate aluminum or PVC tubes, located inside the specified slide-in hard suction hose storage area(s). End of tube(s) shall be "notched" for Pike Head, to prevent rotation.

PIKE POLE MOUNTING, INTERIOR OF SLIDE-IN LADDER STORAGE SLEEVE

Sleeved mounting(s) to be provided for three (3), each pike pole(s) in appropriate aluminum or PVC tubes, located inside the specified slide-in ladder storage area. End of tube(s) to be "notched" for Pike Head, to prevent rotation. Tubes designed to hold New York Hooks

UNDER BODY STAINLESS STEEL SUB-FRAME

An apparatus body sub frame is to be furnished, completely independent of the assembled apparatus body fabrications, bolted to and easily removable from the body module. The apparatus body sub frame, including a forward yoke assembly with torsional suspension, transverse under-tank-cradle supports, and a rigid cantilevered rear platform, are to be constructed of rectangular heavy wall type 304 stainless steel welded tubing. Overall sub frame design will provide a corrosion-free structural under body “platform” onto which the compartmented apparatus body is to be bolted to and easily removable from.

FORWARD BODY SUB-FRAME

A forward sub frame "yoke" is to be furnished, with upper level horizontal transverse cross-members supporting the water tank cradle, and lower level outboard and rearward horizontal members providing under-compartment-

floor support of all side and rear compartments. Sub frame vertical tubular structures are to be no more than 1" from chassis frame webs, so as to allow for maximum interior depth of all side compartments. Four (4) bolt-through rubber cushion "vibration and torsion isolators" are to be provided, two (2) per side. Isolators are to bolt to .312" longitudinal yoke structures, and chassis frame web .312" angle brackets, the assembly of which allows for unlimited twisting-moment of the chassis frame rails, independent of the body sub frame. Lower level horizontal under-floor supports are to allow for individual compartment floor load rating in excess of 800 pounds per compartment (as determined by body construction material), without deformation of the floor material.

REARWARD BODY SUB-FRAME
A "cantilevered" rear under body and tailboard sub-frame platform will be furnished, with transverse and longitudinal tubular stainless structures welded to .75" x 8" glove plate frame drops which are bolted to the side web of rear most chassis frame rails. Glove plates are to be located immediately rearward of the chassis rear axle suspension, and are to include integral bottom 3" diameter closed tow eyes. A bolt-on tubular structure is to be provided, spanning between the glove/tow plates, with its removal allowing for the entire body sub frame (with compartmented body attached) to be lifted vertically from the chassis.

TAILBOARD SUB-FRAME
The specified cantilevered rear under body sub-frame platform shall continue rearward, beyond the rear body corners and rear face of body, providing rigid support of the specified apparatus rear tailboard/bumper. Tailboard/bumper understructure is to consist of the same heavy tubular stainless steel, barrier isolated from any dissimilar metals, its design allowing for the tailboard fabrication to be positioned away from and independent of the body fabrications.

BODY SUB-FRAME MOUNTING TO CHASSIS
Apparatus body sub frame components are to be bolted to the chassis frame with hardened steel locking thread nut and bolt fasteners, bolt holes precision drilled through chassis frame side webs. Body sub frame is to be positioned parallel with and leveled to the chassis frame rails, designed to provide approximately 22" from the ground to top of apparatus body rub rails, running boards, and rear tailboard, when fully loaded.

NOTE: The apparatus body sub frame is not to be fastened to the chassis frame rails with U-bolts, sandwich clamps, or other temporary fastening methods, AND/OR the body sub frame is not to be permanently welded to the body fabrications or extrusions. Above all, the body sub frame is to provide the above specified under-compartment-floor support.

Top mating surface (body to sub frame) of underbody and tailboard tubular supports is to be fully lined with 3M vinyl barrier tape so as to properly isolate the sub frame from the compartment floors.

APPARATUS BODY SIDE COMPARTMENT CONFIGURATION:

A precision machined and fabricated fire apparatus compartmented body is to be furnished, designed to be located immediately rearward of the specified fire pump module, totally separate of the pump module. The

compartmented body is to be mounted to, supported by, and removable from the specified under body structural sub-frame.

The body configuration is to include fully enclosed and weather sealed compartmentation on the driver side and the passenger's side of vehicle. In order to provide for maximum depth compartmentation, the wheelwell housings are to completely enclose the rear axle suspension components, allowing for the lower portions of the side compartments to extend inboard to the chassis frame depth. Additionally, the apparatus body overall side-to-side width (inboard of body rub rails and fender moldings) is to be 100".

Passenger's side compartments are to be provided: one (1) each full-height ahead of, one (1) each upper level above and one (1) each full-height behind rear wheelwell housing.

Driver's side compartments are to be provided: one (1) each full-height ahead of, one (1) each upper level above and one (1) each full-height behind rear wheelwell housing.

COMPARTMENTATION, THREE (3) EACH: DRIVER SIDE

D1: The driver's front side compartment segment (ahead of wheelwell) shall be 46" interior width x 64" interior height x 25" interior depth lower level/12" interior depth upper level. Compartment segment to be fully enclosed and weather sealed, equipped with vertically hinged compartment door(s), size of __" wide x __" high.

D2: The driver's side over-the-wheels and outrigger upper level compartment segment shall be 52" interior width x TBD" interior height x 12" interior depth. Compartment to be fully enclosed and weather sealed, equipped with two (2) vertically hinged compartment doors, size of __" wide x __" high.

D3: The driver's rear side compartment segment shall be 52" interior width x 64" interior height x 25" interior depth lower level/12" interior depth upper level. Compartment segment to be fully enclosed and weather sealed, equipped with vertically hinged compartment door(s), size of __" wide x __" high.

COMPARTMENTATION, THREE (3) EACH: PASSENGER SIDE

P1: The passenger's front side compartment segment (ahead of wheelwell) shall be 46" interior width x 64" interior height x 25" interior depth lower level/12" interior depth upper level. Compartment segment to be fully enclosed and weather sealed, equipped with vertically hinged compartment door(s), size of __" wide x __" high.

P2: The passenger's side over-the-wheels and outrigger upper level compartment segment shall be 52" interior width x tbd" interior height x 12" interior depth. Compartment to be fully enclosed and weather sealed, equipped with two (2) vertically hinged compartment doors, size of __" wide x __" high.

As Per Sourcewell MPCU Contract 2025-12-10

P3: The passenger's rear side compartment segment shall be 52" interior width x 64" interior height x 25" interior depth lower level/12" interior depth upper level. Compartment segment to be fully enclosed and weather sealed, equipped with vertically hinged compartment door(s), size of __" wide x __" high.

UPPER BODY PROVISIONS FOR COFFIN COMPARTMENTS

Smooth painted exterior body panels, constructed of 12 gauge 304 stainless steel shall be provided above driver and officer side compartments.

LANDING/STEP AREAS (2) TO REAR OF SQUAD CAVITIES

Two (2) recessed step areas (landings) are to be provided, located immediately to the rear of the specified overhead squad cavities, on driver and passenger sides of body. Landings are to be same width of cavities, recessed the total depth of cavaties, allowing for standing step positions at top rear of body (ahead of optionally specified ladder), above rear body corners. Landings are to have a NFPA approved non-slip surface.

COMPARTMENT WELLS

Four (4) each, compartment wells shall be provided within specified upper body coffin compartment provisions.

LID
Each well is to be provided with a single piece lift-up hatch style lid which overlaps opening and extends down along sides of opening perimeter.

Lids shall be equipped with door jamb mounted plunger switch to activate the interior lighting and DNMA warning.

Two (2) pneumatic lift assists/stay-open props and weather stripping provided for each lid.

Lids shall be equipped with inboard full length hand rail and rubber strap style hold downs.

DRAINS
Each coffin box shall have a flush floor drain, routed with rubber hose through body to below apparatus.

MATERIALS
Wells are to be fabricated smooth .125" aluminum sheet and .187" polished ATP lid.

COFFIN POD FLOOR TILES, SECTIONAL VINYL FLOOR TILE

Vinyl 12" x 12" sectional floor tiles are to be provided, custom fitted to the perimeter profile of the interior floor surfaces of the specified coffin pods. The specified 12" x 12" coffin pod floor tiles are to be BLACK in color.

LED LIGHT STICKS UNDERSIDE POD COVERS

Four (4) pair, 12-volt multiple LED element tubular light sticks are to be furnished, consisting of two (2) individual light strips per cavity pod, mounted inline underside the hinged metal pod covers. Light sticks are to be positioned to illuminate interior pod cavity, with the hinged cover in full-open position. Light sticks are to be activated by opening of respective pod cover.

SIDE COMPARTMENT DOORS, 3-POINT LATCHES

The following specified compartment doors shall be "flush" with exterior body panels/door jambs, fabricated double panel design with interior compartment weatherstripping. Doors shall be flush mounted to prevent lapping door panel gaskets from freezing to body exterior panels, NOTE: Compartment doors which do not custom-fit door openings, or lap over exterior body panels are not acceptable.

Specified compartment door jambs, integral with front and rear body corners, integral with compartment roofs, and removable above wheelwell housings, shall be double-broke with return flanges perimeter lined with hollow core clip-on/removable neoprene rubber weatherstripping. Weatherstripping shall seal against interior perimeter door flange, allowing "flush fit" of exterior door surface with exterior body sides. Weatherstripping shall be single continuous piece, with no splice joints in the vertical or top horizontal areas.

Striker pins, for use with specified compartment door rotary latches, shall be positioned in top and bottom door jambs and side door flange of vertically hinged doors "interior latched" double-doors, top and bottom door jambs of vertically hinged single doors, and the front and rear door jambs of horizontally hinged doors. Striker pins to be of minimum length so as to not obstruct door opening. Striker pins shall be threaded stud type, cadmium plated, easily accessible and removable.

Passenger's side and driver's side compartment doors shall be U-formed, with triple-broke 2" perimeter flange, fabricated of .125" 5052/H32 smooth aluminum. Removable full size inner door liners shall be fabricated of .125" polished 4-way aluminum treadplate, installed after finish painting of exterior door panel. Inner door liners shall be caulked with silicone sealant prior to assembly, held in place with "flush" stainless steel replaceable fasteners (not self-tapping screws or thread tapped flange screws). Inner door cavity, between exterior door pan and removable inner liner shall be packed with sound deadening automotive sheet foam material. All doors shall be of the "flush design" to custom fit the door opening, without overlapping exterior door perimeter body panels. Paddle handle latches are to be provided on all interior latched doors. D-ring Hansen 102L polished stainless steel slam type door handles that unlatch counter-clockwise shall be furnished on all exterior latched doors. D-rings shall be bent outward for better grasp, with a latch integral mechanism spring-loaded to return to horizontal position. Door handles shall be located in right hand door where double vertically hinged doors are furnished on passenger side (leading edge door) in left hand door where double doors are furnished on driver side (leading edge door), or to trailing edge of single vertically hinged driver side or passenger side door. Door handles shall be located at centerline bottom of top horizontally hinged doors and centerline top of bottom horizontally hinged

doors. Two (2) Eberhard #1-400 cadmium plated "rotary-slam" automatic door latches shall be furnished, mounted one top and one bottom of all vertically hinged driver side or passenger side doors and one front and one rear of horizontally hinged compartment doors. Neoprene rubber gaskets shall be furnished, protecting painted surface between door skin and latch assembly. Exterior door panels shall be smooth with no welds or fasteners exposed. Area where double doors meet shall be weatherstripped, mating door flange offset to allow flush fit of adjacent door. Back side of offset flange (non-latched doors) shall be equipped with rubber bumpers to prevent damage to exterior surface of adjacent door. Vertical offset door flanges shall be integral with exterior door skin, not part of the removable interior door liner.

Rod and spring type door holders/props shall be furnished, installed in top outboard interior corners of all vertically hinged compartment doors. Door holders shall be double bolted to doors and door jamb drop flange, easily removable. Interior compartment doors shall include corner reinforcements with crimp-nut fasteners to accommodate bolted door holder bracket. Door holders/props shall be designed to hold the doors in both "open" and "closed" positions, properly adjusted to prevent opening beyond 90 degrees. NOTE: Door holders/props which are welded to sheet metal screwed to door jambs and/or inner door liners are not acceptable.

In addition to rod/spring door props, all vertically hinged doors shall be provided with multi-stranded steel cable door stops as added protection in event of failure of rod/spring prop. Cable door stops shall not obstruct door opening.

Horizontally hinged lift-up style compartment doors shall be equipped with front and rear (dual) air cylinder assists. Cylinder assists shall be mounted to double bolted fabricated stainless steel door and door jamb brackets. Bottom horizontal and side vertical door jamb areas, surrounding lift-up style compartment doors, shall be lined with polished stainless steel trim moldings to provide corner scuff protection.

All compartment door hinges shall be full length piano style type 304 stainless steel with single piece stainless steel hinge pin. Exposed piano hinge knuckles shall be "machine buffed" to a chrome-like high lustrous finish. Hinge leaves shall be lined with 3M dielectric tape on mating surfaces to doors and door jambs. Piano hinges shall be bolted to door and corresponding door jamb using stainless steel button socket head cap screws and Ny-Lok stainless steel self-locking nuts. So as to provide minimum clearance between door and door jamb (for improved weather sealing), all vertically mounted compartment door hinges shall be .060" material with .187" stainless pin and maximum knuckle length of .625". Horizontal top-of-door mounted hinges, where located under drip cap, may be of larger pin diameter.

POLISHED EXTRUDED ALUMINUM DRIP PROTECTION

Machine-polished extruded aluminum drip cap extrusions shall be provided, installed overhead all of specified hinged compartment door, and/or roll-out tray-doors. Drip cap extrusions are to be installed with screw fasteners (not adhesive).

ADJUSTABLE SHELF TRACKS, LOW PROFILE

Six (6) sets of Laser cut vertically slotted bolt-on "low profile" shelf tracks are to be furnished, mounted two (2) on forward and two (2) on rearward interior side walls of the designated apparatus body side compartments. Tracks are to be designed to accommodate Hex-Bolt and spring-loaded threaded Cleats, in addition to dual stainless steel threaded safety pins allowing for vertical adjustment and security of the optionally specified horizontal compartment shelves.

Shelf tracks are to be fabricated of .125" smooth aluminum with a finish matching that of the shelves and trays, and their design must allow for the shelving width to match the compartment clear opening width.

VERTICAL STRIP COMPARTMENT LIGHTING

Six (6) pairs of LED element, interior compartment vertical "strip" lighting to be furnished.

Lights activated by "opening" of the respective compartment door.

OVERHEAD HOSE BODY: FORWARD DUNNAGE AND REARWARD HOSE BED

The upper level centerline of hose body, above the water tank, is to to be provided with a rearward hose bed.

Hose bed side-to-side width is to be at least ___", and the hose bed front-to-rear length is to be at least ___".

HOSE BED: ALUMINUM GRATINGS

A forward hose body transverse divider panel is to be provided, fabricated with perimeter flanges, and bolted in position (so as to be removable) immediately to the rear of the water tank fill stack. Transverse divider panel is to form the forward wall of the main hose bed area, and provide a mounting surface for optionally specified adjustable hose bed divider tracks.

The apparatus main hose bed area is to be located to the rear of the transverse hose body divider panel, between passenger's and driver's inboard apparatus body sides, overhead the water tank.

Multiple double-break flange reinforced tank retainer/hose load support beams are to be provided, spanning between and bolted to the inboard apparatus body sides. Beams are to be constructed of body matching material, profile is to be of minimum height to maximize hose bed depth, and the beams are to be positioned no more than twenty (20) inches apart.

Extruded aluminum slatted hose bed floor gratings are to be furnished, running longitudinally the full length of the hose bed. Longitudinal grating slats are to be fastened to underside perpendicular cross-slats which extend the full width of the hose bed cavity. The hose bed floor gratings are to be assembled with bolts (not welded), so as to allow for future modifications and repairs to the grating assembly. Longitudinal gratings are to be single piece full

length extrusions, spaced at least .5" apart to allow for hose ventilation. Cross-slats are to be positioned to rest on the top surface of the specified overhead tank retainer/ hose load support beams.

ALUIMINUM TREADPLATE DECKING, AHEAD OF HOSE BED

The overhead top of body area ahead of the hose bed, between the body sides, and to the rear of the midship pump module, is to be plated with .187" polished 4-way aluminum deck plate. The aluminum deck plate is to have an NFPA approved non-slip treadplate pattern, and is to be bolted to perimeter body mating surfaces so as to be easily removable.

NOTE: Where tank fill stacks are present within the above specified covered area, the deck plate is to be cut-out to the exact profile of the stack(s).

STAINLESS STEEL ADJUSTABLE HOSEBED DIVIDER TRACKS

Channel fabricated stainless steel hose bed divider horizontal slide tracks are to be furnished, transverse at the rear of hose bed, designed so as to retain the floor gratings and prevent snagging of hose or couplings during deployment and re-loading operations.

In addition to the rear transverse hose bed divider slide track, two (2) parallel transverse stainless steel horizontal channel tracks shall be furnished, bolted to/removable from the specified forward cross divider. Forward and rear horizontal channel tracks are to be provided with sliding friction clamps and threaded studs with acorn nuts, allowing infinite side-to-side adjustment of hose bed divider location.

HOSEBED DIVIDER

One (1) each, adjustable hose bed divider shall be furnished, constructed of 1/4" unpainted aluminum.

Front and bottom of divider shall have weld on T extrusion for structural integrity and adjustment.

The top rear corner of the divider panels shall have a 3" radius, to prevent damage to tarps and restraints.

All horizontal, vertical, and rear radius metal edges are to be DA sanded smooth to prevent personnel injury and hose damage.

HAND HOLD MACHINED INTO REAR OF HOSEBED DIVIDER(S)

The above specified two (2).25" thick aluminum hose bed divider panel(s) shall have a hand-hold cut-out laser machined into the trailing edge surface. Cut-out area to have top and bottom radiuses, and shall be sanded to provide smooth edges.

As Per Sourcewell MPCU Contract 2025-12-10

HOSE BED CAPACITY

The main overhead hose bed areas, as described above, shall be designed to accommodate: 400 ft. of 3 " double jacket fire hose, 250 ft. of 2.5 " double jacket fire hose, and 800 ft. of 5 " large diameter hose.

VINYL HOSE BED COVER

A vinyl coated nylon hose bed cover/tarp to be furnished over main hose body area. Final design must be approved by the customer.

Hose bed cover material shall be red in color.

Front of hose bed shall be fastened to apparatus body by full width awning rail and beaded seam sewn into leading edge of hose bed cover.

Cover shall be removable by sliding front of hose bed cover laterally out of awning rail.

Sides of hose bed cover shall be fastened to apparatus body by VelCro along outboard edges of hose bed cover and hose body sides.

Rear of hose bed shall be restrained by upper retaining pins, chain-weighted seam and stretch cords provided at the rear and on end flap.

NO RIDE WARNING LABEL

One or more permanent labels to be installed at the rear step area, to read: **WARNING: Do Not Ride on Tailboard**. Label is to be permanently encased in a chrome full surround bezel.

TAILBOARD, EMBOSSED .187" ALUMINUM TREADPLATE

A 101" wide rear step/tailboard shall be furnished, constructed of .187" polished 4-way aluminum treadplate material, with an NFPA approved (as slip-resistant) "embossed" tread top surface.

Tailboard shall be a single piece fabrication, with perimeter fabricated flanges, side and rear same width as the body rubrails, and outboard rear corners "beveled" 45-degrees. The beveled corner flanges and the rear flange of tailboard shall be double-broke, and have a total of five (5) cut-outs, exposing the under flange mounted rear corner marker lights and rear center marker light cluster. Tailboard shall be spaced .5" away from the rear face of body, for drainage, bolted in position and easily replaceable in the event of damage. Underside of aluminum treadplate tailboard is to be lined with a dielectric barrier tape, separating the aluminum from the dissimilar metal underbody sub-frame structure.

Per NFPA: Steps, platforms, or secure ladders shall be provided so that firefighters have access to all working and storage areas of the apparatus. The maximum stepping height from ground to first step shall not exceed 24". Additional steps cannot be more than 18" apart. All steps, platforms, or ladders shall sustain a minimum static load of 500 pounds. without permanent deformation and shall have skid resistant surfaces. Any step shall have a minimum area of 35 sq. in. Platform shall have a minimum depth of 8".

TAILBOARD DEPTH

The tailboard shall be fourteen (14)" deep (front-to-rear flange), across the entire width of the tailboard.

ALUMINUM TREADPLATE PUMP PANEL RUNNING BOARDS

Driver's and passenger's side pump panel running boards to be furnished, extending from the rear of chassis cab (or cab steps) to the front outboard body corners, at a horizontal level "in-line" with the apparatus body side rub rails. Running boards shall be single piece fabrications with double-broke perimeter flanges, and shall protrude outboard of pump panel sides, to the same total width as the apparatus body rub rails (101"). Running board fabrications are to be bolted to the bottom sides of the pump module and furnished with forward and rearward angular stainless steel under-support brackets.

Running boards are to be constructed of .187" polished 4-way aluminum treadplate, with an NFPA approved non-slip foot grip tread top surface.

TOW EYES, TWO (2) EACH

Two (2) tow eyes shall be installed below the rear of body, eyes to be 3" in diameter.

The tow eyes shall be machined into .75" thick steel plates, integral with body subframe, bolted to the side webs of each chassis frame rail, designed to allow vehicle to be straight-line pulled using both of the tow eyes.

COMPARTMENTATION, REAR RUNNINGBOARD LEVEL

A rear apparatus body compartment shall be furnished, located at running board level, ahead of the tailboard, to the rear of the chassis frame rails and water tank, below the hose bed, and between the driver's and passenger's rear side compartments.

The rear compartment shall be fully enclosed and weather sealed, equipped with a "sweep/wash-out" floor, which is raised at least 1" above the compartment door sill and the specified tailboard/bumper. The entire compartment floor shall rest on, and be supported by, the specified rear under body tubular sub frame platform.

Rear compartment shall extend vertically from its interior floor to the underside of hose bed, and longitudinally from inner door liner to the rear of the chassis frame rails.

The running board level rear compartment (ahead of tailboard) dimensions shall be __" interior width x __" interior height x __" interior depth.

The following specified rear compartment door opening shall be __" wide x __" high.

REAR COMPARTMENT DOOR, ROLL-UP STYLE, ROM BRAND

The following specified roll-up style ROM compartment door track extrusions are to be "flush" with exterior rear of body panels.

The rear body door panels shall be fabricated with inboard flanges at doorway sides, which are machined for screw type fasteners for bolt-on mounting of the following specified roll-up compartment door aluminum side track extrusions.

The rear compartment ROM door shall be an extruded anodized aluminum roll-up shutter style, provided with: spring loaded "front roll" door lift assist mechanism, a single full width bottom slat mounted tubular bar latch handle, and two (2) outboard doorway mounted latch handle retainers.

Extruded anodized aluminum vertical left and right side tracks and horizontal overhead molding shall be provided, each with removable neoprene rubber weather-stripping. The door tracks and molding shall be bolted to vertical side and horizontal overhead door jambs so as to be easily removable for repairs or replacement of the weather-stripping, NOTE: Roll-up door tracks and/or moldings which are riveted or welded in position are not acceptable.

The roll-up door shall be of maximum width and height for the available doorway opening size. The door opening size may be reduced by no more than 3" total width (1.5" per side track) and 4" total height (obstruction below door bundle). The decrease in compartment opening size is only allowed due to the profile of side track extrusions with attached weather-stripping and the bottom door slat which remains in the door opening.

ROM VERTICAL STRIP INTERIOR DOORWAY COMPARTMENT LIGHTING

Two (2) per compartment ROM brand 12-volt multiple LED element, interior compartment vertical "strip" tubular lights, shall be furnished, one (1) each side of each compartment door opening.

Where used with roll-up style compartment doors, the lights are to be inboard the specified roll-up door tracks, activated by "opening" of the respective compartment door, using a magnetic bar latch switch. Lighting shall have polycarbonate lens to resist breakage from impact and damage from light element heat.

DOOR BAR HANDLE, NON-LOCKING STYLE

Door bar style handle is to be Non-Locking style.

COMPARTMENT FLOOR TILES, SECTIONAL VINYL FLOOR TILE

Vinyl 12" x 12" sectional floor tiles are to be provided, custom fitted to the perimeter profile of the interior floor surfaces of the driver's side, passenger's side, and rear compartments, seven (7) total.

The specified 12" x 12" floor tiles are to be BLACK in color.

STAINLESS STEEL REAR ACCESS LADDER

A swing-out and down access ladder shall be furnished and installed on rear body surface.

For superior strength and service-ability the entire ladder assembly shall be constructed of fabricated 304 grade brushed stainless steel and assembled using .25" coated stainless steel fasteners and Nylock nuts. Welding shall not be used in the construction.

Ladder shall be equipped with dual vertical knurled tubular aluminum hand rails on upper section.

A bottom ladder section shall be furnished which flips 180-degrees down below tailboard level for improved access to ladder.

Ladder shall fit vertically along rear body surface when stowed and swing out to provide angular climbing surface. Dual compressed gas struts shall be incorporated into movement of ladder. Manual latches shall not be required in the operation of ladder.

Step depth, tread, and spacing shall be NFPA compliant.

DRIVER SIDE FRONT STEPS

The following steps shall be provided on driver side front facing surface of apparatus body or pump module.

As Per Sourcewell MPCU Contract 2025-12-10

FOLDING STEP WITH LIGHT
Two (2) IC brand model 3004234 chrome plated folding steps shall be furnished and installed. Steps shall have integrated back lit logo and lighting to illuminate step surface which is activated with park brake.

HANDRAIL
One (1) knurled polished aluminum vertical handrail with chrome plated end brackets shall be furnished and installed to accompany steps.

OFFICER SIDE FRONT STEPS

The following steps shall be provided on officer side front facing surface of apparatus body or pump module.

FOLDING STEP WITH LIGHT
Two (2) IC brand model 3004234 chrome plated folding steps shall be furnished and installed. Steps shall have integrated back lit logo and lighting to illuminate step surface which is activated with park brake.

HANDRAIL
One (1) knurled polished aluminum vertical handrail with chrome plated end brackets shall be furnished and installed to accompany steps.

SLIP RESISTANT SABER-SHAPE TABS ON PERIMETER TAILBOARD FLANGES

The top outboard corners of the tailboard's rear side facing fabricated flanges are to be provided with multiple evenly spaced saber shape tabs. The tabs are to extend slightly above the top step surface, so as to limit foot slippage when climbing aboard the tailboard. As with the puncture grip pattern, the saber-shape tabs must be self draining to the ground.

LED STRIP LIGHT STICKS UNDERSIDE POD COVERS

Four (4) each, 12-volt multiple LED element tubular light sticks, shall be furnished, mounted one (1) per cavity pod, underside the hinged metal pod covers. Light sticks are to be positioned to illuminate interior pod cavity, with the hinged cover in full-open position. Light sticks shall have poly carbonate lenses to resist breakage from impact and damage from light element heat. All light fixtures are to be activated by opening of respective pod cover.

COST ALLOWANCE: TOOLS AND ACCESSORY EQUIPMENT

The apparatus total cost shall include an "Allowance" of $10,000.00, for installation of customer provided miscellaneous accessory equipment and tools, in the driver and passenger side compartments.

As Per Sourcewell MPCU Contract 2025-12-10

EXTENSION AND ROOF LADDERS

Refer to NFPA Equipment Section for optionally specified extension and roof ladders to be furnished.

EXTENSION AND ROOF LADDERS - TO BE MOUNTED IN SPACE(S) ABOVE:

Extension Ladder: Brand _____Model_____Number of Sections _____
Extended Length _____ft. Nested Length_____Inches Nested Width_____Inches Stacked Height (Thickness)_____Inches

Roof Ladder: Brand _____Model_____Overall Length _____ft.
Overeall Width_____Inches Height (Thickness)_____Inches

Folding Ladder: Brand _____Model_____
Rail Height (Thickness)_____Inches, Collapsed Width_____Inches,
Collapsed Length w/Foot Pad _____inches.

SLIDE-IN STORAGE FOR EXTENSION AND ROOF LADDERS, PASSENGER SIDES

One (1), horizontal storage cavity is to be furnished, passenger's side outboard the upper porton of the water tank, extending full length of body. Storage cavity is to accommodate: tray mounting for optionally specified extension ladder, roof ladder/folding ladder/PVC tubing storage for two (2) pike poles. Ladder storage cavity is to be approximately 40" above rear tailboard, provided with a single vertically hinged rear body panel material matching access door with stainless D-ring latch assembly.

Ladder tracks, for extension and roof ladders only, are to be lined on bottom with nylon for easy "slide-out".

SLIDE-IN LADDER STORAGE SLEEVE, FABRICATED OF STAINLESS STEEL

The above specified ladder slide-in metal storage brackets and trays are to be enclosed on top/sides/bottom/front, in a sleeve compartment, accessible through an opened rear door. The sleeve enclosure is to be fabricated of type 304 #4 brushed stainless steel, for total corrosion protection.

FOLDING LADDER TRAY, SLIDE-IN TRAY

A fabricated metal "tray" shall be furnished, designed to accommodate a folding attic ladder. The tray shall be located in the specified horizontal "slide-in" ladder compartment.

As Per Sourcewell MPCU Contract 2025-12-10

PIKE POLES

Refer to NFPA Equipment Section for optionally specified Pike Poles to be furnished.

LADDER LOCATION: DRIVER SIDE REAR BODY CORNER

The specified climbing ladder is to be located on the Driver Side Rear Body Corner, centered between inboard and outboard vertical edges of corner.

FULL-WIDTH REAR BODY STEP

A full hose bed width surface mounted rear body step fabrication is to be furnished, located between rear body sides, at **same level as "top" step of specified rear body ladder(s)**. Rear step to be fabricated of polished 4-way aluminum treadplate, at least 8" deep, bolted in position and removable. Top step surface to be pattern-cut puncture fabricated non-slip.

APPARATUS BODY AND COMPARTMENT ACCESSORIES

All compartments with an adjustable shelf or tray shall include four (4) side wall mounted slide tracks.

STORAGE IN DRIVER FORWARD WHEEL WELL

SCBA STORAGE COMPARTMENT

One (1) triangular shaped compartment is to be furnished to accommodate three (3) SCBA bottles.

Compartment housing that bolt to exterior of wheel well with exposed flange for ease of removal and weather seal.

INTERIOR
Compartment interior shall be spray coated with a rubberized material for bottle protection and retention.
Backside of door shall be lined with insulated rubber mating.

DOOR
Compartment door shall be weather stripped and equipped with polished stainless steel piano hinge, laser cut stainless door-stop, and a single chrome plated push-button trigger-latch.

EXTERIOR
Door shall be constructed of brushed 304 12 gauge stainless steel with 4B brushed finish.

DNMA LIGHT
Bottle storage compartment door shall be equipped with proximity switch to activate DO NOT MOVE VEHICLE LIGHT, and notify driver of an open door condition.

Std Wheelwell Door Finish

STORAGE IN DRIVER WHEEL WELL REAR

SCBA STORAGE + FUEL CAP COMPARTMENT

One (1) triangular shaped compartment is to be furnished to accommodate two (2) SCBA bottles and a fuel fill cap.

Compartment housing that bolt to exterior of wheel well with exposed flange for ease of removal and weather seal.

INTERIOR
Compartment interior shall be spray coated with a rubberized material for bottle protection and retention.
Backside of door shall be lined with insulated rubber mating.

DOOR
Compartment door shall be weather stripped and equipped with polished stainless steel piano hinge, laser cut stainless door-stop, and a single chrome plated push-button trigger-latch.

EXTERIOR
Door shall be constructed of brushed 304 12 gauge stainless steel with 4B brushed finish.

DNMA LIGHT
Bottle storage compartment door shall be equipped with proximity switch to activate DO NOT MOVE VEHICLE LIGHT, and notify driver of an open door condition.

Std Wheelwell Door Finish

STORAGE IN OFFICER FORWARD WHEEL WELL

FIRE EXTINGUISHER STORAGE COMPARTMENT

One (1) triangular shaped compartment is to be furnished to accommodate two (2) fire extinguishers.

Compartment housing that bolt to exterior of wheel well with exposed flange for ease of removal and weather seal.

INTERIOR
Compartment interior shall be spray coated with a rubberized material for contents protection and retention. Backside of door shall be lined with insulated rubber mating.

DOOR
Compartment door shall be weather stripped and equipped with polished stainless steel piano hinge, laser cut stainless door-stop, and a single chrome plated push-button trigger-latch.

EXTERIOR
Door shall be constructed of brushed 304 12 gauge stainless steel with 4B brushed finish.

DNMA LIGHT
Bottle storage compartment door shall be equipped with proximity switch to activate DO NOT MOVE VEHICLE LIGHT, and notify driver of an open door condition.

Std Wheelwell Door Finish

STORAGE IN OFFICER WHEEL WELL REAR

ABSORBENT DISPENSER

One (1) each, triangular shaped fully enclosed compartment shall be furnished to accommodate minimum 27 quarts of typical floor dry material.

A triangular shaped floor dry hopper shall be provided, constructed of stainless steel or polypropylene, mounted to and removable from a telescoping roller slide mechanism. The hopper shall have a hinged top fill door and an integral bottom chute with guillotine dispensing door.

Hopper compartment shall be equipped with a triangular shaped weather-stripped over-lapping "beveled-edge" door constructed of stainless steel, with wheelwell matching finish, equipped with a slam style latch and stainless steel D-ring door handle.

Hopper compartment door shall be provided with a proximity switch to activate DO NOT MOVE VEHICLE LIGHT, and notify driver of an open door condition.

Std Wheelwell Door Finish

LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION

VINYL FLOOR TILES, BLACK

3/4" thick expanded black vinyl tiles shall be provided for one (1) of the above compartment floor.

If a tray exists on compartment floor, it shall receive above tiles.

DRIVER SIDE FORWARD COMPARTMENT INTERIOR ACCESSORIES

Compartment shall contain the following features:

LOWER LEVEL SHELVING

The following shall be installed in "lower" portion of compartment.

SHELVING

Two (2) 3/16" smooth aluminum shelves with 2" tall side walls shall be furnished.

Each shelf shall be vertically adjustable and equipped with spring loaded positioning pins at all 4 attachment points.

VINYL TILE, SHELF/TRAY LINER, BLACK

3/4" thick expanded black vinyl tiles shall be provided for two (2) of the above specified shelves and/or trays.

BODY COMPARTMENT - 125-VOLT RECEPTACLE(S)

One (1) each, 125-volt, household 20-amp 3-wire duplex (2-total) plug-in receptacles shall be furnished, interior of apparatus body compartment(s), located as designated, with: surface mounted cast aluminum receptacle box, 125-volt 5-20 3-wire household plug-in receptacle, metal cover plate, protected wiring to the specified shoreline, and engraved nameplate identifying voltage and power source.

125-VOLT SHORE POWER RECEPTACLE LOCATION(S)

The above specified "Body Compartment" line voltage receptacles shall be located: high on front bulkhead.

TOOL BOX, CTECH, FOUR DRAWER

A four drawer CTECH model DH-1 tool box shall be furnished. The tool box shall be custom fabricated from aluminum panels and powder coated.

The tool box shall be 40.00" wide x 26.00" high x 22.00" deep and shall contain four pull out drawers installed on ball bearing slide tracks. Three drawers shall be 6.00" deep and one drawer shall be 4.00" deep. Each drawer shall be furnished with an exclusive drawer handle which allows for one hand motion opening and closing with latching for transport.

VINYL FLOOR TILES, BLACK

3/4" thick expanded black vinyl tiles shall be provided for one (1) of the above compartment floor.

If a tray exists on compartment floor, it shall receive above tiles.

DRIVER SIDE OVER WHEELS COMPARTMENT INTERIOR ACCESSORIES

Compartment shall contain the following features:

UPPER LEVEL SHELVING
The following shall be installed in "upper" portion of compartment.

SHELVING
One (1) 3/16" smooth aluminum shelves with 2" tall side walls shall be furnished.

Each shelf shall be vertically adjustable and equipped with spring loaded positioning pins at all 4 attachment points.

VINYL TILE, SHELF/TRAY LINER, BLACK
3/4" thick expanded black vinyl tiles shall be provided for one (1) of the above specified shelves and/or trays.

VINYL FLOOR TILES, BLACK

3/4" thick expanded black vinyl tiles shall be provided for one (1) of the above compartment floor.

If a tray exists on compartment floor, it shall receive above tiles.

DRIVER SIDE REAR COMPARTMENT INTERIOR ACCESSORIES

Compartment shall contain the following features:

TOOL BOARD, PULL-OUT

Two (2) vertical tool boards with load capacity of 300 pounds shall be furnished and installed.

The tool board shall be sized to fit the compartment interior dimensions.

Each tool board shall have an outboard channel edge to provide rigidity and a hand grasp for tool board operation.

The tool board shall be fastened to slide assemblies and tracks allowing side-to-side adjustment within the compartment.

The tool board shall lock in both the stored and extended position.

Tool board shall be constructed of 3/16" thick smooth aluminum plate.

VINYL FLOOR TILES, BLACK

3/4" thick expanded black vinyl tiles shall be provided for one (1) of the above compartment floor.

If a tray exists on compartment floor, it shall receive above tiles.

OFFICER SIDE FORWARD COMPARTMENT INTERIOR ACCESSORIES

Compartment shall contain the following features:

UPPER LEVEL SHELVING

The following shall be installed in "upper" portion of compartment.

TRAY, SLIDE OUT, FLOOR MOUNT

Furnished within the compartment shall be a tray constructed of .188" smooth aluminum and shall have a load capacity of 600 pounds. The tray shall be sized to fit the compartment interior dimensions.

Each tray shall be a single piece fabrication with 2.50" perimeter flanges that are welded in the corners forming a pan and providing a recessed area. The front tray flange shall be formed with a double flange, out and down, to

provide a pull handle. The tray shall be fastened to European style extruded precision slide assemblies on each side that are attached to angles bolted to the compartment floor. The tray shall be held in both the stored and extended position with the use of a gas strut that does not require any type of mechanical latch and allows 110% extension out of the compartment.

BODY COMPARTMENT - 125-VOLT RECEPTACLE(S)

One (1) each, 125-volt, household 20-amp 3-wire duplex (2-total) plug-in receptacles shall be furnished, interior of apparatus body compartment(s), located as designated, with: surface mounted cast aluminum receptacle box, 125-volt 5-20 3-wire household plug-in receptacle, metal cover plate, protected wiring to the specified shoreline, and engraved nameplate identifying voltage and power source.

125-VOLT SHORE POWER RECEPTACLE LOCATION(S)

The above specified "Body Compartment" line voltage receptacles shall be located: high on front bulkhead.

VINYL TILE, SHELF/TRAY LINER, BLACK

3/4" thick expanded black vinyl tiles shall be provided for two (2) of the above specified shelves and/or trays.

VINYL FLOOR TILES, BLACK

3/4" thick expanded black vinyl tiles shall be provided for one (1) of the above compartment floor.

If a tray exists on compartment floor, it shall receive above tiles.

OFFICER SIDE OVER WHEELS COMPARTMENT INTERIOR ACCESSORIES

Compartment shall contain the following features:

TOOL BOARD, SWING-OUT

One (1) swing out tool boards with load capacity of 300 pounds shall be furnished and installed.

Each tool board shall be a two 3/16" smooth aluminum plates that are bolted together with 1.00" spacers to allow hardware fasteners on each side without penetrating the opposing board.

The double panel board shall be installed on upper and lower pivot points furnished with sealed roller bearings to provide smooth operation of the board movement.

The tool board shall be held in the stored and extended position by a single gas strut.

ALUMINUM MOUNTING PANEL

Furnished within the compartment shall be one (1) 3/16" smooth aluminum with a load capacity of 300 pounds.

The tool board shall be installed on upper back wall of compartment with 1/2" gap allowing for fastener clearance behind the tool board.

VINYL FLOOR TILES, BLACK

3/4" thick expanded black vinyl tiles shall be provided for one (1) of the above compartment floor.

If a tray exists on compartment floor, it shall receive above tiles.

OFFICER SIDE REAR COMPARTMENT INTERIOR ACCESSORIES

Compartment shall contain the following features:

UPPER LEVEL SHELVING

The following shall be installed in "upper" portion of compartment.

SHELVING

Two (2) 3/16" smooth aluminum shelves with 2" tall side walls shall be furnished.

Each shelf shall be vertically adjustable and equipped with spring loaded positioning pins at all 4 attachment points.

VINYL TILE, SHELF/TRAY LINER, BLACK

3/4" thick expanded black vinyl tiles shall be provided for two (2) of the above specified shelves and/or trays.

TRAY, SLIDE OUT, FLOOR MOUNT

Furnished within the compartment shall be a tray constructed of .188" smooth aluminum and shall have a load capacity of 600 pounds. The tray shall be sized to fit the compartment interior dimensions.

Each tray shall be a single piece fabrication with 2.50" perimeter flanges that are welded in the corners forming a pan and providing a recessed area. The front tray flange shall be formed with a double flange, out and down, to

provide a pull handle. The tray shall be fastened to European style extruded precision slide assemblies on each side that are attached to angles bolted to the compartment floor. The tray shall be held in both the stored and extended position with the use of a gas strut that does not require any type of mechanical latch and allows 110% extension out of the compartment.

BODY COMPARTMENT - 125-VOLT RECEPTACLE(S)

One (1) each, 125-volt, household 20-amp 3-wire duplex (2-total) plug-in receptacles shall be furnished, interior of apparatus body compartment(s), located as designated, with: surface mounted cast aluminum receptacle box, 125-volt 5-20 3-wire household plug-in receptacle, metal cover plate, protected wiring to the specified shoreline, and engraved nameplate identifying voltage and power source.

125-VOLT SHORE POWER RECEPTACLE LOCATION(S)

The above specified "Body Compartment" line voltage receptacles shall be located: High on front bulkhead.

VINYL FLOOR TILES, BLACK

3/4" thick expanded black vinyl tiles shall be provided for one (1) of the above compartment floor.

If a tray exists on compartment floor, it shall receive above tiles.

REAR FACING COMPARTMENT INTERIOR ACCESSORIES

Compartment shall contain the following features:

SCBA BRACKET

Furnished within the compartment shall be one (1). The SCBA bracket shall be a Zico Walkaway bracket model KD-FHLP-6-SFPHS with rubber covered spring clips and a nylon retaining strap.

VINYL FLOOR TILES, BLACK

3/4" thick expanded black vinyl tiles shall be provided for one (1) of the above compartment floor.

If a tray exists on compartment floor, it shall receive above tiles.

ELECTRICAL - 12 VOLT

NFPA RELATED NON-EMERGENCY 12-VOLT ELECTRICAL STANDARDS:

ELECTRICAL WIRING INSTALLATION - 12 VDC
All electrical circuit wiring installed by the apparatus body builder is to be stranded copper alloy conductors of a gauge rated to carry 125% of the maximum current for which the current is protected. Wiring is to be colored and/or printed with circuit function code over each conductor's entire length.

Original non-protected chassis wiring, extending to rear, including: left turn circuit, right turn circuit, brake circuit, and back-up light circuit is to be re-routed to the interior chassis cab. New replacement color coded legend imprinted SXL insulated multi-stranded copper chassis wiring is to extend from chassis cab to rear body electrical chassis functions. Wiring is to be enclosed inside specified apparatus body in heat resistant vinyl loom.

AMBER TURN LIGHT ACTIVATION
Dedicated wiring shall be provided from chassis turn signal control, to the rear of the apparatus, for signaling of the specified apparatus body left and right side rear amber turn lights. Rear amber turn lights are not to be activated by brake lights.

ELECTRICAL WIRING INSTALLATION PERFORMANCE - 12 VDC
All wires are to be of sufficient size so that voltage drop in any electrical device shall not exceed 15%.

BATTERY CABLE INSTALLATION STANDARDS
Chassis battery cables are to be routed to a power distribution terminal post located on a frame rail, and then to the apparatus body power distribution center (PDC). All battery cables are to be appropriately sized welding cable, heavily insulated super fine multi-stranded copper enclosed within high temperature vinyl loom and equipped with plated copper soldered terminals/lugs. Edge protector or rubber grommet is to be furnished wherever battery cables pass through sheet metal panels.

AUDIBLE DEVICE INSTALLATION STANDARDS
When furnished, air horns, electric siren, electronic siren speakers, and other audible emergency equipment are to be mounted as low and as far forward on the apparatus as practical. Audible warning equipment is not to be mounted on the roof of the chassis cab.

WIRING HARNESSES

All apparatus body and pump compartment wiring for specified lights and electrical equipment shall be suitably protected inside heat resistant vinyl, forming multiple harnesses. Multiple harnesses to run from chassis cab, pump compartment, and apparatus body to a PDC (power distribution center). Harnesses shall consist of

individual legend imprinted multi-stranded copper color coded SAE-J 1128 compliant automotive wires inside vinyl loom. Spare wires shall run throughout apparatus compartmented body and pump compartment, so as to allow future installations of electrical accessories, using original harnesses. All wiring to be identified, "imprinted" with number and function. Auto-reset circuit breakers to be furnished, of various amperage capacity, sized for intended load.

All 12-volt switches, relays, terminals, connectors, and wiring to have a direct current rating of 125% of maximum current for which the current is protected. All wiring terminals to be machine crimped, pull-tested during assembly.

POWER DISTRIBUTION CENTER

The power distribution center shall be located interior of driver's forward side compartment, and shall contain engineered electrical components and waterproof pin/socket bulkhead connectors. Multiple circuit breaker sockets shall be furnished for future use.

An enclosed electric junction cubby will be provided in the driver's side lower front compartment. This compartment will be recessed through the inside front wall of the compartment to an easily accessible enclosure to house all of the body wiring junction points, terminal strips, relays, etc. The design of this compartment will not decrease the storage capacity area of the compartment in which it is located. A removable panel will be provided for access to this compartment.

BATTERY CABLE UPGRADE

A 600 amp fuse protected 2-0 multi-stranded copper insulated battery cable shall run from specified battery switch through a 300-amp solenoid and to the chassis frame mounted threaded stud terminal block, providing power to high amperage items such as: primer motor, electrical discharge valves, reel rewind motors, generator starter motor, etc.

"Vehicle Specific" wiring information shall be provided for this particular apparatus "as built" upon completed delivery of the same. Information to be in spreadsheet format, describing PDC connections and functions.

EMERGENCY SWITCH CONSOLE

See CHASSIS segment of specifications, for description and location of provided emergency switch control console.

DO NOT MOVE APPARATUS " HAZARD" INDICATOR LIGHT

The forward overhead mounted flashing hazard warning indicator light, as per current NFPA requirements, is to be provided and shall be illuminated automatically, when signaled by events listed below:

The light shall be labeled "**DO NOT MOVE APPARATUS IF LIGHT IS ON**".

DEVICES WHICH ACTIVATE THE "DO NOT MOVE APPARATUS" INDICATORS

Opened chassis cab doors and/or open apparatus body exterior compartment doors, are to activate/illuminate the above specified "DO NOT MOVE APPARATUS" warning indicator light located on the forward overhead headliner, and the specified audible alarm.

APPARATUS LIGHTING INSTALLATION STANDARDS:

All specified DC Voltage to be in accordance with D.O.T. regulations at time of purchase.

WALKWAY, STANDING PLATFORM, AND WORK AREA LIGHTING

Specified standing, stepping, and walking surface lighting fixtures are be located to minimize accidental breakage.

LIGHTING INSTALLATION REQUIREMENTS

All specified light fixtures are to be located in the engineered model, mounting holes machined, and installed after finish painting, so that all metal edge surfaces receive the same protective primer and finish paint coatings. Where fixture wiring passes through metal body panel, the pass-thru hole is to be equipped with a rubber grommet. All specified light fixtures are be installed, using stainless steel screws with non-metallic "replaceable" threaded inserts, to allow removal of light fixture, from exterior of body. No holes are to be cut or drilled, after finish painting.

FMVSS LIGHTING CONFIGURATION

The following specified rear body tail/stop turn and back up lights to be positioned: Red (tail/stop) TOP, Amber (turn) MIDDLE, and Clear (back up) BOTTOM, driver's and passenger's sides at the rear of body.

MASTER BATTERY SWITCH

See CHASSIS segment of specifications, for description, and location of provided master battery cut-off switch.

REAR TAILBOARD STEP LIGHTS, LED

Two (2), 12-volt Grote LED courtesy step lights are to be furnished, located to illuminate tailboard step surface at the rear of the body. Light fixture to have polished stainless bezel and shielded clear polycarbonate lens. Lights to be activated by parking brake set.

DOT LIGHTING

REAR LED ID/MARKER LIGHTING

Five (5), 3/4" LED marker lights to be furnished, located: two (2) recessed into outboard rear tailboard corner flanges, and three (3) recessed behind center rear tailboard flange. Marker lights to be activated by headlamp switch.

The three (3) LED marker lights located at the rear to be:

- As close as practical to the vertical Centerline.
- Centers spaced not less than six (6) inches or more than twelve (12) inches apart.
- Red in color.
- All at the same height.

The two (2) LED outboard marker lights located at the rear shall be installed:

- To indicate the overall width of the vehicle.
- At the same height.
- To be visible from the rear and the side.

MID-TURN/MARKERS

Two (2), surface mount mid-ship LED dual element, combination marker and turn lights, are to be furnished, located: one (1) driver's side mid-ship vehicle and one (1) passenger's side mid-ship vehicle. Light fixtures are to have Amber lens. Marker Light is to be steady on with headlights, Turn Lights are to have flashing element, activated by vehicle turn signals.

Per FMVSS 108 and CMVSS 108 requirements.

REAR BODY RED REFLECTORS

Four (4) red reflectors shall be furnished, located at rear sides of body.

STOP/TAIL , BACK-UP and TURN LIGHTS

Two (2), Whelen M62BTT, rectangular Red element surface mount "LED" combination stop/taillights to be furnished, mounted each side at rear of body. Lights to be wired for activation by service brake and headlamp switch.

REAR TURN SIGNALS

Two (2), Whelen M62T, rectangular Amber element surface mount "arrow" LED turn signal lights to be furnished, mounted one each side at rear of body. Lights to be wired for activation by left or right turn signal (not by brake lights).

BACK-UP LIGHTS

Two (2), Whelen M62BU rectangular Clear element surface mount LED back up lights to be furnished, mounted one each side at rear of body. Lights to be wired for activation by reverse gear of truck transmission.

Above specified lights to include M6FC, CHROME plated bezels, evenly spaced, driver's side and passenger's side rear body corners.

Lights and bezels shall be bolted into position by stainless steel fasteners and press-fit plastic female blind fasteners or secure installation, ease of service, and corrosion prevention.

BACK-UP ALARM

See CHASSIS segment of specifications, for description of: Back-Up Alarm to be furnished.

COMPARTMENT INTERIOR LIGHTING

See APPARATUS BODY segment of specifications, for description, and location of provided body compartments interior lighting.

UNDER CHASSIS GROUND LIGHTING

See CHASSIS segment of specifications, for description of: underside chassis Ground Lighting, and locations to be provided.

GROUND PERIMETER LIGHTS, UNDER SIDE PUMP PANELS

Two (2), LED grommet mount 4" round 12-volt ground lights are to be furnished, located one (1) driver's side and one (1) passenger's side, beneath the pump panel areas. Lenses are to be 4" diameter, Clear. Lights to be completely sealed for weather resistance. Lights to be activated by setting of the parking brake.

PERIMETER UNDERBODY LIGHTS

Five (5) each, 4" LED grommet mount under body DC Voltage ground lights to be furnished, located: two (2) each driver's side ahead of and behind rear wheels, two (2) each passenger's side ahead of and behind rear wheels, one (1) each center rear underside tailboard. Lights to be completely sealed for weather resistance, lenses 4" diameter. Light fixtures are to be grommet mounted into STAINLESS STEEL angled brackets to illuminate outwards beneath body. Lights to be wired for activation by setting of the parking brake.

BACK-UP CAMERA

The back-up camera as furnished with the chassis shall be recess mounted into the rear face of the body. The camera shall be wired to the monitor in the cab.

SCENE LIGHTING

The following shall be furnished and installed as described.

BODY SIDE FACING, DRIVER'S SIDE FORWARD

WHELEN PCH2

One (1) Whelen Pioneer Plus combination flood/spot light model # PCH2 shall be furnished in white powder coated aluminum housing. The light shall be 12-Volt, 150 watt and have 17,750 usable lumens.

The light head shall be semi-recess mounted in a housing with a chrome trim ring. The mount shall allow the light to be directed straight out or at a 15 degree angle down.

Lighting shall be switched in the cab with an appropriately labeled switch. In addition, the scene light shall also illuminate with a rocker switch installed on the pump panel.

BODY SIDE FACING, OFFICER'S SIDE FORWARD

WHELEN PCH2

One (1) Whelen Pioneer Plus combination flood/spot light model # PCH2 shall be furnished in white powder coated aluminum housing. The light shall be 12-Volt, 150 watt and have 17,750 usable lumens.

The light head shall be semi-recess mounted in a housing with a chrome trim ring. The mount shall allow the light to be directed straight out or at a 15 degree angle down.

Lighting shall be switched in the cab with an appropriately labeled switch. In addition, the scene light shall also illuminate with a rocker switch installed on the pump panel.

As Per Sourcewell MPCU Contract 2025-12-10

BODY SIDE FACING, DRIVER'S SIDE REAR

WHELEN PCH2

One (1) Whelen Pioneer Plus combination flood/spot light model # PCH2 shall be furnished in white powder coated aluminum housing. The light shall be 12-Volt, 150 watt and have 17,750 usable lumens.

The light head shall be semi-recess mounted in a housing with a chrome trim ring. The mount shall allow the light to be directed straight out or at a 15 degree angle down.

Lighting shall be switched in the cab with an appropriately labeled switch. In addition, the scene light shall also illuminate with a rocker switch installed on the pump panel.

BODY SIDE FACING, OFFICER'S SIDE REAR

WHELEN PCH2

One (1) Whelen Pioneer Plus combination flood/spot light model # PCH2 shall be furnished in white powder coated aluminum housing. The light shall be 12-Volt, 150 watt and have 17,750 usable lumens.

The light head shall be semi-recess mounted in a housing with a chrome trim ring. The mount shall allow the light to be directed straight out or at a 15 degree angle down.

Lighting shall be switched in the cab with an appropriately labeled switch. In addition, the scene light shall also illuminate with a rocker switch installed on the pump panel.

REAR FACING, DRIVER SIDE

WHELEN PCPSM1C

One (1) Whelen Pioneer Plus model # PCPSM1C combination flood/spot shall be furnished.

Each light furnished in a Chrome housing.

Each light shall be 12-Volt, 76 watt and have 7,800 usable lumens directed down at 5° and produce illumination arching upward to a 90° pattern of light.

Lighting shall be switched in the cab with an appropriately labeled switch. In addition, the scene light shall also illuminate with a rocker switch installed on the pump panel.

As Per Sourcewell MPCU Contract 2025-12-10

REAR FACING, OFFICER SIDE

WHELEN PCPSM1C

One (1) Whelen Pioneer Plus model # PCPSM1C combination flood/spot shall be furnished.

Each light furnished in a Chrome housing.

Each light shall be 12-Volt, 76 watt and have 7,800 usable lumens directed down at 5° and produce illumination arching upward to a 90° pattern of light.

Lighting shall be switched in the cab with an appropriately labeled switch. In addition, the scene light shall also illuminate with a rocker switch installed on the pump panel.

REAR FACING SCENE SWITCH ON REAR OF BODY

Rear Facing Scene Lighting shall also be switched on rear exterior apparatus body panel via momentary rocker switch, lit and labeled appropriately.

LIGHT TOWER PACKAGE

The following Light Tower package shall be furnished and installed.

721588044
NS4.5-1200 WBS Sirion 220,000 lumens, LED 120/240VAC dual tilt, 15ft extended.

4735019
NFPA wired hand-held remote control with e-stop button and 50ft control cable.

914512
50ft power cable.

LIGHT TOWER INSTALL LOCATION
Specified light mast shall be installed within specified recessed dunnage/well. Appropriate structural provisions shall be provided.

Scene lighting shall be switched in the cab and at pump panel with an appropriately labeled switch, labeled for respective side of apparatus. Scene lighting shall also be activated when vehicle is placed into reverse gear.

As Per Sourcewell MPCU Contract 2025-12-10

AIR HORNS

See CHASSIS segment of specifications, for description of: Air Horns to be furnished, Activation Device(s), and mounting locations for same components.

ELECTRONIC SIREN SPEAKER(S)

See CHASSIS segment of specifications, for description of: Electronic Siren Speaker(s), and Speaker Location(s) to be furnished.

MECHANICAL SIREN

See CHASSIS segment of specifications, for description of: Mechanical Siren, Activation Device(s), and Installation of components to be furnished.

WARNING LIGHTS

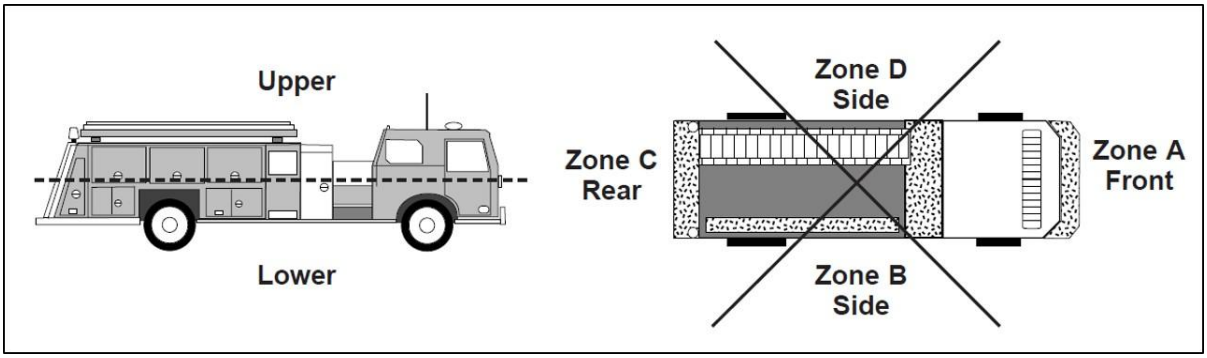
Warning light locations shall be defined by the following NFPA Zones.

Zone A FORWARD FACING, UPPER AND LOWER LEVEL

Zone B OFFICER SIDE FACING, UPPER AND LOWER LEVEL

Zone C DRIVER SIDE FACING, UPPER AND LOWER LEVEL

Zone D REAR FACING, UPPER AND LOWER LEVEL



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RotoRay not requested

Mars Lights not requested

ZONE A UPPER

Please refer to the chassis specification for chassis mounted warning lighting specifications.

ZONE A LOWER, DRIVER SIDE

Please refer to the chassis specification for chassis mounted warning lighting specifications.

Warning Light Location Not Specified

ZONE A LOWER, OFFICER SIDE

Please refer to the chassis specification for chassis mounted warning lighting specifications.

Warning Light Location Not Specified

ZONE B LOWER FRONT (INTERSECTION)

Please refer to the chassis specification for chassis mounted warning lighting specifications.

Warning Light Location Not Specified

ZONE B UPPER FRONT

WHELEN M9 DUO BLUE/WHITE

One (1) Whelen Model # M9DE shall be furnished featuring Super-LEDs 6.50" high by 10.40" wide polycarbonate lens.

A chrome finish M9FC bezel shall be furnished for each light.

Warning light shall be activated by an appropriately labeled control switch in the cab.

Lighting shall be installed on the officer's side of the body in the upper front corner.

ZONE B UPPER REAR

WHELEN M9 DUO BLUE/WHITE

One (1) Whelen Model # M9DE shall be furnished featuring Super-LEDs 6.50" high by 10.40" wide polycarbonate lens.

A chrome finish M9FC bezel shall be furnished for each light.

Warning light shall be activated by an appropriately labeled control switch in the cab.

Lighting shall be installed on the officer's side of the body in the upper rear corner.

ZONE B LOWER MID

WHELEN DUO M6 RED/WHITE

One (1) Whelen Model # M6DD shall be furnished featuring Super-LEDs 4.30" high by 6.80" wide polycarbonate lens.

A chrome finish M6FC bezel shall be furnished for each light.

Warning light shall be activated by an appropriately labeled control switch in the cab.

Lighting shall be installed on the lower side of the body in the wheel well area on the officer's side.

ZONE D LOWER FRONT (INTERSECTION)

Please refer to the chassis specification for chassis mounted warning lighting specifications.

Warning Light Location Not Specified

ZONE D UPPER FRONT

WHELEN M9 DUO RED/WHITE

One (1) Whelen Model # M9DD shall be furnished featuring Super-LEDs 6.50" high by 10.40" wide polycarbonate lens.

A chrome finish M9FC bezel shall be furnished for each light.

Warning light shall be activated by an appropriately labeled control switch in the cab.

Lighting shall be installed on the driver's side of the body in the upper front corner.

ZONE D UPPER REAR

WHELEN M9 DUO RED/WHITE

One (1) Whelen Model # M9DD shall be furnished featuring Super-LEDs 6.50" high by 10.40" wide polycarbonate lens.

A chrome finish M9FC bezel shall be furnished for each light.

Warning light shall be activated by an appropriately labeled control switch in the cab.

Lighting shall be installed on the driver's side of the body in the upper rear corner.

ZONE D LOWER MID

WHELEN M6D

One (1) Whelen Model # M6D shall be furnished featuring Red and White Super-LEDs and a clear 4.30" high by 6.80" wide polycarbonate lens.

A chrome finish M6FC bezel shall be furnished for each light.

Warning light shall be activated by an appropriately labeled control switch in the cab.

Lighting shall be installed on the lower side of the body in the wheel well area on the driver's side.

ZONE C UPPER DRIVER SIDE

Following lighting shall be placed on upper left of body, rear facing.

WHELEN M6RC

Two (2) Whelen Model # M6RC shall be furnished featuring 18 red Super-LEDs and a clear 4.30" high by 6.80" wide polycarbonate lens.

A chrome finish M6FC bezel shall be furnished for each light.

Warning light shall be activated by an appropriately labeled control switch in the cab.

Zone C Upper 2nd Light Model Not Selected

ZONE C UPPER OFFICER SIDE

Following lighting shall be placed on upper right of body, rear facing.

WHELEN M6BC

Two (2) Whelen Model # M6BC shall be furnished featuring 18 blue Super-LEDs and a clear 4.30" high by 6.80" wide polycarbonate lens.

A chrome finish M6FC bezel shall be furnished for each light.

Warning light shall be activated by an appropriately labeled control switch in the cab.

Zone C Upper 2nd Light Model Not Selected

ZONE C LOWER DRIVER SIDE

WHELEN M6RC

One (1) Whelen Model # M6RC shall be furnished featuring 18 red Super-LEDs and a clear 4.30" high by 6.80" wide polycarbonate lens.

A chrome finish M6FC bezel shall be furnished for each light.

Warning light shall be activated by an appropriately labeled control switch in the cab.

Lighting shall be installed in the lower rear on the driver's side of the body.

ZONE C LOWER OFFICER SIDE

WHELEN M6BC

One (1) Whelen Model # M6BC shall be furnished featuring 18 blue Super-LEDs and a clear 4.30" high by 6.80" wide polycarbonate lens.

A chrome finish M6FC bezel shall be furnished for each light.

Warning light shall be activated by an appropriately labeled control switch in the cab.

Lighting shall be installed in the lower rear on the officer's side of the body.

Please refer to the chassis specification for chassis installed siren specifications.

Please refer to the chassis specification for chassis installed siren speaker specifications.

Please refer to the chassis specification for chassis installed air horns.

INVERTER LINE VOLTAGE SYSTEM

SHORELINE/LINE VOLTAGE TRANSFER SWITCH

The following specified line voltage receptacles and/or power strips are to be "dual powered". A transfer switch is to be furnished, wired to both the shoreline and the specified line voltage power sources. System is to automatically transfer the power source for the designated 125 -Volt receptacles/strips (totaling a maximum amperage capacity of 20-Amps), from the Shore Power to the Line Voltage. Transfer is to take place upon start-up of the Line Voltage system.

120V ELECTRICAL SYSTEM AND ACCESSORIES

The following specified 120 -Volt system shall meet the requirements of NFPA 1901, as it relates to vehicle mounted systems, including but not limited to: Materials, Grounding, Overcurrent Protection, Wiring Methods, Wiring identification, Wet Locations, Dry Locations, Receptacle Listings, Electrical System Testing, Placarding, and Operational Testing.

POWER INVERTER, 2000W, 12-VDC-TO 120 VAC

One (1), Kisae Tech True Sine Wave Inverter is to be furnished, located within the apparatus body, wired to provide line voltage power to the optionally specified 120-volt receptacles. Inverter is to have a maximum power output of 2000 watts at 120-VAC.

125-VOLT 5-20R LINE VOLTAGE RECEPTACLES

Eleven (11), duplex 5-20R (household), 125-volt, 20-amp, 3-wire plug-in receptacle(s), to be furnished. Receptacle(s) are to be recessed into a single gang outlet box and surface mounted to specified location, provided with a appropriate exterior gasketed hinged cap or stainless steel duplex cover plate. Receptacle's wiring to include: appropriate gauge multi-stranded insulated copper wiring, and a dedicated manual-reset style circuit breaker. A permanently engraved placard, identifying voltage and power source, is to be provided adjacent to receptacle box, and the manual-reset breaker shall also be identified as to receptacle's location.

NOTE: NEMA 5-20R receptacles will accommodate 5-20P plugs and 5-15P plugs.

BODY LINE VOLTAGE RECEPTACLE LOCATION(S)

The above specified Body Line Voltage Receptacles shall be located in all 7 body compartments, 1 in dunage, 1 in each EMS compartment and 1 behind drivers seat.

PAINT COLOR/CODE

The paint color (job color) code shall be: red to match existing apparatus..

APPARATUS BODY PAINT PROCESS

Body surfaces which are to be painted, are to be cleaned using DX436 wax and grease remover. Next, the entire to be painted surface is to be sprayed with F3963 Etching Primer which exhibits very good adhesion and corrosion resistance. A high build primer surfacer, F3975, is to then be applied directly over the etch primer. After allowing the primer surfacer to air dry, the entire unit is to be sanded using dual action sanders leaving a very smooth surface to be painted.

The paint applied to the apparatus shall be PPG Industries Delfleet® Evolution brand, applied throughout a multi-step process including at least two coats of each color and clearcoat finish.

Special attention will be given to proper application of coatings according to the specified film build (wet and dry) recommendations of PPG. Product or technical data bulletins should be consulted for any needed information

above that which has been outlined herein. All paint materials shall be prepared and applied in accordance with this specification and the paint manufacturer's latest written recommendation prior to paint application.

The coating shall be baked or air dried. The coatings shall provide full gloss when finished curing and must be suitable for application by conventional pressure air atomizing spray.

Body panels and sub-frame area which cannot be painted after assembly shall be pre-primed and painted prior to main painting process.

The coatings shall not contain lead, cadmium or arsenic. The polyiscoyanate component shall consist of only aliphatic isocyanates, with no portion being aromatic isocyanate in character. The solvents used in all components and products shall not contain ethylene glycol, mono-ethyl ethers, or their acetates (commercially recognized as cello solves), nor shall they contain any chlorinated hydrocarbons. The products shall have no adverse health effects or present any unusual hazard to personnel when used according to manufacturer’s recommendations for handling and proper protective safety equipment, and for its intended use.

The coating system, as supplied and recommended for application, shall meet all applicable federal, state and local laws and regulations now in force or at any time during the courses of the bid.

The specified apparatus body painted surfaces shall receive the primer coats and the finish coats. These painted surfaces shall have a finish with no runs, sags, craters, pinholes or other defects.

HIGH LUSTER BUFFING
The specified color painted components (except roll-up door slats) shall be "wet" color sanded with ultra-fine media, machine buffed with rubbing compound and wool pad, machine buffed with glaze and foam pad, and hand wiped to remove residue.

PAINT COLOR
Finish color of the apparatus body exterior and painted accessories shall be of a single color to match major chassis cab exterior color.

Unless otherwise specified, the **c**hassis frame, axles, and suspension shall remain the OEM color of Black.

COMPARTMENT INTERIORS
The enclosed compartment interiors, side and rear, are to be metal finish.

Where body material is aluminum, the metal is to have a finish as described in the Paint and Graphics Section of these specifications.

Where metal specified to be stainless steel, the finish is to be mill polished #4-brushed.

COMPARTMENT FABRICATED ACCESSORIES
The optionally specified fabricated compartment accessories (shelves and boards, etc.), are to be unpainted natural smooth metal finish. Where material is aluminum, the metal is to have a machine "swirl-pattern" finish, where metal is stainless steel, the finish is to be #4-brushed.

BODY RE-ASSEMBLY
During reassembly of all individually painted fabricated components, special care shall be taken to prevent deterioration of top paint coats of mating flanged areas. Fabricated accessory components, which have been removed prior to painting, shall be seal coated where mated to dissimilar metal painted components. Accessory fabrications to be installed using stainless steel button socket head cap screw fasteners. Edges of accessories, where meeting exterior body painted fabrications, shall be properly caulked with G.E. or equal silver metallic body sealant to prevent moisture accumulation between metal layers.

TOUCH-UP PAINT
One (1), full quart of original finish color top coat paint material shall be provided for use as future touch-up paint.

One (1) sample paint card shall be provided with the apparatus. The card shall show an example of the apparatus body color on one side and have the specific PPG paint formula printed on the reverse side.

MACHINE "SWIRLED" FINISH ON BULKHEAD WIRE COVERS

The optionally specified interior compartment front and rear bulkhead wire covers are to be abrasive machined, where exposed inside compartment, with a "swirl" pattern, providing a scuff resistant aluminum finish.

MACHINE "SWIRLED" FINISH ON ROLL-OUT TRAY(S)

The optionally specified two (2) each Roll-Out Tray(s) to be abrasive machined, fully on interior floor and perimeter flanges, with a "swirl" pattern, providing a scuff resistant marbled natural aluminum finish. Swirl machining of the metal surface is to be performed after profile cutting of tray and prior to its fabrication.

MACHINE "SWIRLED" FINISH ON TOOL BOARD(S)

The optionally specified three (3) each Tool Boards are to be abrasive machined, fully on both sides, with a "swirl" pattern, providing a scuff resistant marbled natural aluminum finish. Swirls are to be 5" in diameter, arranged in a horizontal line, overlapping both horizontally and vertically.

MACHINE "SWIRLED" FINISH ON SHELVES

The optionally specified six (6) each Shelves are to be abrasive machined, fully on topside and underside, with a "swirl" pattern, providing a scuff resistant marbled natural aluminum finish. Swirl machining of the metal surface is to be performed after profile cutting of shelf and prior to its fabrication.

CHASSIS FRAME AND DRIVE TRAIN FINISH, TO REMAIN ORIGINAL OEM FINISH

The chassis frame assembly is to remain the color and paint quality as received from the chassis manufacturer (OEM). The frame and drive train components are not be repainted.

Components that are considered part of the "frame assembly" are frame rails, cross members, axles, suspension, steering gear and the fuel tank.

DISSIMILAR METALS CORROSION PREVENTION

In an effort to prevent "dissimilar metals corrosion" all apparatus ferrous and non-ferrous metals shall be isolated from one another, using barrier tapes, vinyl or rubberized coatings, and other methods to isolate the mating surfaces. Where aluminum and steel or stainless steel are "mated", the entire mating surface must be lined or coated, even where surfaces are already prime and/or color coat painted.

Since all fasteners must be stainless steel, it is imperative to provide fasteners with the smallest possible head profile, such as button-socket-head cap screws, in lieu of pan head or truss head screws. Additionally, all screw and nut fasteners shall be coated with "Harpen Wax" to prevent fastener discoloration when exposed to dissimilar aluminum. Rubber and/or vinyl washers shall NOT be used, as they collapse as allow fasteners to loosen.

Where stainless steel piano hinges are bolted to aluminum, the hinge leaf shall first be lined with a brush on undercoating.

ADDITIONAL CORROSION PREVENTION

In addition to the above specified corrosion prevention, the apparatus shall be assembled using ECK or electrolysis corrosion control, on all high corrosion potential areas, such as door latches, door hinges, trim plates, fenderettes, etc. This coating is a high zinc compound that shall act as a sacrificial barrier to prevent electrolysis and corrosion between dissimilar metals.

All .375" diameter and smaller screws and bolts shall be stainless steel with a wax coating, designed to reduce the potential for electrolysis and corrosion to occur where items are assembled and attached.

REFLECTIVE STRIPING, 6" WIDE, SCOTCHLITE

A 6" wide horizontal WHITE ScotchLite reflective stripe is to be affixed to the full length of driver side and passenger side of the vehicle, in conformance with NFPA 1901 reflectivity requirement.

As Per Sourcewell MPCU Contract 2025-12-10

REFLECTIVE MEDIA (STRIPING), CAB INTERIOR DOORS

A White ScotchLite or equivalent reflective stripe is to be affixed to the interior of each chassis cab door. The stripes are each to be a minimum of 96 sq. in. so as to meet the NFPA 1901 requirement.

REFLEXITE DIAMONDS TREADPLATE WALK SURFACES 48"+ ABOVE GROUND

Yellow perimeter marking to indicate designated standing / walking areas above 48" high in compliance with 2016 NFPA 1901 consisting of individual Reflexite diamonds approximately 1" wide.

"Z" JOG IN REFLECTIVE STRIPE

There shall be a "Z-shaped" jog in the reflective stripe design. Jog shall be located in the mid-section of the apparatus body, uninterrupted by wheelwell cut-out and/or pump control panel.

SCOTCHLITE LETTERING, BLACK SHADED

Driver's side and passenger's side chassis cab front doors shall be furnished with CAD generated machine cut GOLD ScotchLite lettering, suitably shaded with Black vinyl.

Forty-one (41) to sixty (50) CAD generated machine cut letters, 4.00" tall, highlighted with black vinyl shading shall be provided.

"SPECIAL DESIGN FEES - 1ST TIME MALTESE CROSS EMBLEMS"

The following specified custom door emblems will be designed by the graphics material supplier.

"MALTESE CROSS EMBLEMS"

One (1) pair of 12" diameter Maltese Crosses emblems, of simulated gold leaf material, is to be furnished and installed per Fire Dept approval.

"SPECIAL DESIGN FEES - 1ST TIME MALTESE CROSS EMBLEMS"

The following specified custom door emblems will be designed by the graphics material supplier.

SCOTCHLITE LETTERING, BLACK SHADED

Driver's side and passenger's side chassis cab front doors shall be furnished with CAD generated machine cut GOLD ScotchLite lettering, suitably shaded with Black vinyl.

Forty-one (41) to sixty (50) CAD generated machine cut letters, 4.00" tall, highlighted with black vinyl shading shall be provided.

LETTERING DESIGN

The driver's side and the passenger's side (2-each) chassis cab front doors shall be lettered as follows:

The Department name (top row) shall be in an '"ARCH", to read: _____

The words: **FIRE DEPT.** shall be in a "straight-line" immediately below Fire Department name.

VEHICLE NUMBER

The vehicle's assigned number shall be displayed in the following form:

UNIT / ENGINE / TRUCK (select one or none) **No. 11**

Lettering shall match the above specified Department name, in style, material, and size; and be located: TBD..

CHEVRON STRIPING, REAR OF APPARATUS, ORALITE V98

Up to 48 square feet of NFPA compliant color and pattern 6" multiple diagonal ORALITE V98 (formerly Reflexite) reflective stripes are to be provided, full width at rear of apparatus body. Stripes are to form "Chevrons", using alternating Solid Red/Fluorescent Yellow-Green reflective stripes, only interrupted by the rear apparatus lighting, handrails, steps, and other bolt-on accessories. Chevron patterned material is to be applied on to the flat metal "painted" surface, prior to the final installation of the specified bolt-on (removable) fixtures and accessories. Stripes shall be oriented at 45-degree angle, sloping downward and away from centerline of vehicle.

SUCTION HOSE OR SUPPLY HOSE:

HARD SUCTION HOSE

Two (2), 10 ft. length(s) of 6" i.d. Maxi-Flex or equivalent flexible suction hose shall be furnished, complete with 6" NST lightweight couplings, long handle swivel female one end, rigid male rocker lug opposite end.

As Per Sourcewell MPCU Contract 2025-12-10

SUCTION HOSE STRAINER

One (1), 6" TFT model A03HNX-JET Low Level style Strainer(s) shall be furnished, for use with specified hard suction hose, equipped with 6" NST rigid female coupling. Strainer shall be equipped with 6" NST-F swivel Long-handled coupling and 1.5" NST-F jet siphon inlet and cap.

Strainer statement from Manufacturer:
"High volume low-level strainer is made of hard anodized and powder-coated aluminum. Clog-resistant stainless steel fi lter has over twice as much fl ow area as a 6" hose. This keeps friction loss down to 0.5 psi (1" Hg) at 1500 gpm and reduces the potential for air vortexes to form as water sinks towards the 2.5" minimum usable depth. Oversized sealed ball pivot allows 45° range of hose angle without constricting the flow path. Optional Jet Siphon with 1.5" female hose thread substantially increases suction lift capability. The Jet Siphon is also useful for tank shuttle operations, pump priming and dewatering without the need for a trash pump."

NFPA REQUIRED FIRE HOSE AND NOZZLES - END USER RESPONSIBILITY

NOTE In order to meet the current requirements of NFPA 1901 it is acknowledged that the end user will furnish and appropriately mount any and all Fire Hose and Nozzles not listed herein but as required by the most recent standards prior to placing this vehicle in service.

NFPA REQUIRED GROUND LADDERS:

All Fire Department ground ladders carried on the apparatus shall meet the requirements of NFPA 1901, unless acceptable substitutions are designated.

EXTENSION LADDER

One (1), Duo-Safety 28 ft. model 1200-A 2-section aluminum ladder shall be furnished, with rope hoist.

ROOF LADDER

One (1), Duo-Safety 16 ft. model 875-A aluminum roof ladder shall be furnished with folding roof hooks.

MULTI-PURPOSE LADDER, LITTLE GIANT DEFENDER 15187-882

One (1), Little Giant, Model 15187-882, Defender NFPA approved Little Giant ladder is to be furnished.

NFPA REQUIRED ATTIC LADDER:

The Fire Department Attic Ladder carried on the apparatus shall meet the requirements of NFPA 1901, unless an acceptable substitution is designated.

FOLDING LADDER

One (1), Duo-Safety 10 ft. model 585-A aluminum folding attic ladder shall be furnished.

FOLDING LADDER TRAY

A fabricated 4-way aluminum treadplate "tray" shall be furnished, designed to accommodate a DuoSafety folding ladder, location to be customer designated.

PIKE POLE, 6-FOOT FIBERGLASS

One (1), DuoSafety or equivalent 6 ft. “pike” pole(s), with fiberglass straight pole shall be furnished.

PIKE POLE, 10-FOOT FIBERGLASS

One (1), DuoSafety or equivalent 10 ft. “pike” pole(s), with fiberglass straight pole shall be furnished.

PIKE POLE MOUNTING(S)

Please refer to the Apparatus Body Section for description of Pike Pole mounting location(s).

ALL PURPOSE HOOK: PIKE POLE, 4-FOOT FIBERGLASS

One (1) each, Hooks Unlimited 4 ft. “New York”with fiberglass straight pole, and Roof Hook to be furnished.

ALL PURPOSE HOOK: PIKE POLE, 6-FOOT FIBERGLASS

One (1) each, Hooks Unlimited 6 ft. “New York”with fiberglass straight pole, and Roof Hook to be furnished.

ALL PURPOSE HOOK: PIKE POLE, 8-FOOT FIBERGLASS

One (1) each, Hooks Unlimited 8 ft. “New York”with fiberglass straight pole, and Roof Hook to be furnished.

As Per Sourcewell MPCU Contract 2025-12-10

AXES - END USER RESPONSIBILITY

NOTE In order to meet the current requirements of NFPA 1901 it is acknowledged that the end user will furnish, the minimum axes specified prior to putting this vehicle in service.

FIRE EXTINGUISHERS - END USER RESPONSIBILITY

NOTE In order to meet the current requirements of NFPA 1901 it is acknowledged that the end user will furnish, the minimum fire extinguishers specified prior to putting this vehicle in service.

SPANNER and HYDRANT WRENCH SET

Three (3) Elkhart model 470 wrench holder(s), each with two (2) spanner wrenches and one (1) hydrant wrench, to be furnished.

STORZ WRENCH (ES)

Three (3) Harrington model HSSW-401, 4 each Storz wrenches with holder(s) to be furnished and mounted.

ADAPTERS - NFPA REQUIRED

One (1) double female 2.5" adapter with National Hose (NH) threads shall be furnished, mounted in a bracket fastened to the apparatus.

One (1) double male 2.5" adapter with National Hose (NH) threads shall be furnished, mounted in a bracket fastened to the apparatus.

RUBBER MALLET

Three (3) rubber mallet to be furnished suitable for use on suction hose connections, mounted in a bracket fastened to the apparatus.

REDUCER(S)

Five (5) chrome plated 2.5" NST female x 1.5" NST male reducing adapters with 1.5" NST chrome plated caps shall be furnished.

WHEEL CHOCKS

Two (2), each Ziamatic model SAC-44, NFPA compliant folding wheel chocks shall be furnished, complete with Ziamatic model SQCH-44H horizontal under body chock holders. Folding chock holders shall be under body mounted, driver's side, ahead of and behind rear wheelwell housing.

FOLLOWING ADDITIONAL EQUIPMENT/ACCESSORIES SHALL BE FURNISHED BY END USER:

FIRST AID KIT - END USER PROVIDED

NOTE In order to meet the current requirements of current NFPA it is acknowledged that the end user will furnish, a First Aid Kit as specified prior to putting this vehicle in service.

SALVAGE COVERS - END USER PROVIDED

NOTE In order to meet the current requirements of current NFPA it is acknowledged that the end user will furnish, the minimum Salvage Covers specified prior to putting this vehicle in service.

TRAFFIC FLARES - END USER RESPONSIBILITY

NOTE In order to meet the current requirements of NFPA 1901 it is acknowledged that the end user will furnish, a minimum of five (5) appropriate traffic warning devices such as highway flares.

TRAFFIC FLARES - END USER RESPONSIBILITY

NOTE In order to meet the current requirements of NFPA 1901 it is acknowledged that the end user will furnish, a minimum of five (5) appropriate traffic fluorescent traffic cones.

DEFIBRILLATOR - END USER RESPONSIBILITY

NOTE In order to meet the current requirements of NFPA 1901 it is acknowledged that the end user will furnish, the automatic external defibrillator (AED) specified prior to putting this vehicle in service.

SCBA - END USER RESPONSIBILITY

NOTE In order to meet the current requirements of NFPA 1901 it is acknowledged that the end user will furnish, the required SCBA (Self-Contained Breathing Apparatus) specified for each seated position, but not fewer than four (4), prior to putting this vehicle in service.

SCBA SPARE CYLINDERS- END USER RESPONSIBILITY

NOTE In order to meet the current requirements of NFPA 1901 it is acknowledged that the end user will furnish and mount in a bracket fastened to the apparatus or stored in a specially designed storage space, the required SCBA spare cylinders required prior to putting this vehicle in service. Each cylinder

NUTS, BOLTS, SCREWS

One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit shall be supplied to mount loose equipment items.